

# Nevada and Northeastern California Greater Sage-Grouse

## Proposed Resource Management Plan Amendment and Final Environmental Impact Statement



Estimated Lead Agency Total Cost Associated  
with Developing and Producing this EIS:

\$384,000.00



The Bureau of Land Management's multiple-use mission is to sustain the health and productivity of the public lands for the use and enjoyment of present and future generations. The Bureau accomplishes this by managing such activities as outdoor recreation, livestock grazing, mineral development, and energy production, and by conserving natural, historical, cultural, and other resources on public lands.

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US Fish and Wildlife, Rachel Woita, James Yule



# United States Department of the Interior



BUREAU OF LAND MANAGEMENT  
Nevada State Office  
1340 Financial Boulevard  
Reno, Nevada 89502-7147  
<http://www.blm.gov/nv>

In Reply Refer To:  
1610 (NV930)

Dear Reader:

The *Nevada and Northeastern California Greater Sage-Grouse Proposed Resource Management Plan Amendment and Final Environmental Impact Statement (Proposed RMPA and Final EIS)* is available for a 30-day protest period and 60-day Governor's Consistency Review. The Bureau of Land Management (BLM) prepared this document in consultation with cooperating agencies and in accordance with the National Environmental Policy Act of 1969, as amended, the Federal Land Policy and Management Act of 1976, as amended, implementing regulations, the BLM's Land Use Planning Handbook (H-1601-1), and other applicable law and policy.

The planning area includes the following BLM Nevada District Offices: Battle Mountain, Carson City, Elko, Ely, and Winnemucca and the BLM California Field Offices of Applegate (Alturas and Surprise) and Eagle Lake. The planning area encompasses approximately 45 million surface acres administered by the BLM.

The Proposed RMPA/Final EIS focuses on the description and analysis of the proposed plan amendment, which consists primarily of the Management Alignment Alternative as modified in response to comments. The Draft RMPA/EIS was sent out for a 90-day public comment period from May 4, 2018 to August 2, 2018. BLM Nevada and California received a total of 34,650 unique comment letters, forms, and emails during the 90-day public comment period. These documents resulted in 595 substantive comments.

Anyone who participated in the process for the EIS and who has an interest that is or may be adversely affected by the proposed land use plan amendments in the Final EIS may protest the proposed plan amendments. A person who wishes to file a protest must do so in writing within 30 days from the date the US Environmental Protection Agency publishes the Notice of Availability of the Final EIS in the *Federal Register*.

Detailed instructions for filing such a protest with the Director of the BLM are available online at <https://www.blm.gov/programs/planning-and-nepa/public-participation/filing-a-plan-protest>.

All protests must be in writing and filed with the BLM Director, either as a hard copy or electronically via BLM's ePlanning website by the end of the protest period.

To file a protest electronically, visit <https://goo.gl/uz89cT> and click the 'Submit Protest' button to the right of the Final EIS document. Protests in hard copy must be mailed to one of the following addresses, postmarked by the end of the protest period, noted above:

**U.S. Postal Service Mail:**

BLM Director (210)  
Attention: Protest Coordinator  
P.O. Box 71383  
Washington, D.C. 20024-1383

**Overnight Delivery:**

BLM Director (210)  
Attention: Protest Coordinator  
20 M Street SE, Room 2134LM  
Washington, D.C. 20003

Before including your address, phone number, e-mail address, or other personal identifying information in your protest, be advised that your entire protest – including your personal identifying information may be made publicly available at any time. While you can ask us in your protest to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

The BLM Director will make every attempt to promptly render a decision on each protest. The decision will be in writing and will be sent to the protesting party by certified mail, return receipt requested. The decision of the BLM Director shall be the final decision of the Department of the Interior on each protest. Responses to protest issues will be compiled and formalized in a Director's Protest Resolution Report made available following issuance of the decision. Upon resolution of all protests, the BLM will issue an Approved RMPA and Record of Decision (ROD). The Approved RMPA and ROD will be made available electronically on BLM's ePlanning website.

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

Sincerely,



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Brian C. Amme  
Acting State Director, Nevada



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Joe Stout  
Acting State Director, California

# **Nevada and Northeastern California Greater Sage-Grouse Proposed Resource Management Plan Amendment and Final Environmental Impact Statement**

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

**Abstract:** This proposed resource management plan (RMP) amendment and final environmental impact statement (EIS) has been prepared by the United States Department of the Interior (DOI), Bureau of Land Management (BLM) with input from cooperating agencies. The purpose of this RMP amendment (RMPA) 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. This document is considering amendments to eight BLM RMPs in Nevada and three RMPs in California. The EIS describes and analyzes two alternatives, as well as the proposed plan amendment for managing Greater Sage-Grouse habitat on approximately 45.4 million acres of BLM-administered surface estate. The No-Action Alternative is a continuation of current management; use of public lands and resources would continue to be managed under the current BLM RMPs, as amended in 2015. The Management Alignment Alternative was derived through coordination with the States and cooperating agencies to align with the States' conservation plans and to support conservation outcomes for Greater Sage-Grouse. The Management Alignment Alternative was identified as the agency's preferred alternative in the Draft EIS that was published on May 4, 2018. The Proposed Plan Amendment represents the agencies' proposed management approach, it reflects the best combination of decisions to achieve BLM goals and policies, meets the purpose and need, and addresses the key planning issues. It also considers public comments received on the Draft EIS and incorporates many of the recommendations provided by cooperating agencies. Major planning issues addressed include modifying habitat management areas, Sagebrush Focal Area designations, adaptive management, allocation exceptions, mitigation, seasonal timing restrictions, and habitat objectives.

**Protests:** Protests must be postmarked or received no later than 30 days after publication of the US Environmental Protection Agency Notice of Availability in the Federal Register. Refer to the instructions in the letter preceding this abstract for additional information on how to protest. The close of the protest period will be announced in news releases and on the Nevada and Northeastern California website: <https://goo.gl/uz89cT>

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## ACRONYMS AND ABBREVIATIONS

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Full Phrase

ADH	all designated habitat
ARMPA	approved resource management plan amendment
BLM	Bureau of Land Management
BMP	best management practice
BSU	biologically significant unit
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulation
CSU	controlled surface use
DOI	US Department of the Interior
EIS	environmental impact statement
FIAT	Fire and Invasives Assessment Tool
FLMPA	Federal Land Management and Policy Act
Forest Service	US Department of Agriculture, Forest Service
GHMA	General Habitat Management Area
HMA	habitat management area
HQT	Habitat Quantification Tool
IM	Instruction Memorandum
LUPA	Land Use Plan Amendment
MZ	management zone
NDOW	Nevada Department of Wildlife
NEPA	National Environmental Policy Act
NSO	no surface occupancy
OHMA	Other Habitat Management Area
PAC	Priority Area for Conservation
PHMA	Priority Habitat Management Area
RDF	required design feature
RMP	resource management plan
RMPA	resource management plan amendment
ROD	record of decision
ROW	right-of-way
SETT	Sagebrush Ecosystem Technical Team
SFA	sagebrush focal area

SO	Secretarial Order
TL	timing limitation
USGS	US Geological Survey
USFWS	US Fish and Wildlife Service
WO	Washington Office

# Executive Summary

**Note to readers: For ease of reading, additions, changes, and modifications made between the Draft Resource Management Plan Amendment (RMPA) and Draft Environmental Impact Statement (EIS) and the Proposed RMPA and Final EIS have been highlighted in gray.**

## ES.I INTRODUCTION

Greater Sage-Grouse is a state-managed species that is dependent on sagebrush steppe ecosystems. These ecosystems are managed in partnership across the range of the Greater Sage-Grouse by federal, state, and local authorities. Efforts to conserve the species and its habitat date back to the 1950s. Over the past two decades, state wildlife agencies, federal agencies, local partners (county governments, local area working groups, conservation districts, non-government officials, etc.) and many others with in the range of the species have been collaborating to conserve Greater Sage-Grouse and its habitats. The United States Department of the Interior (DOI) and the Bureau of Land Management (BLM) have broad responsibilities to manage federal lands and resources for the public benefit. Nearly half of Greater Sage-Grouse habitat is managed by the BLM.

In September 2015, the US Fish and Wildlife Service (USFWS) determined that the Greater Sage-Grouse did not warrant listing under the Endangered Species Act of 1973. In its “not warranted” determination, the USFWS based its decision in part on regulatory certainty from the conservation commitments and management actions in the BLM and Forest Service Greater Sage-Grouse land use plan amendments (LUPAs) and revisions, as well as on other private, state, and federal conservation efforts. Since 2015, the BLM, in discussion with partners, recognized that several refinements and policy updates would help strengthen conservation efforts, while providing increased economic opportunity to local communities. BLM’s multiple use mandate is essential to sustaining lands and resources in tandem with local socioeconomics including local customs and culture.

The BLM continues to build upon its commitment to on-the-ground management to promote conservation through close collaboration with State governments, local communities, private landowners, and other stakeholders. **Table ES-I** shows the acres of on-the-ground treatment activity between 2015 and 2017 and planned activity for 2018 in the Nevada and Northeastern California Sub-region, based upon annual budgets allocated by Congress. BLM’s accomplishments reflect contributions from programs other than Greater Sage-Grouse, including fuels, riparian, and range management.

The BLM is now engaged in a planning effort to further enhance its continued cooperation with western states by ensuring greater consistency between individual state plans and the BLM’s multiple-use mission. This executive summary highlights the major components of this planning document and outlines the potential impacts from the proposed management changes. The BLM’s efforts seek to improve management alignment in ways that would increase management flexibility, maintain access to public resources, and secure and promote positive Greater Sage-Grouse conservation outcomes and incorporate additional and new information that is considered the best available current science.

**Table ES-1**  
**Acres<sup>1</sup> of On-The-Ground Treatment Activity for Fiscal Years 2015 to 2017**  
**and Planned for 2018**

Fiscal Year	Conifer Removal	Fuelbreaks	Invasive Species Removal	Habitat Protection	Habitat Restoration	Total
2015	98,876	15,000	63,612	41,003	75,952	294,443
2016	165,963	14,614	66,621	42,305	95,748	385,251
2017	185,032	65,455	124,582	10,428	93,474	479,000
2018 <sup>2</sup>	118,384	65,442	68,512	9,240	54,509	316,087

<sup>1</sup>These acres do not include treatment activities completed or planned on other federally administered lands, state lands, or private lands.

<sup>2</sup>Planned.

## 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 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 light of the policies and other background summarized in **Section I.1**, the purpose and need for this RMPA/EIS is to modify the approach to Greater Sage-Grouse management in existing land use plans through (1) enhancing cooperation and coordination with the States of Nevada and California, (2) align with DOI and BLM policy directives that have been issued since 2015, and (3) incorporate appropriate management consistency, flexibility, and adaptation to better align with Nevada and California's Greater Sage-Grouse management strategies.

## ES.3 ISSUES AND RELATED RESOURCE TOPICS IDENTIFIED THROUGH SCOPING

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 impacts; as such, they 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 is presented in Potential Amendments to Land Use Plans Regarding Greater Sage-Grouse Conservation Scoping Report (<https://goo.gl/FopNgW>).

The sections below lay out how issues raised during scoping, as well as related resource topics, are considered in this RMPA/EIS. Generally, they fall into the following categories:

- Issues and related resource topics retained for further consideration in this RMPA/EIS—These were issues raised during scoping for which alternatives were developed to address the issues.
- Clarification of decisions in the Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment and Record of Decision (BLM 2015b; [2015](#))

[ARMPA/ROD](#))—These are decisions or frameworks in the 2015 ARMPA/ROD that require clarification as to their application or implementation. No new analysis is required, as the intentions behind the decisions were analyzed in the Nevada and Northeastern California Greater Sage-Grouse Proposed Land Use Plan Amendments and Final Environmental Impact Statement (BLM 2015a; [2015 Final EIS](#)).

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

### ES.3.1 Issues and Related Resource Topics Retained for Further Consideration in this RMPA/EIS

The issues identified in **Table ES-2**, below, were previously analyzed in the 2015 Final EIS; however, based on the proposed changes, the resource topics and potential impacts that may require additional analysis are as follows: Greater Sage-Grouse, vegetation (including invasive species and special status vegetation), land use and realty, renewable energy, minerals and energy, socioeconomics, livestock grazing, and comprehensive travel management; therefore, these resource topics are carried forward for analysis.

**Table ES-2** identifies the corresponding resource topics to which the issues relate. The level of detail in the description of each resource topic and the impacts from implementing any of the alternatives also are described in **Chapters 3** and **4**.

**Table ES-2**  
**Issues and Related Resource Topics**

Issues	Resource Topics Related to the Issues
<b>Modifying Habitat Management Area Designations</b>	
<ul style="list-style-type: none"> <li>• Need for adjusting habitat management areas (HMAs) so that they reflect the best available science based on updates to habitat and use modeling (Coates et al. 2016) and are consistent with HMAs identified by the State of Nevada and recommended by the California Department of Fish and Wildlife (CDFW). This would provide consistency in management across jurisdictions and to third parties operating on public and state or private lands in Nevada and northeastern California.</li> <li>• Integration of flexibility into the plans to be able to adjust HMA designations (and their associated allocations), based on the best available science, through plan maintenance or amendment, as appropriate.</li> <li>• Maintaining all HMAs as identified in the 2015 ARMPA/ROD, including sagebrush focal areas (SFAs), which would be provided with the most protections.</li> </ul>	<ul style="list-style-type: none"> <li>• Greater Sage-Grouse</li> <li>• Vegetation</li> <li>• Land Use and Realty</li> <li>• Renewable Energy</li> <li>• Minerals and Energy</li> <li>• Socioeconomics</li> <li>• Livestock Grazing</li> <li>• Comprehensive Travel Management</li> </ul>

**Table ES-2  
Issues and Related Resource Topics**

Issues	Resource Topics Related to the Issues
<p><b>Removing Sagebrush Focal Area Designations</b></p> <ul style="list-style-type: none"> <li>Address eliminating the SFA designation and the cancellation of the proposed withdrawal of SFAs and the reasoning for the cancellation               <ul style="list-style-type: none"> <li>Analyze the inclusion and removal of SFAs, in response to the March 31, 2017, United States District Court for the District of Nevada court order.</li> </ul> </li> <li>Is this habitat designation (i.e., SFA) needed to adequately maintain conservation of Greater Sage-Grouse HMAs?</li> </ul>	<ul style="list-style-type: none"> <li>Greater Sage-Grouse</li> <li>Vegetation</li> <li>Land Use and Realty</li> <li>Renewable Energy</li> <li>Minerals and Energy</li> <li>Socioeconomics</li> <li>Livestock Grazing</li> <li>Comprehensive Travel Management</li> </ul>
<p><b>Adaptive Management</b></p> <ul style="list-style-type: none"> <li>Ensure federal, state, and local partners are part of the causal factor analysis process</li> <li>Lack of flexibility with implementing and removing hard trigger adaptive management responses</li> <li>Better alignment with DOI guidance on implementation of the adaptive management process</li> <li>Incorporate best available science, including local data and information, into the adaptive management strategy</li> <li>Utilize collaborative processes with stakeholders, appropriate state and local agencies, and authorized land users when developing and implementing management responses to any trigger met or surpassed</li> </ul>	<ul style="list-style-type: none"> <li>Greater Sage-Grouse</li> <li>Vegetation</li> <li>Land Use and Realty</li> <li>Renewable Energy</li> <li>Minerals and Energy</li> <li>Socioeconomics</li> <li>Livestock Grazing</li> <li>Comprehensive Travel Management</li> </ul>
<p><b>Allocation Exception Process</b></p> <ul style="list-style-type: none"> <li>Clarify and make consistent the various exception allocation processes</li> <li>Verify use of landscape-scale mapping of priority habitat management area (PHMA), general habitat management area (GHMA), and other habitat management areas (OHMA) in regards to the application of allocations and stipulations</li> <li>Address restrictions on actions related to public health and safety, existing infrastructure, and administrative functions that serve a public purpose</li> <li>Address inconsistencies with existing federal legislation and the 2015 ARMPA/ROD that include land tenure adjustments, including, but not limited to, disposals, exchanges, transfers, and recreation and public purposes actions</li> </ul>	<ul style="list-style-type: none"> <li>Greater Sage-Grouse</li> <li>Vegetation</li> <li>Land Use and Realty</li> <li>Renewable Energy</li> <li>Minerals and Energy</li> <li>Socioeconomics</li> <li>Livestock Grazing</li> <li>Comprehensive Travel Management</li> </ul>
<p><b>Mitigation</b></p> <ul style="list-style-type: none"> <li>Alignment with the State of Nevada's mitigation strategy to the extent allowable by federal law on Nevada BLM-administered lands only</li> <li>Defer to the State of Nevada's mitigation strategy to the extent allowable by federal law and regulation on Nevada BLM-administered lands only</li> <li>Consider and analyze the State of Nevada's and California's recommendation for project level mitigation in relevant NEPA documentation</li> <li>Ensure consistency in tracking and reporting changes to Greater Sage-Grouse habitat quality and quantity</li> <li>Alignment with updated BLM policy regarding compensatory mitigation (IM 2018-093)</li> </ul>	<ul style="list-style-type: none"> <li>Greater Sage-Grouse</li> <li>Vegetation</li> <li>Land Use and Realty</li> <li>Renewable Energy</li> <li>Minerals and Energy</li> <li>Socioeconomics</li> <li>Livestock Grazing</li> <li>Comprehensive Travel Management</li> </ul>



**Table ES-2  
Issues and Related Resource Topics**

Issues	Resource Topics Related to the Issues
<p><b>Seasonal Timing Restrictions</b></p> <ul style="list-style-type: none"> <li>Alignment with State of Nevada’s conservation plan and management strategies with the State of California, to the greatest extent possible</li> <li>Consider exceptions and/or modifications to seasonal timing restrictions to allow for beneficial or neutral projects, as recommended by the State of Nevada and California consistent with its conservation plan and/or mitigation strategies, to occur in a timely manner</li> <li>Seasonal timing restrictions need to be adjusted to allow for public health and safety concerns and time sensitive administrative functions that serve a public purpose to be addressed without delay</li> </ul>	<ul style="list-style-type: none"> <li>Greater Sage-Grouse</li> <li>Vegetation</li> <li>Land Use and Realty</li> <li>Renewable Energy</li> <li>Minerals and Energy</li> <li>Socioeconomics</li> <li>Livestock Grazing</li> <li>Comprehensive Travel Management</li> </ul>
<p><b>Modifying Habitat Objectives</b></p> <ul style="list-style-type: none"> <li>Consideration of site potential based on ecological site descriptions, state and transition models, etc.</li> <li>Consistency with the State of Nevada’s desired habitat conditions</li> <li>Incorporation of the best available current science to support modifications</li> <li>Clarify that the Greater Sage-Grouse Habitat Objectives (Table 2-2 in the 2015 ARMPA/ROD) are desired outcomes expressed as goals consistent with BLM Planning Handbook-1601-1 (BLM 2005)</li> </ul>	<ul style="list-style-type: none"> <li>Greater Sage-Grouse</li> <li>Vegetation</li> <li>Land Use and Realty</li> <li>Renewable Energy</li> <li>Minerals and Energy</li> <li>Socioeconomics</li> <li>Livestock Grazing</li> <li>Comprehensive Travel Management</li> </ul>

### ES.3.2 Clarification of Planning Decisions in the 2015 ARMPA/ROD

The following issues identified in existing planning decisions in **Table ES-3** were raised during scoping. These issues require clarification to language in the 2015 ARMPA/ROD but do not require new analysis. The clarifying language for these planning decisions is displayed in this planning document to communicate how these issues are being addressed through plan maintenance, policy, or implementation.

**Table ES-3  
Clarification Issues**

Clarification Issue	Clarifications Addressed through Plan Maintenance, Policy, or Implementation
<p><b>Modifying Lek Buffers</b></p> <ul style="list-style-type: none"> <li>Clarification regarding the application of lek buffer-distances</li> </ul>	<p><i>Plan Maintenance</i> - Management Decisions SSS 2(D) and SSS 3(C) from the 2015 ARMPA/ROD have been clarified to resolve conflicting statements regarding how the BLM would “apply” lek buffers contained in the USGS “<i>Conservation Buffer Distance Estimates for Greater Sage-Grouse—A Review</i>”, <i>Open File Report 2014-1239</i> (Mainer et al. 2014). Management Decisions SSS 2(D) and SSS 3(C) have been revised to read as follows:</p> <p><i>In undertaking BLM management actions [in PHMA and GHMA], and consistent with valid and existing rights and applicable law in authorizing third-party actions, the BLM would utilize the lower end of the interpreted range of lek buffer-distances and guidance identified in Mainer et al. (2014) to establish the evaluation area around leks that would be used to analyze impacts during project-specific NEPA, including scientifically justifiable departures based on</i></p>

**Table ES-3  
Clarification Issues**

Clarification Issue	Clarifications Addressed through Plan Maintenance, Policy, or Implementation
	<i>local data, topography, and other factors, in accordance with Appendix B. Appendix B has also been revised to reflect this clarified decision language.</i>
<p><b>Changing Requirements for Required Design Features</b></p> <ul style="list-style-type: none"> <li>Clarify the application of required design features and opportunities to deviate from them</li> </ul>	<p><i>Plan Maintenance</i> - Appendix C includes a required design features (RDFs) worksheet that BLM Nevada and Northeastern California field and/or district offices would complete for all proposed activities authorized in PHMA, GHMA, and OHMA. This worksheet clearly defines the rationale for dismissing a RDF when it not appropriate for a specific proposed activity.</p>
<p><b>Fire and Invasives</b></p> <ul style="list-style-type: none"> <li>Provide the necessary prioritization of all three aspects of fire management: pre-suppression, suppression, and rehabilitation and find ways to expedite on-the-ground treatments to address this present and widespread threat in the Nevada and Northeastern California Sub-region</li> </ul>	<p><i>Policy</i> - When the <a href="#">Great-Basin-Wide Programmatic Environmental Impact Statements (PEISs) for Fuel Breaks and to Reduce the Threat of Wildfire and Support Rangeland Productivity</a> and any other programmatic analysis associated with vegetation treatments are completed, BLM Nevada and California would issue statewide policies that would instruct BLM field and district offices to incorporate by reference the analysis contained in the PEISs for on-the-ground environmental analysis, in an effort to expedite on-the-ground activities that would address the present and widespread threat of fire and invasives in the Nevada and Northeastern California Sub-region. The Draft PEISs are tentatively scheduled for publication in December 2018, with Final PEISs tentatively scheduled for publication in June/July 2019. The PEISs would not modify any proposed land use plan decisions (including HMA designations) specified in this RMPA/EIS.</p>
<p><b>Increase Opportunities for Outcome-Based Grazing</b></p> <ul style="list-style-type: none"> <li>Identify and complete a number of authorizations to support the development of rigorous and defensible outcome-based grazing</li> </ul>	<p><i>Implementation</i> - BLM Nevada and California would continue to pursue outcome-based grazing initiatives that would exhibit a new management paradigm that BLM managers and livestock operators can use to establish management practices that can achieve specific management objectives that respond to changing, on-the-ground conditions such as wildfires, high moisture years, or drought. This would better ensure healthy rangelands, high-quality wildlife habitat, and economically sustainable ranching operations.</p>
<p><b>Land Health Assessments and Habitat Objectives</b></p> <ul style="list-style-type: none"> <li>Management Decisions LG 5 within the existing 2015 ARMPA/ROD is inconsistent with 43 CFR 4160.1. References of this decision contained in Management Decisions LG 6 and LG 10 would be removed and these management decisions would be modified.</li> </ul>	<p><i>Plan Maintenance</i> - Management Decision LG 5 (page 2-25 through 2-26, 2015 ARMPA/ROD), as written, is not consistent with existing BLM grazing regulations (43 CFR 4160.1) or recent policies (IM 2018-023), as it provides direction to implement interim management strategies until appropriate modifications are incorporated through the permit renewal process (if results from a land health assessment indicate that Greater Sage-Grouse habitat objectives are not met and grazing is a causal factor). This management decision, however, does not identify that these interim management strategies need to be within the existing terms and conditions of a grazing</p>

**Table ES-3  
Clarification Issues**

Clarification Issue	Clarifications Addressed through Plan Maintenance, Policy, or Implementation
	<p>permit in order to implement them immediately. Under 43 CFR 4160.1 (existing BLM grazing regulations), the BLM must issue a proposed/final decision on any affected applicant, permittee or lessee, and interested public when modifying a grazing permit. If the interim management strategies are within the existing terms and conditions of a grazing permit, they can be implemented immediately; however, if the selected interim management strategies are outside of the existing terms and conditions, the BLM would need to comply with NEPA and the decision processes provided in 43 CFR 4160. For this reason, Management Decision LG 5 would be removed, and references to Management Decision LG 5 in Management Decisions LG 6 and LG 10 would be removed and these management decisions would be modified.</p>

### **ES.3.3 Issues and Resource Topics Not Carried Forward for Additional Analysis (Scoping Issues Outside the Scope and Scoping Issues Previously Analyzed)**

The following issues were raised during scoping and are not carried forward for a variety of 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 States of Nevada and California.

Other issues were analyzed in the 2015 Final EIS, and no significant new information related to these issues has emerged since that time. Therefore, the following issues do not require additional analysis in this RMPA/EIS:

- Effects of No Surface Occupancy (NSO) stipulations on Greater Sage-Grouse habitat on non-BLM-administered lands
- Mitigation for oil and gas development
- Prioritization of fluid mineral leases outside of PHMA and GHMA
- Numerical noise limitations within PHMA
- Contribution of disturbance caps toward Greater Sage-Grouse conservation objectives
- Wildfire response to vegetation treatments
- Sage-Grouse Habitat Assessment Framework (Stiver et al. 2015)

Other issues were evaluated as part of the [2015 Final EIS](#). For the same reasons they were dismissed in the [2015 Final EIS](#), they are not carried forward for detailed analysis in this RMPA/EIS:

- Hunting of Greater Sage-Grouse

- Predator control<sup>1</sup>
- Aircraft overflights in PHMA and GHMA<sup>2</sup>

The resource topics below were dismissed from detailed analysis because they have no potentially significant impacts from actions proposed in this Proposed RMPA/FEIS:

- Geology
- Indian trust resources
- Noise
- Air quality and visibility
- Special designations (e.g., areas of critical environmental concern, research natural areas, wilderness, wilderness study areas, wild and scenic rivers, and national scenic and historic trails)
- Environmental justice
- Wildland fire and fire management
- Wild horses and burros
- Recreation
- Visual resources
- Water resources
- Cultural and heritage resources
- Lands with wilderness characteristics

## ES.4 ALTERNATIVES CONSIDERED

Alternative development and analysis is the heart of an EIS. The alternatives considered in this document address all the issues brought forward by the public and considered by the BLM. The comparative analysis between alternatives establishes a framework for decision makers to understand important trade-offs and identify the most effective way to meet the purpose and need and the BLM's multiple use mission. The alternatives analysis can support the BLM in adapting its management when information and circumstances change.

### ES.4.1 No-Action Alternative

Under the No-Action Alternative, the BLM would not amend the current RMPs amended by the [2015 Final EIS](#). 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 would also remain the same, as they pertain to such activities as mineral leasing and development, recreation, lands and realty, and livestock grazing. This alternative also includes the designation of SFAs, which is analyzed in **Chapter 4**.

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<sup>1</sup> While the BLM does not have the authority to carry out certain predator control actions (such as permitting take permits), BLM is committed to working with partners who do, particularly in degraded habitat (recovering burns, areas of pinyon and juniper encroachment, etc.) where predators are having a disproportionate impact on local Greater Sage-Grouse populations.

<sup>2</sup> Military aircraft operations are outside the scope of this RMPA/EIS and this RMPA/EIS does not apply to aircraft activities that are under the jurisdiction of the Federal Aviation Administration or the Department of Defense.

#### ES.4.2 Management Alignment Alternative

This alternative was identified as the Preferred Alternative in the Draft RMPA/EIS. This alternative makes modifications to the No-Action Alternative to better align the BLM's management direction with the State of Nevada's Conservation Plan and conservation strategies with the CDFW to reach a "combination of balanced and diverse resource uses," as required by FLPMA. This alternative was also developed in a collaborative process with cooperating agencies to support conservation outcomes based on state recommendations for Greater Sage-Grouse and its habitat.

The BLM continues to build upon the 2015 planning effort as envisioned in Secretarial Order (SO) 3353 by collaborating with states and stakeholders to improve compatibility between federal management plans and state plans and programs at the state level, while ensuring consistency with the BLM's multiple use mission and obligation to protect Greater Sage-Grouse habitat. This enhanced cooperation between the BLM and the states would lead to improved management and coordination with states across the range of Greater Sage-Grouse. These modifications include updating and making adjustments to HMAs and including language that would allow the BLM to update them through plan maintenance, when appropriate, based on the best available current science; removing SFA designations; incorporating new science into the adaptive management strategy and replacing predetermined hard trigger responses with a clear causal factor analysis process to determine the appropriate management responses and to address the decline in Greater Sage-Grouse populations and/or habitat; revising and simplifying an allocation exception process to allow for the consideration of projects within Greater Sage-Grouse HMAs provided they meet prescribed criteria; solidifying the BLM's commitment to use the most current version and future updated versions of the State of Nevada's Habitat Quantification Tool (HQT) to quantify disturbance calculations; and identifying that seasonal timing restrictions and modifying habitat objectives would be addressed in coordination with the US Geological Service (USGS), Nevada Division of Wildlife (NDOW), CDFW, and others.

The Management Alignment Alternative in the Draft RMPA/EIS included a proposed management action for compensatory mitigation based on the mitigation framework the BLM incorporated into its plans in 2015. However, following extensive review of FLPMA, existing regulations, orders, policies, and guidance, 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 BLM-administered lands (Instruction Memorandum 2018-093, *Compensatory Mitigation*, July 24, 2018). Consistent with that determination, compensatory mitigation must be voluntary unless required by other applicable laws, but the BLM recognizes that state authorities may also require compensatory mitigation. The BLM will 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.

The BLM would continue to apply the mitigation hierarchy as described in the CEQ regulations at 40 CFR 1508.20; however, the BLM would focus on avoiding, minimizing, rectifying, and reducing impacts over time. Compensation, which involves replacing or providing substitute resources for the impacts (including through payments to fund such work), would be considered only when: voluntarily offered by a proponent; or, when the appropriate state agency, through coordination with the BLM, determines a state regulation, policy, or program requires or recommends compensatory mitigation. The BLM commits to cooperating with the State to analyze applicant-proposed or state-required or recommended compensatory mitigation to offset residual impacts.

Because this clarification simply aligns the Proposed Plan Amendment with BLM policy and the scope of compensatory mitigation authority expressly provided by FLPMA, and because any analysis of compensatory mitigation relating to future projects is speculative at this level of land use planning, analysis of compensatory mitigation is more appropriate for future project-specific NEPA. The BLM remains committed to achieving the planning-level management goals and objectives identified in this RMPA by ensuring Greater Sage-Grouse habitat impacts are addressed through implementing mitigating actions consistent with the Proposed Plan Amendment. Consistent with the [Notice of Cancellation](#) of the BLM's application to withdraw SFAs from locatable mineral entry (82 *Federal Register* 195, October 11, 2017, p. 47248), this alternative would also remove the recommendation for withdrawal. The effects of these actions are included in **Chapter 4**.

## **ES.5 DEVELOPMENT OF THE PROPOSED PLAN AMENDMENT**

The Proposed Plan Amendment represents the BLM's proposed approach for meeting the purpose and need consistent with the agencies' legal and policy mandates. The Draft RMPA/EIS was issued for a 90-day public review and comment period on May 4, 2018. In particular, the BLM asked for comment on the "net conservation gain" compensatory mitigation standard included in the 2015 plans. The BLM assessed and considered public comments, received both individually and collectively, during the public review period of the Draft RMPA/EIS. The BLM developed the Proposed Plan Amendment, largely based on the Preferred Alternative (Management Alignment Alternative), which was identified in the Draft RMPA/EIS, with modifications based on review of public comments received on the Draft RMPA/EIS. In addition, special expertise input and comments received from cooperating agencies helped shape the Proposed Plan Amendment. Changes in BLM regulations, policy, and guidance were another factor taken into consideration in its development. Key policy and guidance changes center on compensatory mitigation and adaptive management. The BLM responded to all substantive comments received on the Draft RMPA/EIS (**Appendix G**). In preparing responses to comments, the BLM referenced responses based on similar comments.

To align this planning effort with the BLM's compensatory mitigation policy (IM 2018-093), the Proposed Plan Amendment clarifies 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. In accordance with the State of Nevada's goals for managing Greater Sage-Grouse, the Proposed Plan Amendment modifies the net conservation gain standard for compensatory mitigation to clarify that the BLM would pursue net benefit/net conservation gain as a broader planning goal and objective. This means that the BLM would continue to require avoidance, minimization, and other onsite mitigation to adequately conserve Greater Sage-Grouse and its habitat, while remaining committed to implementing beneficial habitat management actions to reduce the threats of fire and invasive species. In fiscal year 2018, the BLM funded approximately \$29 million in Greater Sage-Grouse management actions resulting in approximately 500,000 acres of treated Greater Sage-Grouse habitat and expects to invest another \$22.5 million of habitat management projects in fiscal year 2019 in the Great Basin Region.

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 States 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 of

Nevada 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 Nevada BLM-administered lands.

The MOA describes the State of Nevada’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 of Nevada 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 on BLM-administered lands in Nevada, the BLM would notify the State of Nevada 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 and its habitat.

## ES.6 SUMMARY OF ENVIRONMENTAL CONSEQUENCES

This section includes a summary comparison of environmental consequences from implementing the No-Action Alternative, the Management Alignment Alternative, and the Proposed Plan Amendment. A detailed description of environmental consequences is included in **Chapter 4**.

**Table ES-4**  
**Comparison of Environmental Consequences**

No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
<b>Greater Sage-Grouse</b>		
Under the No-Action Alternative, the designation of 2,767,552 acres as SFAs and recommendation for withdrawal would have minimal and speculative beneficial impacts on Greater Sage-Grouse by reducing mining activities that may cause disturbance to Greater Sage-Grouse and its habitat. The nature and type of effects on Greater Sage-Grouse and its habitat is described in Section 4.4.10 of the 2015 Final EIS (BLM 2015a) and the 2016 SFA Withdrawal EIS (BLM 2016b), Section 4.5.	The Management Alignment Alternative would ensure that current and future renditions of habitat management area boundaries reflect Greater Sage-Grouse habitat on the ground and guide management actions appropriately. As habitat data and modeling is updated (such as updates contained in the latest iteration from Coates et al. 2016), the states would consider adopting these updates to depict HMA and BSU boundaries within the states’ plans and strategies, and then the BLM would consider adopting the HMA and BSU boundaries, along with the allocations associated with each Habitat Management Area ( <b>Table 2-1</b> in Chapter 2). This would help to conserve the species by ensuring allocations and any of their associated restrictions are applied in the appropriate areas, while allowing infrastructure and economic development to occur in areas that would not impact the species.  Updating the allocation exception process would not have impacts on Greater Sage-	Same as Management Alignment Alternative except that the process for compensatory mitigation would be modified to comply with IM 2018-093. The net conservation standard has been modified to reflect BLM’s determination that FLPMA does not authorize the agency to impose mandatory compensatory mitigation on project applicants to achieve a net conservation gain, through land use plans. The BLM would continue to require appropriate mitigation to adequately conserve Greater Sage-Grouse and its habitat

**Table ES-4  
Comparison of Environmental Consequences**

No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
	<p>Grouse and its habitat.</p> <p>Adaptive management hard and soft triggers updates would ensure that the BLM is utilizing the best available science (such as Coates et al. 2017 for population triggers as updated) to adjust management. Impacts on Greater Sage-Grouse and its habitat would be beneficial.</p> <p>The mitigation standard (net conservation gain) would be retained in the Management Alignment Alternative. Improving coordination among state and federal partners, along with using consistent metrics for tracking changes in habitat quality and quantity over time, is anticipated to benefit the species through enhanced knowledge of baseline conditions and restoration/reclamation/mitigation effectiveness.</p> <p>Beneficial impacts were identified for addressing seasonal timing restrictions and modifying indicators and their values in the Habitat Objectives (table 2-2) in the 2015 Final EIS (BLM 2015a). Modifying or removing seasonal timing restrictions allows beneficial Greater Sage-Grouse projects (i.e., juniper and/or pinyon removal) to be implemented in an expedited manner and modifying the Habitat Objectives (table 2-2) would improve the efficiency of Greater Sage-Grouse habitat management by using the best available science to inform Greater Sage-Grouse seasonal habitat requirements.</p> <p>The SFAs would not be designated under this alternative and therefore this area would not be recommended for withdrawal from location and entry under the Mining Law of 1872; however, they would still be managed according to their underlying Greater Sage-Grouse Habitat Management Area designations (i.e., PHMA, GHMA and/or OHMA). Impacts on Greater Sage-Grouse and its habitat would be consistent with those described in the 2015 Final EIS (BLM 2015a).</p>	<p>and would continue to pursue a net conservation gain as a broader planning goal and objective in alignment with State management plans.</p>
<b>Vegetation and Soils</b>		
<p>Under the No-Action Alternative, 2,767,552 acres of Greater Sage-Grouse HMAs would be</p>	<p>The Management Alignment Alternative would not substantially alter vegetation and soil resources because they would continue</p>	<p>Same as Management Alignment Alternative.</p>



**Table ES-4  
Comparison of Environmental Consequences**

<b>No-Action Alternative</b>	<b>Management Alignment Alternative</b>	<b>Proposed Plan Amendment</b>
designated as SFAs and recommended for withdrawal. This alternative would reduce disturbance to Greater Sage-Grouse and its habitat from associated mining activities and would have beneficial impacts on vegetation and soils; effects of SFAs on vegetation and soils are described in Section 4.5.10 of the 2015 Final EIS (BLM 2015a).	to be managed as underlying Greater Sage-Grouse HMAs (i.e., PHMA, GHMA, and/or OHMA). The difference between the nature and type of impacts described would be negligible. These impacts are discussed in Section 4.5 of the 2015 Final EIS (BLM 2015a).	
<b>Land Use and Realty</b>		
Under the No-Action Alternative, the designation of SFAs would be specific to recommending lands for withdrawal from location and entry under the Mining Law of 1872. Because this would not alter the underlying allocations for land use and realty associated with Greater Sage-Grouse HMAs, the nature and type of effects on land use and realty described in Section 4.13.10 of the 2015 Final EIS (BLM 2015a) would be the same as under this alternative.	Adopting the changes proposed in the Management Alignment Alternative would result in slight boundary adjustments for where land use and realty allocations are applied. Given the relatively minor shift in PHMA (-0.5%) and GHMA (+0.5%), these changes would not result in discernible differences from the No-Action Alternative. The decrease in OHMA (-17%) would have negligible impacts on land use and realty; therefore, the difference between the nature and type of impacts described would be negligible. These impacts are discussed in Section 4.13 of the 2015 Final EIS (BLM 2015a).	Same as Management Alignment Alternative.
<b>Renewable Energy Resources</b>		
Under the No-Action Alternative, 2,767,552 acres of Greater Sage-Grouse HMAs would be designated as SFAs and recommended for withdrawal. Because this would not alter the underlying allocations for renewable energy resources associated with Greater Sage-Grouse HMAs, the nature and type of effects on renewable energy resources described in Section 4.14.10 of the 2015 Final EIS (BLM 2015a) would be the same as under this alternative.	Adopting the changes proposed in the Management Alignment Alternative would result in minor boundary adjustments for where renewable energy allocations are applied. Given the relatively minor shift in PHMA (-0.5%) and GHMA (+0.5%), these changes would not result in discernible differences from the No-Action Alternative. The decrease in OHMA (-17%) would make additional areas available for solar development in Nevada, but this is not expected to result in increased development proposals, based on the reasonably foreseeable development scenarios discussed in the 2015 Final EIS (BLM 2015a).	Same as Management Alignment Alternative.
<b>Minerals and Energy</b>		
Under the No-Action Alternative, 2,767,552 acres of Greater Sage-Grouse HMAs would be designated as SFAs and recommended for withdrawal. The	Adopting the changes proposed in the Management Alignment Alternative would result in slight boundary adjustments for where minerals and energy allocations are applied. Given the relatively minor shift in	Same as Management Alignment Alternative.

**Table ES-4  
Comparison of Environmental Consequences**

No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
<p>withdrawal would reduce the availability of geology and mineral resources in Nevada only. New mines would be reduced by 33 percent and the number of exploration projects would be reduced by 41 percent (BLM 2016). The reduction in mining activity would also result in socioeconomic impacts, which are discussed in Section 4.10.1. The nature and type of effects on minerals and energy as described in Section 4.15.10 of the 2015 Final EIS (BLM 2015a) would be the same.</p>	<p>PHMA (-0.5%) and GHMA (+0.5%), these changes would not result in discernible differences from the No-Action Alternative. The decrease in OHMA (-17%) would be negligible; therefore, the difference between the nature and type of impacts described would be negligible. These impacts are discussed in Section 4.15 of the 2015 Final EIS (BLM 2015a).</p>	
<b>Socioeconomics</b>		
<p>Under the No-Action Alternative the mining industry could be adversely affected from having fewer potential locations to develop and explore. The economic impacts in Nevada would differ considerably, depending on whether the one new mine that was developed was a large gold/silver mine or a smaller barite mine. Withdrawal would support approximately 414 to 739 fewer jobs in Nevada, and between \$25.8 and \$56.5 million less in annual labor income (BLM 2016).</p> <p>SFA designation would also reduce the number of exploration projects from 78 to 32 in Nevada. Exploration would be expected to fall by approximately 41 percent (approximately \$3.8 million; BLM 2016).</p>	<p>Adopting the changes proposed in the Management Alignment Alternative and not recommending SFAs for withdrawal could lead to a corresponding increase in populations and employment for the counties that would see new mine development in Nevada. Where the SFAs have been removed, the projected economic impacts from operation of future mines would result in 801 jobs, a labor income of \$62 million, and approximately \$12 million in state/local tax revenue in Nevada. With the exception of not including SFAs, the difference between the nature and type of impacts described would be negligible, given the similarity of the proposed management actions. These impacts are discussed in Section 4.21 of the 2015 Final EIS (BLM 2015a) and Section 4.3.6 of the 2016 SFA DEIS (BLM 2016).</p>	<p>Same as Management Alignment Alternative.</p>
<b>Livestock Grazing</b>		
<p>Under the No-Action Alternative, the designation of SFAs would be specific to recommending lands for withdrawal from location and entry under the Mining Law of 1872. Because this would not alter the underlying allocations for livestock grazing associated with Greater</p>	<p>Despite minor differences between the actions described in the Management Alignment Alternative and those analyzed in the 2015 Final EIS, the difference between the nature and type of impacts described would be negligible. These impacts are discussed in Section 4.10 of the 2015 Final EIS (BLM 2015a).</p>	<p>Same as Management Alignment Alternative.</p>

**Table ES-4  
Comparison of Environmental Consequences**

<b>No-Action Alternative</b>	<b>Management Alignment Alternative</b>	<b>Proposed Plan Amendment</b>
Sage-Grouse HMAs, the nature and type of effects on livestock grazing described in Section 4.10.10 of the Final EIS (BLM 2015a) would be the same as under this alternative.		
<b>Comprehensive Travel Management</b>		
Under the No-Action Alternative, the designation of SFAs would be specific to recommending lands for withdrawal from location and entry under the Mining Law of 1872. Because this would not alter the underlying allocations for travel and transportation management associated with Greater Sage-Grouse HMAs, the nature and type of effects on travel and transportation management described in Section 4.12.10 of the Final EIS (BLM 2015a) would be the same as under this alternative.	Adopting the changes proposed in the Management Alignment Alternative would result in minor boundary adjustments where travel and transportation allocations are applied. Given the relatively minor shift in PHMA (-0.5%) and GHMA (+0.5%), these changes would not result in discernible differences from the No-Action Alternative. The decrease in OHMA (-17%), would have negligible impacts on comprehensive travel management; therefore, the difference between the nature and type of impacts described would be negligible. These impacts are discussed in Section 4.12 of the 2015 Final EIS (BLM 2015a).	Same as Management Alignment Alternative.

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# Chapter I. Purpose and Need for Action

## I.1 INTRODUCTION

Greater Sage-Grouse (*Centrocercus urophasianus*) is a state-managed species dependent on sagebrush steppe ecosystems that are managed in partnership across its range by federal, state, local, and private authorities. State agencies responsible for fish and wildlife management possess broad powers for the protection and management of fish, wildlife, and plants within their borders, except where preempted by federal law. Similarly, the Department of the Interior (DOI) has broad responsibilities to manage federal lands and resources for the public's benefit. The BLM and US Forest Service (Forest Service) manage approximately half of the Greater Sage-Grouse habitat range-wide across 11 states; approximately 20.5 million acres of this is within the Nevada and Northeastern California Sub-regional planning area.

State and local 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 Greater Sage-Grouse and its habitat date back to the 1950s. For the past 2 decades, state wildlife agencies, local agencies, federal agencies, and many others in the range of the species have been collaborating to conserve Greater Sage-Grouse and its habitats.

In response to a 2010 determination by the US Fish and Wildlife Service (USFWS) that the listing of the Greater Sage-Grouse under the Endangered Species Act was “warranted, but precluded by higher priority listing actions,” the BLM in coordination with the DOI and the US Department of Agriculture developed a management strategy that included targeted Greater Sage-Grouse management actions. In 2015, the agencies adopted amendments and revisions to 98 BLM and Forest Service land use plans (LUPs) across 10 western states. These LUPs addressed, in part, threats to the Greater Sage-Grouse and its habitat. The amended LUPs 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 Endangered Species Act of 1973. The USFWS attributed its 2010 “warranted, but precluded” determination primarily to “inadequate regulatory mechanisms.” In concluding “not warranted” in 2015, the USFWS based its decision in part on regulatory certainty from the conservation commitments and management actions in the federal land use plan amendments (LUPAs) and revisions, as well as on other private, state, and federal conservation efforts.

The BLM continues to prioritize efforts to conserve Greater Sage-Grouse and restore sagebrush habitat and increase the number 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.

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 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.

The plans recommended that approximately 10 million acres of SFAs be proposed for withdrawal, 2.8 million acres of which fall within Nevada; however, a proposed withdrawal of Sagebrush Focal Areas (SFAs) was cancelled on October 11, 2017. The BLM determined the proposal to withdraw 10 million acres 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 (Secretary) issued Secretarial Order (SO) [3349](#), [American Energy Independence](#), ordering 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 [SO 3353](#) with a purpose of enhancing cooperation among 11 western states and the BLM in managing and conserving Greater Sage-Grouse. SO 3353 directed an Interior Review Team, consisting of the BLM, USFWS, and US Geological Survey (USGS), to coordinate with the Sage-Grouse Task Force Team and review the 2015 Greater Sage-Grouse plans and associated policies to identify provisions that may require modification to make the plans more consistent with the individual state plans and better balance the BLM’s multiple-use mission as directed by SO 3349. On August 4, 2017, the Interior Review Team submitted its “[Report in Response to SO 3353](#).” This report made recommendations for 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.

Consistent with the report, the BLM published a Notice of Intent titled “[Notice of Intent to Amend Land Use Plans Regarding Greater Sage-Grouse Conservation and Prepare Associated Environment Impact Statements or Environmental Assessments](#)” in the *Federal Register* on October 11, 2017. During this public scoping period, the BLM sought public comments on a list of specific issues on whether all, some, or none of the 2015 Greater Sage-Grouse plans should be amended, what additional issues should be considered, and if plans should be completed at the state level rather than at the national

level. In addition, the BLM recognized that Greater Sage-Grouse is a state-managed species dependent on sagebrush steppe habitats managed in partnership between federal, state, and local authorities and that input from state governors would be given significant weight when considering what management changes should be made and in ensuring consistency with the BLM's multiple-use mission during a land use plan amendment process.

On March 31, 2017, the United States District Court for the District of Nevada held that the BLM violated the National Environmental Policy Act (NEPA) by failing to prepare a supplemental Environmental Impact Statement (EIS) for the designation of SFA in the Nevada and Northeastern California Greater Sage-Grouse Resource Management Plan Amendment in Nevada. This Resource Management Plan Amendment and Environmental Impact Statement (RMPA/EIS) responds to the Court's order by evaluating the SFA designation and providing the public with an opportunity to review and comment on that evaluation. The BLM would also provide the public with an opportunity to review and comment on the designation of habitat management areas (HMAs), such as priority, general, and other, which provide a landscape-level reference of relative Greater Sage-Grouse habitat as determined by landscape characteristics and the likelihood of Greater Sage-Grouse occurrence (Coates et al. 2016).

This RMPA/EIS incorporates by reference the [2015 Nevada and Northeastern California Greater Sage-Grouse Proposed RMP Amendment and Final EIS](#) (BLM 2015a; 2015 Final EIS) and incorporates by reference all the descriptions of the affected environment and impacts analyzed in the 2015 Final EIS and subsequent Approved Nevada and Northeastern California Greater Sage-Grouse Land Use Plan Amendment and Record of Decision (BLM 2015b; 2015 ARMPA/ROD). This RMPA/EIS also incorporates by reference the [2016 Sagebrush Focal Area Withdrawal Draft EIS \(BLM 2016; 2016 SFA Draft EIS\)](#). This RMPA/EIS has been prepared to analyze the impacts associated with aligning the 2015 Final EIS with the State of Nevada and State of California's Greater Sage-Grouse management strategies.

Incorporation by reference and tiering provide opportunities to reduce paperwork and redundant analysis in the NEPA process. When incorporating by reference, the author refers to other available documents that cover similar issues, effects, and/or resources considered in the NEPA analysis that is being prepared. Incorporation by reference allows brief summarizations of relevant portions of other documents rather than repeating them.

## **I.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 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 light of the policies and other background summarized in **Section I.1**, the purpose and need for this RMPA/EIS is to modify the approach to Greater Sage-Grouse management in existing land use plans through (1) enhancing cooperation and coordination with the States of Nevada and California, (2) align with DOI and BLM policy directives that have been issued since 2015, and (3) incorporate appropriate

management consistency, flexibility, and adaptation to better align with Nevada and California's Greater Sage-Grouse management strategies.

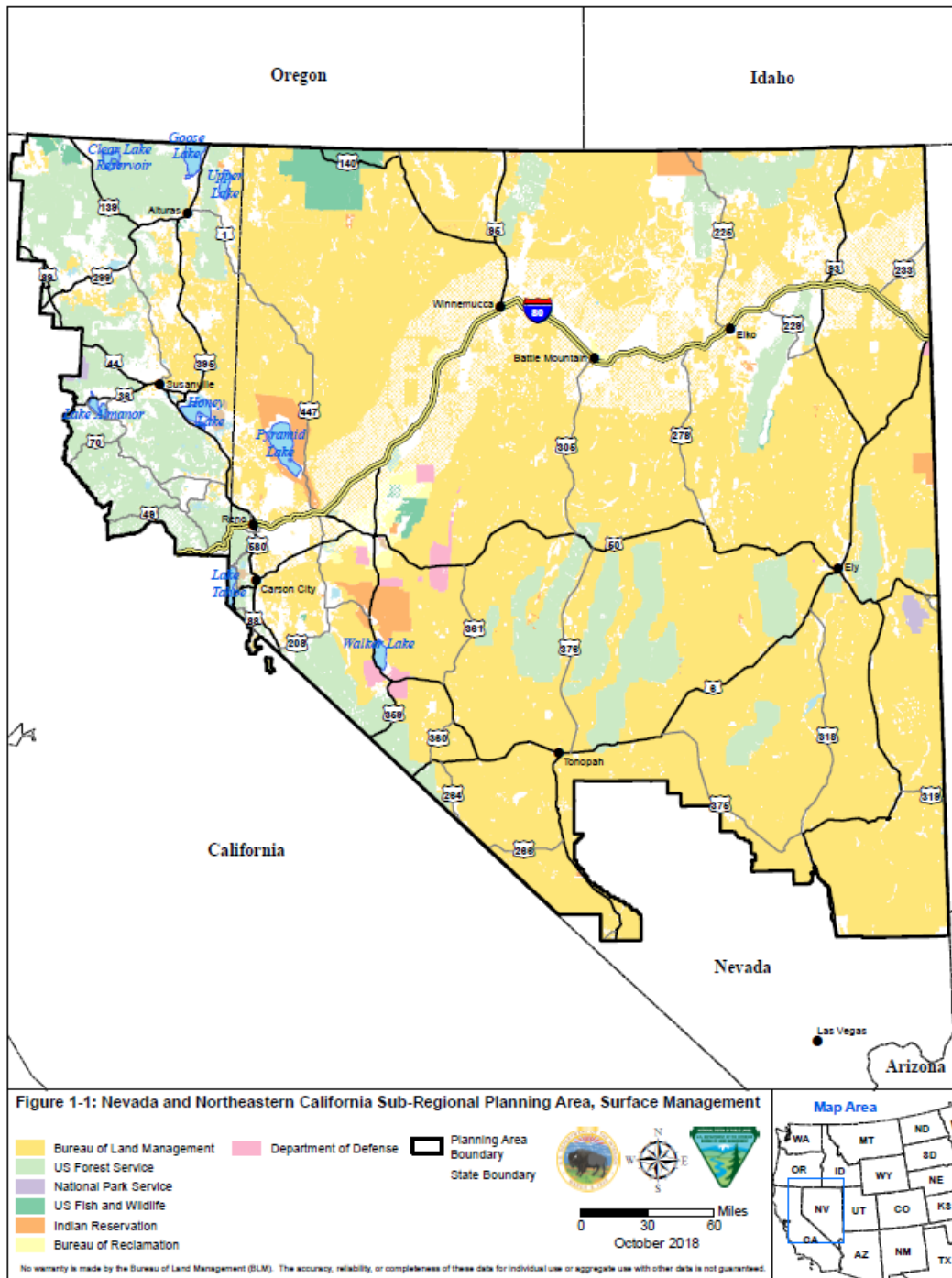
### **I.3 PLANNING AREA AND CURRENT MANAGEMENT**

The planning area boundary includes all lands regardless of jurisdiction in the Nevada and Northeastern California Sub-region (see **Figure I-1**). **Table I-1**, Land Management in the Planning Area, outlines the number of surface acres that are administered by specific federal agencies, states, and local governments and lands that are privately owned in the planning area. It includes other BLM-administered lands that are not allocated as Greater Sage-Grouse HMAs (i.e., priority, general, and other) and do not contain habitat for Greater Sage-Grouse. The planning area includes the BLM Nevada District Offices of Battle Mountain, Carson City, Elko, Ely, and Winnemucca and the BLM California Field Offices of Applegate (Alturas and Surprise) and Eagle Lake. The 2015 ARMPA did not establish any additional management for lands that are not identified as Greater Sage-Grouse HMAs, which would continue to be managed according to the existing, underlying land use plan for the areas. BLM-administered lands in HMAs within the planning area are where management direction described in this document would be applied (the decision areas; see **Figures 2-1a** and **2-1b [Appendix A]**). **Figures I-2a** and **I-2b (Appendix A)** display where HMAs reside across the planning area for all lands regardless of jurisdiction.

These broad HMA maps are necessary at the resource management planning scale in order to include a variety of important Greater Sage-Grouse seasonal habitats and movement corridors that are spread across geographically diverse and naturally fragmented landscapes. Greater Sage-Grouse use various habitat types to meet seasonal needs throughout the year and the resulting mosaic of habitats (e.g., breeding, nesting, early brood-rearing, late brood-rearing, and winter) 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, in and of themselves, may not provide direct habitat value for Greater Sage-Grouse (e.g., canyons, water bodies, and human disturbances), these areas may be crossed by birds when moving between seasonal habitats; therefore, these HMAs 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 areas include habitats that may not meet the Greater Sage-Grouse seasonal habitats described in the Habitat Objectives for Greater Sage-Grouse (**Table 2-2**) 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**



**Table I-1  
Land Management in the Planning Area**

<b>Surface Land Management</b>	<b>Total Surface Land Management Acres</b>
BLM	45,424,700
Forest Service	9,787,300
Private	12,111,700
Indian reservation	942,600
USFWS	806,700
Department of Energy	2,600
State	232,500
National Park Service	115,000
Bureau of Reclamation	431,000
Local government	17,800
Department of Defense	402,400
<b>Total acres</b>	<b>70,274,300</b>

Source: BLM GIS 2015

#### **I.4 PLANNING CRITERIA**

Planning criteria establish constraints, guidelines, and standards for the planning process and help the BLM define the scope of the planning effort and estimate the extent of data collection and analysis. The following criteria are based on standards prescribed by applicable laws and regulations; agency guidance; results of consultation and coordination with the public and other federal, state, and local agencies; analysis pertinent to the planning area; and professional judgment.

The BLM has identified these planning criteria:

- The BLM would comply with all laws, regulations, policies, and guidance related to public lands management and implementing FLPMA and NEPA on BLM-administered lands.
- Greater Sage-Grouse is a state-managed species dependent on sagebrush steppe habitats managed in partnership by federal, state, and local authorities, including private landowners. Appropriate state agencies' Greater Sage-Grouse data and expertise would be used to the fullest extent practicable by the BLM in making management determinations on BLM-administered lands.
- Lands addressed in the RMPA/EIS would be BLM-administered land in Greater Sage-Grouse habitats, including surface and split-estate lands with federal subsurface mineral rights. Any decisions in this RMPA/EIS would apply only to BLM-administered lands.
- This RMPA/EIS would comply with Secretarial Orders, including 3353 (Greater Sage-Grouse Conservation and Cooperation with Western States), which strives for compatibility and alignment with state conservation plans.
- This RMPA/EIS would 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), and other best available science.
- This RMPA/EIS's adaptive management actions would be consistent with the Department of the Interior's Adaptive Management Technical Guide (DOI 2009).

- This RMPA/EIS would comply with BLM Manual 6840, Special Status Species Management.
- This RMPA/EIS would recognize valid existing rights.
- All activities and uses within Greater Sage-Grouse habitats would be managed to achieve Greater Sage-Grouse Habitat Objectives (Table 2-2) set forth in the 2015 ARMPA/ROD and land health standards (43 CFR 4180).
- Where more restrictive land use allocations or decisions are in effect for other resources (e.g., wilderness study areas, areas of critical environmental concern, cultural resources, and riparian areas) under existing RMPs, those more restrictive land use allocations or decisions would not be amended by this RMPA/EIS.
- This RMPA/EIS would respond to the March 31, 2017, United States District Court for the District of Nevada court order.

### I.5 ISSUES AND RELATED RESOURCE TOPICS IDENTIFIED THROUGH SCOPING

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 is presented in a report titled “Potential Amendments to Land Use Plans Regarding Greater Sage-Grouse Conservation Scoping Report” (BLM 2018a; <https://goo.gl/FopNgVW>).

When determining whether to retain an issue for more detailed analysis in this 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 or of critical importance to development of a Greater Sage-Grouse management plan.
- 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.
- There are potentially significant impacts on resources associated with the issue.

Ultimately, it is important for decision-makers and the public to understand the impacts that each of the alternatives would have on specific resources; therefore, the BLM uses resource topics as a heading to indicate which resources would be affected by a potential management change. Importantly, resource topics would help organize the discussions of the affected environment (**Chapter 3**) and environmental consequences (**Chapter 4**).

The sections below lay out how issues raised during scoping, as well as related resource topics, are considered in this RMPA/EIS. Generally, they fall into the following categories:

- Issues and related resource topics retained for further consideration in this RMPA/EIS. These were issues raised during scoping that are retained in this 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 this 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 this RMPA/EIS. Just like issues, resource topics may have been analyzed in the [2015 Final EIS](#) for those decisions being included in this RMPA/EIS.

- Clarification of decisions in the [2015 ARMPA](#). These are decisions or frameworks in the 2015 ARMPA/ROD that required clarification as to their application or implementation. No new analysis is 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 are not carried forward in this RMPA/EIS. While some of these issues are considered in this RMPA/EIS, they do not require additional analysis because they were analyzed in the [2015 Final EIS](#). Others are not carried forward in this RMPA/EIS because they do not further the purpose of aligning with the state’s conservation plan or management strategies. Similar to issues, there are resource topics that are not retained for further analysis in this RMPA/EIS. This is because either they are not affected by the changes proposed in **Chapter 2** or because the effect was analyzed in the 2015 Final EIS.

**1.5.1 Issues and Related Resource Topics Retained for Further Consideration in this RMPA/EIS**

**Table 1-2** summarizes those issues identified through scoping and that have been retained for consideration and additional discussion in **Chapters 3** and **4**.

Based on the issues identified in **Table 1-2** that have not been previously analyzed, the resource topics that have the potential to be impacted are: Greater Sage-Grouse, vegetation (including invasives and special status vegetation), land use and realty, renewable energy, minerals and energy, socioeconomics, livestock grazing, and comprehensive travel management. These resource topics, therefore, are carried forward for detailed analysis.

**Table 1-2** identifies the corresponding resource topics to which the issues relate. The level of detail in the description of each resource topic and the effects from implementing any of the alternatives also are described in **Chapters 3** and **4**.

**Table 1-2  
Issues and Related Resource Topics**

Issues	Resource Topics Related to the Issues
<p><b>Modifying Habitat Management Area Designations</b></p> <ul style="list-style-type: none"> <li>• Need for adjusting Greater Sage-Grouse Habitat Management Areas (HMAs) so that they reflect the best available science based on updates to habitat data and use modeling (Coates et al. 2016) and are consistent with HMAs identified by the State of Nevada and recommended by CDFW. This would provide consistency in management across jurisdictions and to third parties operating on public and state or private lands in the Nevada and Northeastern California Subregion.</li> <li>• Integration of flexibility into the plans to be able to adjust HMA designations (and their associated allocations), based on the best available science, through</li> </ul>	<ul style="list-style-type: none"> <li>• Greater Sage-Grouse</li> <li>• Vegetation</li> <li>• Land Use and Realty</li> <li>• Renewable Energy</li> <li>• Minerals and Energy</li> <li>• Socioeconomics</li> <li>• Livestock Grazing</li> <li>• Comprehensive Travel Management</li> </ul>

**Table I-2  
Issues and Related Resource Topics**

Issues	Resource Topics Related to the Issues
<p>plan maintenance or amendment, as appropriate.</p> <ul style="list-style-type: none"> <li>Maintaining all HMAs as identified in the 2015 ARMPA/ROD, and SFAs, which should be provided with the most protections.</li> </ul>	
<p><b>Removing Sagebrush Focal Area Designations</b></p> <ul style="list-style-type: none"> <li>Address eliminating the SFA designation and the cancellation of the proposed withdrawal of SFAs and the reasoning for the cancellation <ul style="list-style-type: none"> <li>Analyze the inclusion and removal of SFAs, in response to the March 31, 2017, United States District Court for the District of Nevada court order.</li> </ul> </li> <li>Is this habitat designation (i.e., SFA) needed to adequately maintain conservation of Greater Sage-Grouse HMAs?</li> </ul>	<ul style="list-style-type: none"> <li>Greater Sage-Grouse</li> <li>Vegetation</li> <li>Land Use and Realty</li> <li>Renewable Energy</li> <li>Minerals and Energy</li> <li>Socioeconomics</li> <li>Livestock Grazing</li> <li>Comprehensive Travel Management</li> </ul>
<p><b>Adaptive Management</b></p> <ul style="list-style-type: none"> <li>Ensure federal, state, and local partners are part of the causal factor analysis process</li> <li>Lack of flexibility with implementing and removing hard trigger adaptive management responses</li> <li>Better alignment with DOI guidance on implementation of the adaptive management process</li> <li>Incorporate best available science including local data and information into the adaptive management strategy</li> <li>Utilize collaborative processes with stakeholders, appropriate state and local agencies, and authorized land users when developing and implementing management responses to any trigger met or surpassed</li> </ul>	<ul style="list-style-type: none"> <li>Greater Sage-Grouse</li> <li>Vegetation</li> <li>Land Use and Realty</li> <li>Renewable Energy</li> <li>Minerals and Energy</li> <li>Socioeconomics</li> <li>Livestock Grazing</li> <li>Comprehensive Travel Management</li> </ul>
<p><b>Allocation Exception Process</b></p> <ul style="list-style-type: none"> <li>Clarify and make consistent the various exception allocation processes</li> <li>Verify through ground-truthing (Greater Sage-Grouse habitat suitability assessments, such as Stiver et al. 2015), the utilization of landscape-scale mapping of priority habitat management area (PHMA), general habitat management area (GHMA), and other HMAs (OHMA) in regards to the application of land use plan allocations and stipulations</li> <li>Address restrictions on actions related to public health and safety, existing infrastructure, and administrative functions that serve a public purpose</li> <li>Address inconsistencies with existing federal legislation and the 2015 ARMPA/ROD that include land tenure adjustments, including, but not limited to, disposals, exchanges, transfers, and recreation and public purposes actions</li> </ul>	<ul style="list-style-type: none"> <li>Greater Sage-Grouse</li> <li>Vegetation</li> <li>Land Use and Realty</li> <li>Renewable Energy</li> <li>Minerals and Energy</li> <li>Socioeconomics</li> <li>Livestock Grazing</li> <li>Comprehensive Travel Management</li> </ul>
<p><b>Mitigation</b></p> <ul style="list-style-type: none"> <li>Alignment with the State of Nevada's mitigation strategy to the extent allowable by federal law on Nevada BLM-administered lands only</li> <li>Defer to the State of Nevada's mitigation strategy to the extent allowable by federal law and regulation on Nevada BLM-administered lands only</li> <li>Consider and analyze the State of Nevada's and California's recommendations for project level mitigation in relevant NEPA documentation</li> <li>Ensure consistency in tracking and reporting changes to Greater Sage-Grouse habitat quality and quantity</li> <li>Alignment with updated BLM policy regarding compensatory mitigation (IM 2018-093)</li> </ul>	<ul style="list-style-type: none"> <li>Greater Sage-Grouse</li> <li>Vegetation</li> <li>Land Use and Realty</li> <li>Renewable Energy</li> <li>Minerals and Energy</li> <li>Socioeconomics</li> <li>Livestock Grazing</li> <li>Comprehensive Travel Management</li> </ul>

**Table I-2  
Issues and Related Resource Topics**

Issues	Resource Topics Related to the Issues
<p><b>Seasonal Timing Restrictions</b></p> <ul style="list-style-type: none"> <li>• Alignment with State of Nevada’s conservation plan and management strategies with the State of California, to the greatest extent possible</li> <li>• Consider exceptions and/or modifications to Greater Sage-Grouse seasonal timing restrictions to allow for beneficial or neutral projects as recommended by the State of Nevada and California consistent with its conservation plan and/or mitigation strategies to occur in a timely manner</li> <li>• Seasonal timing restrictions need to be adjusted to allow for public health and safety concerns and time sensitive administrative functions that serve a public purpose to be addressed without delay</li> </ul>	<ul style="list-style-type: none"> <li>• Greater Sage-Grouse</li> <li>• Vegetation</li> <li>• Land Use and Realty</li> <li>• Renewable Energy</li> <li>• Minerals and Energy</li> <li>• Socioeconomics</li> <li>• Livestock Grazing</li> <li>• Comprehensive Travel Management</li> </ul>
<p><b>Modifying Habitat Objectives</b></p> <ul style="list-style-type: none"> <li>• Consideration of site potential, based on such factors as ecological site descriptions, state and transition models, etc.</li> <li>• Consistency with State of Nevada’s desired habitat conditions</li> <li>• Incorporation of the best available current science supporting modifications</li> <li>• Clarify that the Greater Sage-Grouse Habitat Objectives (Table 2-2 of the 2015 ARMPA/ROD) are actually desired outcomes expressed as goals consistent with BLM Planning Handbook (H-1601-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Greater Sage-Grouse</li> <li>• Vegetation</li> <li>• Land Use and Realty</li> <li>• Renewable Energy</li> <li>• Minerals and Energy</li> <li>• Socioeconomics</li> <li>• Livestock Grazing</li> <li>• Comprehensive Travel Management</li> </ul>

### I.5.2 Clarification of Planning Decisions in the 2015 ARMPA/ROD

The following issues identified in existing planning decisions in **Table I-3** were raised during scoping. These issues require clarification to language in the 2015 ARMPA/ROD but do not require new analysis. The clarifying language for these planning decisions is displayed in this planning document to communicate how these issues are being addressed through plan maintenance, policy, or implementation.

**Table I-3  
Clarification Issues**

Clarification Issue	Clarifications Addressed through Plan Maintenance, Policy, or Implementation
<p><b>Modifying Lek Buffers</b> Clarification regarding the application of lek buffer-distances</p>	<p><i>Plan Maintenance</i> - Management Decisions SSS 2(D) and SSS 3(C) from the 2015 ARMPA/ROD have been clarified to resolve conflicting statements regarding how the BLM would “apply” lek buffers contained in the USGS Report <i>Conservation Buffer Distance Estimates for Greater Sage-Grouse – A Review, Open File Report 2014-1239</i> (Mainer et al. 2014). Management Decisions SSS 2(D) and SSS 3(C) have been revised to read as follows:</p> <p><i>In undertaking BLM management actions [in PHMA and GHMA], and consistent with valid and existing rights and applicable law in authorizing third-party actions, the BLM would utilize the lower end of the interpreted range of lek buffer-distances and guidance identified in Mainer et al. (2014) to establish the evaluation area around leks that would be used to analyze impacts during project-specific</i></p>

**Table I-3  
Clarification Issues**

<b>Clarification Issue</b>	<b>Clarifications Addressed through Plan Maintenance, Policy, or Implementation</b>
	<p><i>NEPA, including scientifically justifiable departures based on local data, topography, and other factors, in accordance with <b>Appendix B</b>.</i></p> <p><b>Appendix B</b> has also been revised to reflect this clarified decision language.</p>
<p><b>Changing Requirements for Required Design Features</b> Clarify the application of required design features and opportunities to deviate from them</p>	<p><i>Plan Maintenance - <b>Appendix C</b> includes a required design features (RDFs) worksheet that BLM Nevada and Northeastern California field and district offices would complete for all proposed activities authorized in PHMA, GHMA, and OHMA. This worksheet clearly defines the rationale for dismissing certain RDFs when they are not appropriate for specific proposed activities.</i></p>
<p><b>Fire and Invasives</b> Provide the necessary prioritization of all three aspects of fire management: pre-suppression, suppression, and rehabilitation and find ways to expedite on-the-ground treatments to address this present and widespread threat in the Nevada and Northeastern California Sub-region</p>	<p><i>Policy - When the <a href="#">Great-Basin-Wide Programmatic Environmental Impact Statements (PEISs) for Fuel Breaks and to Reduce the Threat of Wildfire and Support Rangeland Productivity</a> and any other programmatic analysis associated with vegetation treatments are completed, BLM Nevada and California would issue statewide policies that would instruct BLM field and district offices to incorporate by reference the analysis contained in the PEISs for on-the-ground environmental analysis, in an effort to expedite on-the-ground activities that would address the present and widespread threat of fire and invasives in the Nevada and Northeastern California Sub-region. The Draft PEISs are tentatively scheduled for publication in December 2018, with Final PEISs tentatively scheduled for publication in June/July 2019. The PEISs would not modify any proposed land use plan decisions (including HMA designations) specified in this RMPA/EIS.</i></p>
<p><b>Increase Opportunities for Outcome-Based Grazing</b> Identify and complete a number of authorizations to support the development of rigorous and defensible outcome-based grazing</p>	<p><i>Implementation - BLM Nevada and California would continue to pursue outcome-based grazing initiatives that would exhibit a new management paradigm that BLM managers and livestock operators can use to establish management practices that can achieve specific management objectives that respond to changing, on-the-ground conditions such as wildfires, high moisture years, or drought. This would better ensure healthy rangelands, high-quality wildlife habitat, and economically sustainable ranching operations.</i></p>
<p><b>Land Health Assessments and Habitat Objectives</b> Management Decisions LG 5 within the existing 2015 ARMPA/ROD is inconsistent with 43 CFR 4160.1. References of this decision contained in Management Decisions LG 6 and LG 10 would be removed and these management decisions would be modified.</p>	<p><i>Plan Maintenance - Management Decision LG 5 (page 2-25 through 2-26, ARMPA), as written, is not consistent with existing BLM grazing regulations (43 CFR 4160.1) or recent policies (WO Instruction Memorandum 2018-023), as it provides direction to implement interim management strategies until appropriate modifications are incorporated through the permit renewal process (if results from a land health assessment indicate that Greater Sage-Grouse habitat objectives are not met and</i></p>

**Table I-3  
Clarification Issues**

Clarification Issue	Clarifications Addressed through Plan Maintenance, Policy, or Implementation
	<p>grazing is a causal factor). This management decision, however, does not identify that these interim management strategies need to be within the existing terms and conditions of a grazing permit in order to implement them immediately. Under 43 CFR 4160.1 (existing BLM grazing regulations), the BLM must issue a proposed/final decision on any affected applicant, permittee or lessee, and interested public when modifying a grazing permit. If the interim management strategies are within the existing terms and conditions of a grazing permit, they can be implemented immediately; however, if the selected interim management strategies are outside of the existing terms and conditions, the BLM would need to comply with NEPA and the decision processes provided in 43 CFR 4160. For this reason, Management Decision LG 5 would be removed, and references to Management Decision LG 5 in Management Decisions LG 6 and LG 10 would be removed and these management decisions would be modified.</p>

### **I.5.3 Issues and Resource Topics Not Carried Forward for Additional Analysis (Scoping Issues Outside the Scope and Scoping Issues Previously Analyzed)**

#### ***Issues and Related Resource Topics Not Carried Forward for Additional Analysis***

The following issues were raised during scoping and are not carried forward for a variety of 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 States of Nevada and California.

Because the following issues were raised during scoping and were already analyzed in the 2015 Final EIS, and no significant new information has emerged, they do not require additional analysis in this RMPA/EIS. These issues were analyzed under most resource topics in the 2015 Final EIS, and these 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 RMPA/EIS are within the range of alternatives previously analyzed.

- Effects of No surface occupancy (NSO) stipulations on Greater Sage-Grouse habitat on non-BLM-administered lands
- Mitigation for oil and gas development
- Prioritization of fluid mineral leases outside of PHMA and GHMA
- Numerical noise limitations within PHMA
- Contribution of disturbance caps toward Greater Sage-Grouse conservation objectives
- Wildfire response to vegetation treatments
- Sage-Grouse Habitat Assessment Framework (Stiver et al. 2015)



Other issues were evaluated as part of the [2015 Final EIS](#). For the same reasons they were dismissed in the [2015 Final EIS](#), they are not carried forward for detailed analysis in this RMPA/EIS:

- Hunting of Greater Sage-Grouse
- Predator control<sup>1</sup>
- Aircraft overflights in PHMA and GHMA<sup>2</sup>

### **Resource Topics Not Carried Forward for Additional Analysis**

The resource topics below are dismissed from detailed analysis. While these resource topics may have impacts related to Greater Sage-Grouse conservation that were analyzed in the 2015 Final EIS, they are dismissed from detailed analysis because they have no potentially significant impacts from actions proposed in this RMPA/EIS:

- Geology
- Indian trust resources
- Noise
- Air quality and visibility
- Special designations (e.g., areas of critical environmental concern, research natural areas, wilderness, wilderness study areas, wild and scenic rivers, and national scenic and historic trails)
- Environmental justice
- Wildland fire and fire management
- Wild horses and burros
- Recreation
- Visual resources
- Water resources
- Cultural and heritage resources
- Lands with wilderness characteristics

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

The BLM recognizes the importance of state and local plans. The BLM would work to be consistent with or complementary to the management actions in these plans when possible to the extent consistent with the laws governing the administration of public lands.

### **I.6.1 State Plans**

State plans considered during this planning effort include the following:

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<sup>1</sup>While the BLM does not have the authority to carry out certain predator control actions (such as permitting take permits), it is committed to working with partners who do, particularly in degraded habitat, such as recovering burns and areas of pinyon and/or juniper encroachment, where predators are having a disproportionate impact on local Greater Sage-Grouse populations.

<sup>2</sup> Military aircraft operations are outside the scope of the Proposed RMPA/Final EIS. This proposed plan amendment does not apply to aircraft activities that are under the jurisdiction of the Federal Aviation Administration or the Department of Defense.

- Nevada’s 2016-2021 Statewide Comprehensive Outdoor Recreation Plan (SCORP)— Assessment and Policy Plan (Nevada Division of State Parks and Department of Conservation and Natural Resources 2016-2020)
- Nevada Comprehensive Preservation Plan (Nevada State Historic Preservation Office 2012–2020)
- Sustainable Preservation: California’s Statewide Historic Preservation Plan, 2013–2017 (California State Parks 2013)
- Nevada Department of Wildlife-Wildlife Action Plan (2013)
- Greater Sage-Grouse Conservation Plan for Nevada and Eastern California (NDOW 2004)
- Nevada Sage-Grouse Conservation Strategy (State of Nevada 2001, 2004, 2012)
- Nevada Sage-Grouse Conservation Plan (State of Nevada 2014, as amended)
- Nevada’s Coordinated Invasive Weed Strategy (Nevada Weed Action Committee 2000)
- Nevada Division of State Lands, Lands Identified for Public Acquisition (Nevada Department of Conservation & Natural Resources 1999)
- State of Nevada Drought Plan (Nevada Department of Conservation and Natural Resources 2012)
- Nevada Division of State Lands, Nevada Statewide Policy Plan for Public Lands (Nevada Department of Conservation & Natural Resources 1985)

### **I.6.2 Local Plans**

Local land use plans considered during this planning effort include the following:

- Carson City Comprehensive Master Plan, Nevada (Carson City 2006)
- Churchill County Master Plan, Nevada (Churchill County 2015)
- Churchill County Water Resource Plan, Nevada (Churchill County 2007)
- City of Caliente Master Plan, Nevada (City of Caliente 2011)
- Douglas County Comprehensive Master Plan, Nevada (Douglas County 2012)
- Douglas County Open Space Plan, Nevada (Douglas County 2007)
- Elko County, Nevada Greater Sage-Grouse Management and Conservation Strategy Plan (September 2012)
- Elko County General Open Space Plan, Nevada (Elko County 2003)
- Elko County Public Lands Policy Plan, Nevada (Elko County 2008)
- Elko County Water Resource Management Plan, Nevada (Elko County 2007)
- Esmeralda County Master Plan, Nevada (Esmeralda County 2011)
- Esmeralda County Public Lands Policy Plan, Nevada (Esmeralda County 2013)
- Eureka County Master Plan, Nevada (Eureka County 2010)
- Humboldt County Master Plan, Nevada (Humboldt County 2002)
- Humboldt County Master Plan Open Space Element Amendment, Nevada (Humboldt County 2003)
- Lander County Master Plan, Nevada (Lander County 2010)

- Lander County Policy Plan for Federally Administered Lands, Nevada (Lander County 2005)
- Lander County Water Resources Plan, Nevada (Lander County 2011)
- Lassen County Fire Safe Plan, California (Lassen County 2012)
- Lassen County General Plan, California (Lassen County 1999)
- Lincoln County Master Plan, Nevada (Lincoln County 2007)
- Lincoln County Open Space and Community Lands Plan, Nevada (Lincoln County 2011)
- Lincoln County Public Lands Policy Plan, Nevada (Lincoln County 2015)
- Lyon County Comprehensive Master Plan, Nevada (Lyon County 2010)
- Modoc County General Plan, California (Modoc County 1988)
- Nye County Comprehensive Master Plan, Nevada (Nye County 2011)
- Pershing County Master Plan, Nevada (Pershing County 2002)
- Pershing County Natural Resources Management Plan: Natural Resources and Federal or State Land Use, Nevada (Pershing County 2010)
- Shasta County General Plan, California (Shasta County 2004)
- Siskiyou County General Plan, California (Siskiyou County 2010)
- Storey County Master Plan, Nevada (Storey County 1994)
- Title 7 of the Nye County Code (Comprehensive Land Use and Management Plan for Federal and State Lands within Nye County), Nevada (Nye County 2009)
- Tri-Party Framework for Interactions to Address Public Lands Issues in Nye County, Nevada (includes Nye County, the BLM, and Forest Service), Nevada (Nye County 1996)
- Truckee Meadows Regional Plan (Washoe County Only), Nevada (TMRPA 2007)
- Washoe County Comprehensive Plan, Nevada (Washoe County 2005a)
- Washoe County Open Space & Natural Resource Management Plan, Nevada (Washoe County 2008)
- Washoe County Water Resources Management Plan, Nevada (Washoe County 2005b)
- Washoe County Master Plan with Elements and Area Plans, Nevada (Washoe County, 2010, as amended)
- Washoe County Regional Open Space & Natural Resource Management Plan, Nevada (Washoe County, 2008)
- White Pine County Public Lands Policy Plan, Nevada (White Pine County 2007)
- White Pine County Water Resources Plan, Nevada (White Pine County 2006)

### **I.7 CHANGES BETWEEN DRAFT RMPA/EIS AND PROPOSED RMPA/FINAL EIS**

As a result of public comment, cooperating agency feedback, and internal BLM review, the BLM's Preferred Alternative, identified as the Management Alignment Alternative as presented in the May 2018 Draft RMPA/EIS has been modified and is now considered the Proposed Plan Amendment for managing BLM-administered public lands within the Proposed RMPA/Final EIS decision area. The Proposed Plan Amendment is a refinement of the Management Alignment Alternative from the Draft RMPA/EIS, with consideration given to public comments, corrections, and rewording for clarification of purpose and intent. The Draft RMPA/EIS was available for a 90-day comment period, which ended on August 2, 2018.

Please note that all changes between the Draft RMPA/EIS and Proposed RMPA/Final EIS are highlighted in gray throughout the document for reference.

Summary of Changes in this Proposed RMPA/Final EIS from the Draft RMPA/EIS generally include the following:

- Revisions or adjustments to the Management Alignment Alternative to develop the Proposed Plan Amendment, which include
  - Modifications to how BLM is addressing mitigation within the Proposed Plan Amendment
  - Modifications to the Adaptive Management Strategy (**Appendix D**) to align with the Adaptive Management Strategy adopted by the State of Nevada’s Sagebrush Ecosystem Council
- Clarifications to better explain the purpose and intent of management proposed in the Draft RMPA/EIS and the planning issues being addressed
- Additions, corrections, and clarifications to **Chapter 3**, Affected Environment
- Revisions to **Chapter 4**, Environmental Consequences, to make corrections and reflect changes in management direction (Proposed Plan Amendment) and subsequent impact analysis
- Additions to **Chapter 5**, Consultation and Coordination, to describe the public comment process on the Draft RMPA/EIS
- Inclusion of a Comment Analysis Report (**Appendix G**) to reflect BLM’s responses to comments received during the 90-day public comment period on the Draft RMPA/EIS
- Additions to **Chapter 6**, References, to include additional references cited in the document
- Additions to glossary terms that were omitted in the Draft RMPA/EIS
- Minor corrections, such as typographical errors
- Incorporation of quantitative cumulative effects analysis to Greater Sage-Grouse at the Western Association of Fish and Wildlife Agencies (WAFWA) Management Zone level

# Chapter 2. Proposed Plan Amendment and Alternatives

## 2.1 INTRODUCTION

This chapter describes the alternatives evaluated as a part of this RMPA/EIS. This RMPA/EIS analyzes the No-Action Alternative, the Management Alignment Alternative which was identified as the preferred alternative in the Draft RMPA/EIS, and the Proposed Plan Amendment, which represents the agencies' proposed management approach and reflects the best combination of decisions to achieve BLM goals and policies, meets the purpose and need, and addresses the key planning issues. The Proposed Plan Amendment is consistent with multiple use that allows for "management of the public lands and their various resource values so that they are utilized in the combination that would best meet the present and future needs of the American people" providing a "combination of balanced and diverse resource uses" and with consideration "to the relative values of the resources" (43 USC 1702(c)). The Proposed Plan Amendment would also meet the FLPMA goal of reaching consistency "with State and local plans to the maximum extent" provided such plans are "consistent with Federal law and the purposes of [the] Act." In addition to the alternatives considered in detail, this chapter describes alternatives considered but eliminated from detailed analysis.

### *Components of Alternatives*

Goals are broad statements of desired outcomes and are not quantifiable or measurable. Objectives are specific measurable desired conditions or outcomes intended to meet goals. Goals and objectives can vary across alternatives, resulting in different allowable uses and management actions for some resources and resource uses.

Management actions and allowable uses are designed to achieve goals and objectives. Management actions are measures that guide day-to-day and future activities. Allowable uses delineate uses that are permitted, restricted, or prohibited, and may include stipulations or restrictions. Allowable uses also identify lands where specific uses are excluded to protect resource values, or where certain lands are open or closed in response to legislative, regulatory, or policy requirements. Implementation decisions are site-specific actions and are typically not addressed in RMPs.

## 2.2 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

### 2.2.1 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.<sup>1</sup> Other commenters, in contrast, asked the BLM to consider eliminating or reducing constraints on land uses, or incorporating other flexibilities into the

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<sup>1</sup>For example, this 2018 planning process, built upon the 2015 planning process, would 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).

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 States. Because the purpose and need for the BLM's action, building off of the 2015 ARMPA/ROD, 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 this planning effort.

This planning process does not revisit every issue that the BLM evaluated in the 2015 ARMPA/ROD. Instead, the BLM now addresses refinements to the 2015 ROD/ARMPA decisions, consistent with the BLM's purpose and need for the action. Accordingly, this RMPA/EIS has its foundation in the comprehensive 2015 Final EIS and ARMPA/ROD 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's 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 Instruction Memorandum (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 groups' 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, 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 Nevada 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.
- 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 Priority Habitat Management Areas (PHMA) and General Habitat Management Areas (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 and conservation strategies. 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 ARMPA/ROD.

Further, 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 that it 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 ARMPA/ROD, the BLM partnered with the USGS to review the best available information published since January 2015, develop an annotated bibliography of that Greater Sage-Grouse science (Carter et al. 2018; see **Section 3.1**), and incorporate the information into this EIS. 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.

## **2.3 DESCRIPTION OF DRAFT RMPA/EIS ALTERNATIVES**

### **2.3.1 No-Action Alternative**

Under the No-Action Alternative, the BLM would not amend the current RMPs amended or revised by the [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 would also remain the same, as they pertain to such activities as mineral leasing and development, recreation, lands and realty, and livestock grazing. This alternative also includes the designation of Sagebrush Focal Areas (SFA), which is analyzed in **Chapter 4**.

### **2.3.2 Management Alignment Alternative**

This alternative was identified as the Preferred Alternative in the Draft RMPA/EIS and makes modifications to the No-Action Alternative to better align the BLMs management direction with the State of Nevada's Conservation Plan<sup>2</sup> and conservation strategies with the California Department of Fish and Wildlife (CDFW) to reach a "combination of balanced and diverse resource uses," as required by FLPMA. This alternative was also developed in a collaborative process with cooperating agencies to support conservation outcomes based on state recommendations 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 state plans

<sup>2</sup> The process involved in developing the State of Nevada's Greater Sage-grouse Conservation Plan (as amended) is described in pages 5 through 7 of the State plan. The State Plan is part of the State of Nevada's Sagebrush Ecosystem Program (under Nevada Revised Statutes 232.161 and 232.162) and has been approved and amended through the State of Nevada's Sagebrush Ecosystem Council, which includes ex-officio members from the BLM, U.S. Forest Service, NRCS, and the USFWS.

and programs, while ensuring consistency with the BLM's multiple use mission and commitment to protect Greater Sage-Grouse habitat. This enhanced cooperation between the BLM and the States would lead to improved management and coordination with states across the range of Greater Sage-Grouse. These modifications include updating and making adjustments to Greater Sage-Grouse HMA boundaries and including language that would allow the BLM to update, through plan maintenance, when appropriate, based on the most updated best available science and habitat data; removing SFA designations; incorporating new science into the adaptive management strategy and replacing predetermined hard trigger responses with a clear causal factor analysis process to determine the appropriate management responses and to address the decline in Greater Sage-Grouse populations and/or habitat; revising and simplifying an allocation exception process to allow for the consideration of projects or other actions within Greater Sage-Grouse HMA (see **Table 2-1**, Allocation Exceptions, for more detail); solidifying the BLM's commitment to defer to the most current version of the State of Nevada's Habitat Quantification Tool (HQT) to quantify disturbance calculations; and identifying that seasonal timing restrictions and modifying Greater Sage-Grouse Habitat Objectives (**Table 2-2**) would be addressed in coordination with state wildlife agencies and other partners. At the request of the State of Nevada, the Management Alignment Alternative in the Draft RMPA/EIS included the net conservation gain standard for compensatory mitigation that the BLM incorporated into its plans in 2015.

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

### 2.3.3 Proposed Plan Amendment

The Proposed Plan Amendment represents the BLM's proposed approach for meeting the purpose and need consistent with the agencies' legal and policy mandates. The Draft RMPA/EIS was issued for a 90-day public review and comment in May 2018. In particular, the BLM asked for comment on the "net conservation gain" compensatory mitigation standard included in the 2015 plans. The BLM assessed and considered public comments, received both individually and collectively, during the public review period of the Draft RMPA/EIS. The BLM has crafted the Proposed Plan Amendment, largely based on the Preferred Alternative (Management Alignment Alternative), which was identified in the May 2018 Draft RMPA/EIS, with modifications based on review of public comments received on the Draft RMPA/EIS. In addition, special expertise input and comments received from cooperating agencies helped shape the Proposed Plan Amendment. Changes in BLM regulations, policy, and guidance were another factor taken into consideration in its development. Key policy and guidance changes center on compensatory mitigation and adaptive management. BLM responded to all substantive comments received on the Draft RMPA/EIS (**Appendix G**).

At the request of the State of Nevada, the Management Alignment Alternative in the Draft RMPA/EIS included proposed management actions for compensatory mitigation based on the mitigation framework BLM incorporated into its plans in 2015; however, following extensive review of all existing regulations, orders, guidance documents, and policies 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 RMPA/EIS maintained the net conservation gain standard for compensatory mitigation actions required to offset residual impacts on public lands.



To align BLM's compensatory mitigation policy (IM 2018-093) with this planning effort, the Proposed Plan Amendment clarifies that at the project level, BLM would consider compensatory mitigation only when offered voluntarily by project proponents or when required by state statutes. Because this correction brings the Proposed Plan Amendment into alignment with existing policy and regulation, and because compensatory mitigation would be analyzed in site-specific NEPA analysis, there would be no additional analysis concerning application of the mitigation standard and compensatory mitigation actions in this Proposed Plan Amendment. BLM would achieve the planning-level management goals and objectives identified in this Proposed RMPA/Final EIS including achieving conservation in alignment with State goals and objectives at the landscape-level by ensuring Greater Sage-Grouse habitat impacts are offset through implementing the mitigation hierarchy as analyzed in this Proposed RMPA/Final EIS.

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 coordinated with the State of Nevada 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 in Nevada.

The MOA describes the State of Nevada'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 of Nevada 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 on BLM-administered lands in Nevada, the BLM would notify the State of Nevada 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 and its habitat.

## 2.4 COMPARATIVE SUMMARY OF ALTERNATIVES

**Table 2-1** below provides a comparison between acres designated as PHMA, GHMA, and Other Habitat Management Areas (OHMA) (managed by the BLM) between the No-Action Alternative and Management Alignment Alternative. The change in acres between these two alternatives is based on the BLM's consideration in the Management Alignment Alternative of new PHMA, GHMA, and OHMA boundaries, from the composite management categories contained within the USGS's 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 (Coates et al. 2016) and as adopted and modified by the State of Nevada on December 11, 2015.

Between the two alternatives, no allocation decisions, with the exception of the recommendation for withdrawal in SFAs, would change. Acres of PHMA, GHMA, and OHMA vary between alternatives.

**Table 2-1  
Comparative Summary of Alternatives**

		<b>No-Action Alternative</b>	<b>Management Alignment Alternative</b>	<b>Proposed Plan Amendment</b>
<b>Comparative Summary of HMA (Acres)</b>				
PHMA (see <b>Figures 2-1a</b> and <b>2-1b</b> [ <b>Appendix A</b> ])		9,309,800 acres (2,797,400 portion of PHMA that is designated as SFA)	9,265,800 acres	9,265,800 acres
GHMA (see <b>Figures 2-1a</b> and <b>2-1b</b> )		5,720,700 acres	5,748,000 acres	5,748,000 acres
OHMA (see <b>Figures 2-1a</b> and <b>2-1b</b> )		5,876,500 acres	4,868,900 acres	4,868,900 acres
<b>Comparative Summary of Allocations</b>				
Land Tenure (see <b>Figures 2-12a</b> and <b>2-12b</b> )	Retain	PHMA, GHMA, OHMA	PHMA, GHMA, OHMA	PHMA, GHMA, OHMA
	Dispose	OHMA	OHMA	OHMA
Solar (see <b>Figures 2-9a</b> and <b>2-9b</b> )	Open	—	—	—
	Avoidance	—	—	—
	Exclusion	PHMA, GHMA, OHMA	PHMA, GHMA, OHMA	PHMA, GHMA, OHMA
Wind (see <b>Figures 2-8a</b> and <b>2-8b</b> )	Open	OHMA	OHMA	OHMA
	Avoidance	GHMA	GHMA	GHMA
	Exclusion	PHMA	PHMA	PHMA
Minor ROWs (see <b>Figures 2-11a</b> and <b>2-11b</b> )	Open	OHMA, GHMA	OHMA, GHMA	OHMA, GHMA
	Avoidance	PHMA	PHMA	PHMA
	Exclusion	—	—	—
Major ROWs (see <b>Figures 2-10a</b> and <b>2-10b</b> )	Open	OHMA	OHMA	OHMA
	Avoidance	PHMA, GHMA	PHMA, GHMA	PHMA, GHMA
	Exclusion	—	—	—
Fluid Minerals (Oil, Gas, and Geothermal) (see <b>Figures 2-4a</b> and <b>2-4b</b> )	Open with Standard Stipulations	OHMA	OHMA	OHMA
	Open with Minor Stipulations	GHMA	GHMA	GHMA
	Open with Major Stipulations	PHMA	PHMA	PHMA
Locatable Minerals (see <b>Figures 2-5a</b> and <b>2-5b</b> )	Open	PHMA, GHMA, OHMA	PHMA, GHMA, OHMA	PHMA, GHMA, OHMA
	Recommended for Withdrawal	Portion of PHMA that is SFA is Recommend for Withdrawal	—	—
Salable Minerals (see <b>Figures 2-6a</b> and <b>2-6b</b> )	Open	GHMA, OHMA	GHMA, OHMA	GHMA, OHMA
	Closed	PHMA	PHMA	PHMA
Non-Energy Leasable Minerals (see <b>Figures 2-7a</b> and <b>2-7b</b> )	Open	GHMA, OHMA	GHMA, OHMA	GHMA, OHMA
	Closed	PHMA	PHMA	PHMA
Comprehensive Travel Management (see <b>Figures 2-13a</b> and <b>2-13b</b> )	Open	OHMA	OHMA	OHMA
	Limited	PHMA, GHMA	PHMA, GHMA	PHMA, GHMA
	Closed	—	—	—
Livestock Grazing (see <b>Figures 2-3a</b> and <b>2-3b</b> )	Available	PHMA, GHMA, OHMA	PHMA, GHMA, OHMA	PHMA, GHMA, OHMA
	Not Available	—	—	—

\*Under the Management Alignment Alternative and the Proposed Plan Amendment, site specific projects would not need to conform to these allocation decisions if they meet one of the criteria outlined under the "Allocation Exception Process" management direction.

## 2.5 COMPARISON OF ALTERNATIVES

**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
<b>Issue: Modifying HMA Designations</b>				
<ul style="list-style-type: none"> <li>Need for adjusting HMAs so that they reflect the best available science based on updates to habitat data and use modeling (Coates et al. 2016) and are consistent with HMAs identified by the State of Nevada and recommended by CDFW. This would provide consistency in management across jurisdictions and to third parties operating on public and state or private lands in Nevada and northeastern California.</li> <li>Integration of flexibility into the plans to be able to adjust habitat management area designations (and their associated allocations), based on the best available science, through plan maintenance or amendment, as appropriate.</li> <li>Maintaining all HMAs as identified in the 2015 ARMPA/ROD, including SFAs, which should be provided with the most protections.</li> </ul>				
<b>Update Management Areas to Incorporate Best Available Science</b>	<b>Appendix A, Maps</b>	<p>PHMA, GHMA, and OHMA boundaries are based on the 2015 Approved Resource Management Plan Amendment HMA maps (see <b>Appendix A, Maps</b>). These boundaries were derived from USGS' <i>Spatially Explicit Modeling of Greater Sage-Grouse Habitat in Nevada and Northeastern California</i> (Coates et al. 2014)</p> <ul style="list-style-type: none"> <li>Manage 9,309,800 acres as PHMA <ul style="list-style-type: none"> <li>Including 2,797,400 acres of PHMA as SFA</li> </ul> </li> <li>Manage 5,720,700 acres as GHMA</li> <li>Manage 5,876,500 acres as OHMA</li> </ul>	<p>PHMA, GHMA, and OHMA boundaries are based on composite management categories contained within USGS's <i>Spatially Explicit Modeling of Annual and Seasonal Habitat for Greater Sage-Grouse (Centrocercus urophasianus)</i> in Nevada and Northeastern California—an updated decision-support tool for management (Coates et al. 2016), as adopted and modified by the State of Nevada on December 11, 2015 (see <b>Appendix A, Maps</b>).</p> <ul style="list-style-type: none"> <li>Manage 9,265,800 acres as PHMA</li> <li>Manage 5,748,000 acres as GHMA</li> <li>Manage 4,868,900 acres as OHMA</li> </ul> <p>BLM recognizes that landscape level mapping may not accurately reflect on-the-ground conditions. Therefore, the HMAs (<b>Figure 2-1b</b>) do not constitute a land use plan decision but rather a landscape level reference of relative habitat suitability.</p>	<p>PHMA, GHMA, and OHMA boundaries are based on composite management categories contained within USGS's <i>Spatially Explicit Modeling of Annual and Seasonal Habitat for Greater Sage-Grouse (Centrocercus urophasianus)</i> in Nevada and Northeastern California—an updated decision-support tool for management (Coates et al. 2016), as adopted and modified by the State of Nevada on December 11, 2015 (see <b>Appendix A: Maps</b>).</p> <ul style="list-style-type: none"> <li>Manage 9,265,800 acres as PHMA</li> <li>Manage 5,748,000 acres as GHMA</li> <li>Manage 4,868,900 acres as OHMA</li> </ul> <p>BLM recognizes that landscape level mapping may not accurately reflect on-the-ground conditions. Therefore, the HMAs (<b>Figure 2-1b</b>) do not constitute a land use plan decision but rather a landscape level reference of relative habitat suitability.</p>

**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
<b>Habitat management area designations flexibility</b>	MD SSS 17	As site-specific Greater Sage-Grouse data (habitat assessments, lek counts, telemetry, etc.) is collected, the information will be included into future modeling efforts using the “Spatially Explicit Modeling of Greater Sage-Grouse Habitat in Nevada and Northeastern California” (Coates et al. 2014) to reflect the most up-to-date spatial representation of Greater Sage-Grouse habitat categories. Through plan maintenance or plan	When a proposed project is thought to be in an area that is unsuitable for Greater Sage-Grouse within PHMA, GHMA, and/or OHMA, habitat assessments of the project site and its surrounding areas would be conducted by a qualified biologist with Greater Sage-Grouse experience using BLM-approved methods based on Stiver et al. 2015 and compliant with current BLM Policy, to identify suitable, marginal, or unsuitable Greater Sage-Grouse habitats at multiple scales. This habitat assessment process would then inform criteria (i) under <i>Issue: Allocation Exception Process, Management Alignment Alternative</i> . The BLM would track all on-the-ground assessments and would share this information with USGS and the States of Nevada and California to consider when they begin refining the habitat management maps in the future.  Consistent with the State of Nevada’s Greater Sage-Grouse Conservation Plan (2014, as amended) and CDFW’s management recommendations, the HMA mapping process would be reviewed and refined every 3 to 5 years, or when new data are incorporated in the model. New or improved spatial data (e.g., additional Greater Sage-Grouse telemetry data, updated or improved vegetation community data) would be incorporated during the	When a proposed project is thought to be in an area that is unsuitable for Greater Sage-Grouse within PHMA, GHMA, and/or OHMA, habitat assessments of the project site and its surrounding areas would be conducted by a biologist with Greater Sage-Grouse experience using BLM-approved methods such as Stiver et al. 2015 and compliant with current BLM policy, to identify suitable, marginal, or unsuitable Greater Sage-Grouse habitats at multiple scales. This habitat assessment process would then inform criteria (i) under <i>Issue: Allocation Exception Process, Management Alignment Alternative and Proposed Plan Amendment</i> . The BLM would track all on-the-ground assessments and would share this information with USGS and the States of Nevada and California to consider when updating HMA maps in the future.  Consistent with the State of Nevada’s Greater Sage-Grouse Conservation Plan (2014, as amended) and CDFW’s management recommendations, the HMA mapping process would be reviewed and refined every 3 to 5 years, or when new data are incorporated in the model. New or improved spatial data (e.g., additional Greater Sage-Grouse telemetry data, updated or improved vegetation community data) would be incorporated during the refinement

**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
		<p>amendment/revision, as appropriate, and in consultation with the Nevada Department of Wildlife and USFWS, based on the best scientific information, the updated modeling efforts may be adopted and appropriate allocation decisions and management actions will be applied to PHMA, GHMA, and OHMA. Future modeling efforts to incorporate site-specific Greater Sage-Grouse data will utilize the same modeling methods (as described under Methods and Results in Coates et al. 2014) used to develop the current Nevada and Northeastern California Subregions' Greater Sage-Grouse habitat management categories. The addition of site-specific Greater Sage-Grouse data will allow for the refinement of the spatial representation of the Greater Sage-Grouse habitat management categories.</p>	<p>refinement process.</p> <p>The review and refinement process would be scientifically based and would include review and input from the Sagebrush Ecosystem Technical Team (SETT), NDOW, BLM, USFS, and USFWS. For refinements in California, this process would also include CDFW. Other stakeholders would be encouraged to participate in the process by submitting relevant information to the listed agencies. The USGS habitat suitability modeling processes (Coates et al. 2016) would be the basis for future refinements. As these habitat management categories are adjusted and approved by the States of Nevada and California, adjustments to PHMA, GHMA, and/or OHMA boundaries (along with the existing allocation decisions and management actions tied to these areas) would be made by the BLM through plan maintenance.</p>	<p>process.</p> <p>The review and refinement process would be scientifically based and would include review and input from the Sagebrush Ecosystem Technical Team (SETT), NDOW, BLM, USFS, USFWS, and local agencies as appropriate. For refinements in California, this process would also include CDFW. Other stakeholders would be encouraged to participate in the process by submitting relevant information to the listed agencies. The USGS habitat suitability modeling processes (Coates et al. 2016) would be the basis for future refinements, which may include results of BLM habitat suitability determinations shared with USGS for their consideration. As these habitat management categories are adjusted and approved by the States of Nevada<sup>3</sup> and California, adjustments to BLM's PHMA, GHMA, and/or OHMA boundaries (along with the existing allocation decisions and management</p>

<sup>3</sup>The State of Nevada's Greater Sage-Grouse Conservation Plan (2014, as amended) refers to Sage-grouse Management Areas (SGMA) as the spatial extent of Greater Sage-Grouse management in Nevada. For the State of Nevada, the purpose of the SGMA is to initiate consultation with the SETT in regards to the use of the State's Conservation Credit System. The BLM's HMAs are not equivalent to the SGMAs, but rather, are equivalent to the State of Nevada's "Management Categories," which are displayed on Figure 4 of the State Plan. For the State of Nevada, the approval of new iterations of their management categories are approved through the State's Sagebrush Ecosystem Council (SEC). SEC meetings are open to the public and are subject to the State of Nevada's open meeting laws. It is also important to note that the BLM's HMAs are not equivalent to identified biologically significant units (BSUs), as BSUs are one of three scales used to assess adaptive management population triggers. For more information regarding BSUs, see **Appendix D**.

**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
				actions tied to these areas) would be made by the BLM through plan maintenance or amendment, as appropriate.
<b>Issue: Removing Sagebrush Focal Area Designations</b> <ul style="list-style-type: none"> <li>• Address cancellation of the proposed SFA withdrawal and the reasons for its cancellation. <ul style="list-style-type: none"> <li>○ Analyze the inclusion and removal of SFAs, in response to the March 31, 2017, United States District Court for the District of Nevada court order.</li> </ul> </li> <li>• Is this habitat designation needed to adequately maintain conservation of Greater Sage-Grouse habitat?</li> </ul>				
<b>SFA</b>	MD SSS 5 Objective Veg 1 MD Fire 2 Objective Fire 2-4 MD Fire 11-12 MD LG 2 MD LG 3 MD LG 4 MD LG 11 MD WHB 3 through 7 MD MR 3 MD MR 4a MD MR 16 MD LR 24 MD MIT 2	Designate 2,797,400 acres as SFA. SFA will be managed as PHMA, with the following additional management: <ul style="list-style-type: none"> <li>• Recommended for withdrawal from the General Mining Act of 1872, subject to valid existing rights</li> <li>• Managed as NSO, without waiver, exception, or modification, for fluid mineral leasing</li> <li>• 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.</li> </ul>	No similar action (no areas would be managed as SFA). Lands previously identified as SFA would be managed according to their underlying habitat management area designation (PHMA, GHMA, or OHMA, as identified under this alternative).	Same as Management Alignment Alternative.

**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
<b>Issue: Adaptive Management</b>				
<ul style="list-style-type: none"> <li>• Ensure federal, state, and local partners are part of the causal factor analysis process.</li> <li>• Lack of flexibility with implementing and removing hard trigger adaptive management responses.</li> <li>• Better alignment with Department of Interior guidance on implementation of the Adaptive Management Process.</li> <li>• Incorporate best available science including local data and information into the adaptive management strategy.</li> <li>• Utilize collaborative processes with stakeholders, appropriate state and local agencies, and authorized land users when developing and implementing management responses to any trigger met or surpassed.</li> </ul>				
<b>Adaptive Management</b>	MD SSS 18 MD SSS 19 MD SSS 20 MD SSS 21 MD SSS 24 <b>Appendix J</b>	<p>A biologically significant unit (see <b>Appendix A, Figure 2-2</b>) that has hit a soft trigger due to vegetation disturbance will be a priority for restoration treatments consistent with Fire and Invasives Assessment Tool (FIAT) (<b>Appendix J</b>).</p> <p>If a soft trigger is reached, the BLM will identify the causal factor and apply additional project-level adaptive management and/or mitigation measures contained in the authorization (and for future similar authorizations), to alleviate the specific or presumptive causes in the decline of Greater Sage-Grouse populations or its habitats and include the following: The adjustment in management would be based on the causal factor and would affect only the area being impacted in the lek cluster or other appropriate scale (e.g., BSU)</p> <ul style="list-style-type: none"> <li>• Greater Sage-Grouse populations and habitat would continue to be monitored annually.</li> <li>• If the causal factor were not readily discernable, then an</li> </ul>	<p>The revised soft and hard population triggers (signals) and new BSU and lek cluster boundaries were derived from USGS's <i>Hierarchical Population Monitoring of Greater Sage-Grouse (Centrocercus urophasianus) in Nevada and California—Identifying Populations for Management at the Appropriate Spatial Scale: U.S. Geological Survey Open-File Report 2017–1089</i>. These triggers (signals), BSU boundaries, and lek cluster boundaries can be found in <b>Appendix D</b>. The State of Nevada is currently in the process of incorporating the adaptive management strategy within the State of Nevada's Conservation Plan. BLM would consider alignment with the State's strategy when it is completed.</p> <p>Implement the Adaptive Management Strategy (<b>Appendix D</b>). Soft and hard trigger responses would be removed when the criteria for recovery have been met (see <b>Appendix D, Longevity of Responses</b>). Removal of the soft and hard trigger responses returns management direction in the</p>	<p>The BLM would implement the Adaptive Management Strategy as described in <b>Appendix D</b>.</p> <p>The revised soft and hard population triggers, warnings, and new BSU and lek cluster boundaries were derived from USGS's <i>Hierarchical Population Monitoring of Greater Sage-Grouse (Centrocercus urophasianus) in Nevada and California—Identifying Populations for Management at the Appropriate Spatial Scale: U.S. Geological Survey Open-File Report 2017–1089</i> (Coates et al. 2017). These triggers, warnings, BSU boundaries, and lek cluster boundaries can be found in <b>Appendix D</b>.</p> <p>Soft and hard trigger responses would be removed when the criteria for recovery have been met (see <b>Appendix D, Longevity of Responses</b>). Removal of the soft and hard trigger responses returns management direction in the affected lek cluster and/or BSU to the management directions that were in place prior to reaching a trigger.</p>

**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
		interdisciplinary team, including the BLM, Forest Service (as applicable), and state wildlife agency representatives, would identify the appropriate mitigation or adjusted management actions in a timely manner.	affected lek cluster and/or BSU to the management directions that are in force within those lek clusters and/or BSUs that have not tripped a trigger.	
		Once a hard trigger has been reached, all responses in <b>Tables J-1</b> and <b>J-2</b> in <b>Appendix J</b> will be implemented. This includes where soft triggers have been reached for both population and habitat.		
		When a hard trigger is hit in a Priority Area for Conservation (PAC) that has multiple BSUs, including those that cross state lines, the WAFWA Management Zone Greater Sage-Grouse Conservation Team will convene to determine the cause, will put project level responses in place, as appropriate, and will discuss further appropriate actions to be applied. The team will also investigate the status of the hard triggers in other BSUs in the PAC and will invoke the appropriate plan response. Adopting any further actions at the plan level may require initiating a plan amendment process.		
		The hard and soft trigger data will be analyzed as soon as it becomes available after the signing of the ROD and then at a minimum, analyzed annually thereafter.		



**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
<b>Issue: Mitigation</b>				
<ul style="list-style-type: none"> <li>• Alignment with the State of Nevada’s mitigation strategy to the extent allowable by federal law on Nevada BLM-administered lands only</li> <li>• Defer to the State of Nevada’s mitigation strategy to the extent allowable by federal law and regulation on Nevada BLM-administered lands only</li> <li>• Consider and analyze the State of Nevada’s and California’s recommendation for project level mitigation in relevant NEPA documentation</li> <li>• Ensure consistency in tracking and reporting changes to Greater Sage-Grouse habitat quality and quantity</li> <li>• Alignment with updated BLM policy regarding compensatory mitigation (IM 2018-093)</li> </ul>				
<b>Mitigation</b>	MD MIT 1 MD MIT 2 <b>Appendix F</b> <b>Appendix N</b>	<p>In PHMA, 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 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. The project/activity with associated mitigation (such as the use of the State of Nevada Conservation Credit System) will result in an overall net conservation gain to Greater Sage-Grouse (see <b>Appendix F</b>).</p> <p>In GHMA, 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 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. The project/activity with</p>	<p>Same as the No-Action Alternative, except <b>Appendix F, Mitigation Strategy</b>, would be updated to include the following clarifying language and concepts:</p> <p>When authorizing third-party actions, the BLM would apply the mitigation hierarchy as described in the CEQ regulations at 40 CFR 1508.20 and in the State of Nevada’s Greater Sage-Grouse Conservation Plan, Section 3.1.2 (2014), which is to “avoid, minimize, and compensate,” for impacts on Greater Sage-Grouse and its habitat. BLM would consult with the SETT and other state agencies when implementing the avoid, minimize, and mitigate process.</p> <p>The State of Nevada adopted a mitigation standard of net benefit (net conservation gain). Consistent with the State approach, this standard would be retained in the Management Alignment Alternative. In Nevada only, when authorizing third-party actions that would result in direct, indirect, or cumulative impacts on Greater Sage-</p>	<p>Revised to align with current BLM policy and guidance regarding mitigation issued on July 24, 2018 through IM 2018-093.</p> <ul style="list-style-type: none"> <li>• When authorizing third-party actions in designated Greater Sage-Grouse habitat, the BLM will seek to achieve the planning-level Greater Sage-Grouse management goals and objectives through implementation of mitigation and management actions, consistent with valid existing rights and applicable law. 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 will 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-</li> </ul>

**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
		<p>associated mitigation (such as the use of the State of Nevada Conservation Credit System) in GHMA will result in an overall net conservation gain to Greater Sage-Grouse (see <b>Appendix F, Regional Mitigation Strategy</b>).</p> <p>In Nevada only, the BLM will consult with the SETT for application of the “avoid, minimize, and compensate” mitigation strategy and the Conservation Credit System developed by the Nevada Department of Conservation and Natural Resources (2014a, 2014b) or other applicable mitigation system such as outlined in <b>Appendix I</b>. This will be to ensure that a net conservation gain of Greater Sage-Grouse habitat is achieved in mitigating human disturbances in PHMA and GHMA (see <b>Appendix F</b>) on all agency-authorized activities. The specifics of the coordination will be identified in an Memorandum of Understanding between the agencies.</p> <p>Subject to valid existing rights and applicable law, authorize locatable mineral development activity, by approving plans of operation and apply mitigation and best management practices that minimize the loss of PHMA and GHMA or that enhance Greater Sage-Grouse habitat by applying the “avoid, minimize and compensatory</p>	<p>Grouse or their habitat, the BLM would require those impacts to be quantified using the State of Nevada’s Habitat Quantification Tool (HQT) to ensure consistency in tracking/reporting changes to habitat quality and quantity.</p> <p>When adverse impacts on Greater Sage-Grouse and its habitat remain after avoidance and minimization, mitigation would be considered subject to the federal regulations governing the authorization and valid existing rights.</p> <p>When it is determined that an activity requires compensatory mitigation, or a proponent voluntarily offers to conduct compensatory mitigation, the BLM would coordinate with the SETT regarding use of the Conservation Credit System and/or evaluation of other proponent-developed mitigation options. Evaluation of mitigation options would be assessed using the HQT to ensure net benefit (net conservation gain) and that impacts calculated using the HQT would be mitigated with the equivalent number of functional acres regardless of mitigation method.</p>	<p>Grouse] habitat” across the planning area.</p> <ul style="list-style-type: none"> <li>• 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, <i>Compensatory Mitigation</i>, 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.</li> <li>• In all Greater Sage-Grouse habitat, before authorizing third-party actions that result in habitat loss and degradation within the State of Nevada, the BLM will complete the following steps, in alignment with the State of Nevada’s Greater Sage-Grouse Conservation Plan (2014, as amended), including avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions:</li> </ul>

**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
		<p>mitigation” process through an applicable mitigation system, such as the Nevada Conservation Credit System and the Barrick Nevada Sage-Grouse Bank Enabling Agreement (March 2015).</p> <p>In Nevada, coordinate with the SETT on the application of a compensatory mitigation program, such as the Nevada Conservation Credit System (<b>Appendix N</b>) for mitigating activities that result in habitat loss and degradation of Greater Sage-Grouse habitat in Nevada, where the application of compensatory mitigation will occur on or the credit will be applied to disturbance on BLM-administered lands.</p> <p>Identify compensatory mitigation areas in PHMA and GHMA with the potential to achieve Greater Sage-Grouse habitat objectives (Habitat Objectives table in the 2015 Final EIS), in accordance with FIAT, the SFA prioritization, and the State of Nevada Strategic Action Plan.</p>		<ol style="list-style-type: none"> <li>1. Notify the State of Nevada’s Sagebrush Ecosystem Technical Team 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.</li> <li>2. Incorporate state required or recommended mitigation into the BLM’s NEPA decision-making process, if the State of Nevada’s Sagebrush Ecosystem Technical 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.</li> <li>3. Analyze whether the compensatory mitigation: <ul style="list-style-type: none"> <li>○ achieves measurable outcomes for Greater Sage-Grouse habitat function that are at least equal to the lost or degraded values</li> <li>○ provides benefits that are in place for at least the duration of the impacts</li> </ul> </li> </ol>

**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
				<ul style="list-style-type: none"> <li>○ accounts for a level of risk that the mitigation action may fail or not persist for the full duration of the impact</li> <li>4. Verify that the project proponent has coordinated with the State of Nevada’s Sagebrush Ecosystem Technical Team to ensure it complies with the State of Nevada’s Greater Sage-Grouse Conservation Plan (2014, as amended) and all applicable State requirements relating to it’s proposal</li> <li>• Project-specific analysis will be necessary to determine how a compensatory mitigation proposal addresses impacts from a proposed action. The BLM will 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 requirement of or recommendation from the State, the BLM’s NEPA analysis would</li> </ul>

**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
				<p>evaluate the need to avoid or minimize impacts of the proposed project and achieve the goals and objectives of this RMPA. The BLM will defer to the appropriate State authority to quantify habitat offsets, durability, and other aspects used to determine the recommended compensatory mitigation action.</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• The BLM would continue to apply the mitigation hierarchy as described in the CEQ Regulations at 40 CFR 1508.20; however, the BLM would focus on avoiding, minimizing, rectifying or reducing impacts over time. Compensation, which involves replacing or providing substitute resources for the impacts (including payment) would only be considered when voluntarily offered by a proponent, in coordination with the States of Nevada and California.</li> <li>• <b>Appendix F</b> has been removed from the Proposed Plan</li> </ul>

**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
				<p>Amendment. The BLM would ensure project design is aligned with State requirements—including compensatory mitigation—that may be necessary to comply with State policies and programs for the conservation of Greater Sage-Grouse. When the BLM is considering compensatory mitigation as a component of the project proponent’s submission or based on a recommendation from the States, the BLM’s NEPA analysis would evaluate the need for resolving or eliminating impacts of the proposed project and achieving the goals and objectives of this RMPA. Additional project-specific analysis would be necessary to determine how the compensatory mitigation proposal supports BLM’s obligation to evaluate and appropriately implement mitigation to address impacts from a project proposal.</p> <ul style="list-style-type: none"> <li>On BLM-administered lands within Nevada and California, when authorizing third-party actions that would result in direct, indirect, or cumulative impacts on Greater Sage-Grouse or their habitat, the BLM would defer to the State of Nevada’s most current version of the Habitat Quantification Tool</li> </ul>

**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
(HQT) to quantify those impacts to ensure consistency in tracking/reporting changes to Greater Sage-Grouse habitat quality and quantity.				
<b>Issue: Allocation Exception Process</b>				
<ul style="list-style-type: none"> <li>Clarify and make consistent the various exception allocation processes.</li> <li>Verify through ground-truthing (Greater Sage-Grouse habitat suitability assessments, such as Stiver et al. 2015), the use of landscape-scale mapping of PHMA, GHMA, and OHMA in regards to the application of allocations and stipulations.</li> <li>Address restrictions on actions related to public health and safety, existing infrastructure, and administrative functions that serve a public purpose.</li> <li>Address inconsistencies with existing federal legislation and Approved Resource Management Plans that include land tenure adjustments, including, but not limited to: disposals, exchanges, transfers and Recreation and Public Purpose actions.</li> </ul>				
<b>Allocation Exception Process</b>	MD MR 4a MD MR 3 MD MR 21 MD RE 4 MD LR 21 MD REC 3 <b>Appendix G</b>	<p>(Geothermal) For BLM land in the State of Nevada only, in the portions of the PHMA outside of SFA, geothermal projects may be considered for authorization if all of the following conditions are met:</p> <ul style="list-style-type: none"> <li>A team comprised of BLM, USFWS, and NDOW specialists advises the BLM State Director on appropriate mitigation measures for the project and its ancillary facilities, including lek buffer distances using the best available science;</li> <li>Mitigation actions are consistent with this Plan’s mitigation strategy such as the Nevada Conservation Credit System, and</li> <li>The footprint of the project is consistent with the disturbance management protocols identified</li> </ul>	<p>In PHMA and GHMA, the State Director may grant an exception to the land use plan allocations and stipulations described in Section 2-5 if one of the following applies (in coordination with NDOW, SETT, and/or CDFW):</p> <ol style="list-style-type: none"> <li>The location of the proposed authorization is determined to be unsuitable (by a qualified biologist with Greater Sage-Grouse experience using methods based on Stiver et al 2015); lacks the ecological potential to become marginal or suitable habitat; and would not result in direct, indirect, or cumulative impacts on Greater Sage-Grouse and its habitat. Management allocation decisions would not apply to those areas determined to be</li> </ol>	<p>In PHMA, GHMA, and OHMA, the State Director may grant an exception to the allocations and stipulations described in <b>Table 2-1: Comparative Summary of Alternatives</b> if one of the following applies (in coordination with NDOW, SETT, and/or CDFW):</p> <ol style="list-style-type: none"> <li>The location of the proposed activity is determined to be unsuitable (by a biologist with Greater Sage-Grouse experience using methods such as Stiver et. al. 2015); lacks the ecological potential to become marginal or suitable habitat; and would not result in direct, indirect, or cumulative impacts on Greater Sage-Grouse and its habitat. Management allocation decisions would not apply to those areas determined to be</li> </ol>

**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
		<p>in this plan (see MD SSS 2 and <b>Appendix E</b>)</p> <p>(Salable Minerals) PHMA are closed to new mineral material sales (see <b>Appendix A, Figure 2-6</b>). However, these areas remain open to free use permits and the expansion of existing active pits, if requirements in MD MR 20 can be met [Objective SSS 4 and apply MDs SSS 1 through SSS 4].</p> <p>(Oil and Gas) In PHMA outside of SFA, no waivers or modifications to an oil and gas lease no-surface-occupancy stipulation will be granted. In PHMA, the Authorized Officer may grant an exception to an oil and gas lease no-surface-occupancy stipulation only where the proposed action:</p> <ul style="list-style-type: none"> <li>i. Will not have direct, indirect, or cumulative effects on Greater Sage-Grouse or its habitat; or,</li> <li>ii. Is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel, and will provide a clear conservation gain to Greater Sage-Grouse.</li> </ul> <p>Exceptions based on conservation gain (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</p>	<p>unsuitable because the area lacks the ecological potential to become marginal or suitable habitat;</p> <ul style="list-style-type: none"> <li>ii. Impacts from the proposed action could be offset through use of the mitigation hierarchy (avoid, minimize, mitigate) to achieve a net conservation gain and demonstrate that the individual and cumulative impacts of the project would not result in habitat fragmentation or other impacts that would cause Greater Sage-Grouse populations to decline.</li> <li>iii. The proposed action would be authorized to address public health and safety concerns, specifically as they relate to local, state, and national priorities.</li> <li>iv. Renewals or re-authorizations of existing infrastructure in previously disturbed sites or expansions of existing infrastructure that have <i>de minimis</i> impacts or do not result in direct, indirect, or cumulative impacts on Greater Sage-Grouse and its habitat.</li> <li>v. The proposed action would be determined a routine administrative function</li> </ul>	<p>unsuitable because the area lacks the ecological potential to become marginal or suitable habitat;</p> <ul style="list-style-type: none"> <li>ii. The proposed activity's impacts could be offset to result in no adverse impacts on Greater Sage-Grouse or its habitat, through use of the mitigation hierarchy consistent with Federal law and the state's mitigation policies and programs. In cases where exceptions may be granted for projects with a residual impact, voluntary compensatory mitigation consistent with the State's management goals could be one mechanism by which a proponent achieves the RMPA goals, objectives, and exception 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 an exception. 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.</li> </ul>



**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
		<p>public lands where the proposed exception is an alternative to an action occurring on a nearby parcel subject to a valid federal oil and gas 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 (see <b>Appendix G</b>).</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</p>	<p>conducted by State or local governments, including prior existing uses, authorized uses, valid existing rights and existing infrastructure (i.e. rights-of-way for roads) that serve such a public purpose.</p> <p>vi. Exceptions to lands that are identified for retention in <b>Figure 2-12b</b> would be considered for disposal or exchange if they were identified for disposal through previous planning efforts, either as part of the due process of carrying out Congressional Acts (e.g., the respective Lincoln and White Pine County Conservation, Recreation, and Development Acts) and the agency can demonstrate that the disposal, including land exchanges, would have no direct or indirect adverse impact on conservation of the Greater Sage-Grouse or can achieve a net conservation gain through the use of compensatory mitigation.</p>	<p>iii. The proposed activity would be authorized to address public health and safety concerns, specifically as they relate to federal, state, local government and national priorities.</p> <p>iv. Renewals or re-authorizations of existing infrastructure in previously disturbed sites or expansions of existing infrastructure that do not result in direct, indirect, or cumulative impacts on Greater Sage-Grouse and its habitat.</p> <p>v. The proposed activity would be determined a routine administrative function conducted by federal, state or local governments, including prior existing uses, authorized uses, valid existing rights and existing infrastructure (i.e., rights-of-way for roads) that serve a public purpose and would have no adverse impacts on Greater Sage-Grouse and its habitat, consistent with the state's mitigation policies and programs.</p> <p>vi. Exceptions to lands that are identified for retention in <b>Figure 2-12b</b> would be considered for disposal or exchange if they were identified</p>

**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
		<p>available at least quarterly.</p> <p>(Wind Energy) Within PHMA, wind facilities associated with existing industrial infrastructure (e.g., a mine site) to provide on-site power generation could be considered for approval, subject to a net conservation gain.</p> <p>(Land Tenure) Lands classified as PHMA 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 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 (see <b>Appendix A, Figure 2-12</b>).</p> <p>(Recreation) In PHMA, 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 and its 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.</p>		<p>for disposal through previous planning efforts, either as part of the due process of carrying out Congressional Acts (e.g., the respective Lincoln and White Pine County Conservation, Recreation, and Development Acts) or the agency can demonstrate that the disposal, including land exchanges, would have no direct, indirect or cumulative impacts on Greater Sage-Grouse and its habitat.</p>

**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
<b>Issue: Seasonal Timing Restrictions</b> <ul style="list-style-type: none"> <li>Alignment with State of Nevada’s conservation plan and management strategies with the State of California, to the greatest extent possible</li> <li>Consider exceptions and/or modifications to seasonal timing restrictions to allow for beneficial or neutral projects to occur in a timely manner</li> <li>Seasonal timing restrictions need to be adjusted to allow for public health and safety concerns and time sensitive administrative functions that serve a public purpose to be addressed without delay</li> </ul>				
<b>Seasonal Timing Restrictions</b>	MD SSS 2E MD SSS 3D <b>Appendix G</b>	Seasonal restrictions will be applied during the periods specified below to manage discretionary surface-disturbing activities and uses on public lands (i.e., anthropogenic disturbances) that are disruptive to Greater Sage-Grouse, to prevent disturbances to Greater Sage-Grouse during seasonal life-cycle periods. <ol style="list-style-type: none"> <li>1. In breeding habitat within 4 miles of active and pending Greater Sage-Grouse leks from March 1 through June 30:               <ol style="list-style-type: none"> <li>a. Lek—March 1 to May 15</li> <li>b. Lek hourly restrictions—6 p.m. to 9 a.m.</li> <li>c. Nesting—April 1 to June 30</li> </ol> </li> <li>2. Brood-rearing habitat from May 15 to September 15               <ol style="list-style-type: none"> <li>a. Early—May 15 to June 15</li> <li>b. Late—June 15 to September 15</li> </ol> </li> <li>3. Winter habitat from November 1 to February 28</li> </ol> The seasonal dates may be modified due to documented local variations (e.g., higher/lower elevations) or annual	Same as the No-Action Alternative, except: <p>The seasonal dates could be modified or waived (in coordination with NDOW and/or CDFW) based on site-specific information that indicates:</p> <ol style="list-style-type: none"> <li>i. A project proposal’s NEPA document and/or project record, and correspondence from NDOW and/or CDFW, demonstrates that any modification (shortening/extending seasonal timeframes or waiving the seasonal timing restrictions all together) is justified on the basis that it serves to better protect or enhance Greater Sage-Grouse and its habitat than if the strict application of seasonal timing restrictions are implemented. Under this scenario modifications can occur if:               <ol style="list-style-type: none"> <li>a) A proposed authorization would have beneficial or neutral impacts on Greater Sage-Grouse.</li> </ol> </li> </ol>	Same as the No-Action Alternative, except: <p>The seasonal dates could be modified or waived (in coordination with NDOW and/or CDFW) based on site-specific information that indicates:</p> <ol style="list-style-type: none"> <li>i. A project proposal’s NEPA document and/or project record, and correspondence from NDOW and/or CDFW, demonstrates that any modification (shortening/extending seasonal timeframes or waiving the seasonal timing restrictions all together) is justified on the basis that it serves to better protect or enhance Greater Sage-Grouse and its habitat than if the seasonal timing restrictions are implemented. Under this scenario modifications can occur if:               <ol style="list-style-type: none"> <li>a) A proposed activity would have beneficial or neutral impacts on Greater Sage-Grouse.</li> <li>b) Topography or other factors</li> </ol> </li> </ol>

**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
		<p>climatic fluctuations (e.g., early/late spring, long/heavy winter), in coordination with NDOW and California Department of Fish and Wildlife (CDFW), in order to better protect Greater Sage-Grouse and its habitat.</p> <p>Footnote: The conditions would not be applicable to vegetation treatments being conducted to enhance Greater Sage-Grouse habitat, with exceptions for seasonal restrictions and noise.</p>	<p>b) There are documented local variations (e.g., higher/lower elevations) and/or annual climatic fluctuations (e.g., early/late spring, long/heavy winter) that indicate the seasonal life cycle periods are different than presented, or that Greater Sage-Grouse are not using the area during a given seasonal life cycle period.</p> <p>ii. Modifications are needed to address an immediate public health and safety concern in a timely manner (e.g. maintaining a road impacted by flooding).</p>	<p>eliminate direct and indirect impacts from visibility and audibility to Greater Sage-Grouse and its habitat.</p> <p>c) There are documented local variations (e.g., higher/lower elevations) and/or annual climatic fluctuations (e.g., early/late spring, long/heavy winter) that indicate the seasonal life cycle periods are different than presented, or that Greater Sage-Grouse are not using the area during a given seasonal life cycle period.</p> <p>ii. Modifications are needed to address an immediate public health and safety concern in a timely manner (e.g., maintaining a road impacted by flooding).</p> <p>iii. The proposed action would be determined a routine administrative function conducted by federal, state or local governments, including prior existing uses, authorized uses, valid existing rights and existing infrastructure (i.e., rights-of-way for roads) that serve a public purpose and would have no adverse impacts on Greater Sage-Grouse or its habitat.</p>

**Table 2-2  
Comparison of Alternatives**

Topic	2015 ARMPA Decision Number	No-Action Alternative	Management Alignment Alternative	Proposed Plan Amendment
<b>ISSUE: Modifying Habitat Objectives</b>				
<ul style="list-style-type: none"> <li>• Consideration of site potential based on Ecological Site Descriptions, State and Transition Models, etc.</li> <li>• Consistency with State of Nevada’s Desired Habitat Conditions</li> <li>• Incorporation of best available current science supporting modifications.</li> <li>• Clarify that Habitat Objectives are actually desired outcomes expressed as goals consistent with BLM Planning Handbook (H-1601-1).</li> </ul>				
<b>Modifying Habitat Objectives</b>	No similar action.	No similar action.	<p>The Habitat Objectives table in the 2015 Final EIS would be revised to incorporate best available science in coordination with representatives from the SETT, USFWS, NDOW, CDFW, USFS, USGS, and BLM. The team would review and incorporate the best available science and would recommend adjustments based on regionally and locally derived data. As these habitat objectives are updated, adjustments would be made by the BLM through plan maintenance.</p> <p>The Habitat Objectives table in the 2015 Final EIS would be implemented following this guidance: The Habitat Objectives table in the 2015 Final EIS are desired habitat conditions that are broad goals based on habitat selection that may not be achievable in all areas. Objectives should be based on sources such as ecological site descriptions, associated state-and-transition models.</p>	<p>The Habitat Objectives table in the 2015 Final EIS would be revised to incorporate best available science in coordination with the SETT, USFWS, NDOW, CDFW, USFS, USGS, University of Nevada, Reno, University of California, and appropriate local agencies, and BLM. The team would review and incorporate the best available science and would recommend adjustments based on locally derived data. As the Habitat Objectives (Table 2-2 of the 2015 Final EIS) are updated, adjustments would be made by the BLM through plan maintenance or amendment, as appropriate.</p> <p>The Habitat Objectives (Table 2-2) in the 2015 Final EIS would be implemented following this guidance: The Habitat Objectives (Table 2-2) in the 2015 Final EIS are desired habitat conditions that are broad goals based on Greater Sage-Grouse habitat selection that may not be achievable in all areas. The ability of a site to achieve the objectives should be based on site potential, ecological site descriptions, state-and-transition models, etc.</p>

## 2.6 PLAN EVALUATION, MONITORING, AND ADAPTIVE MANAGEMENT

Plan evaluation is the process by which the plan and monitoring data are reviewed to determine if management objectives are being met and progress is being made toward meeting management goals and if management direction is sound. RMP evaluations determine if decisions are being implemented, if mitigation measures are satisfactory, if there are significant changes in the related plans of other entities, if there are new data of significance to the plan, and if decisions should be amended or revised.

Monitoring data gathered over time are examined and used to draw conclusions on whether management actions are meeting stated objectives, and if not, why. Conclusions are then used to make recommendations on whether to continue current management or to identify what changes need to be made in management practices to meet objectives. The BLM would use RMP evaluations to determine if the decisions in this Proposed RMPA, supported by the accompanying NEPA analysis, are still valid in light of new information and monitoring data.

Evaluations would follow the protocols established by the BLM Land Use Planning Handbook (H-1601-1), DOI Adaptive Management Guidance (including Williams et. al 2009, Adaptive Management: The U.S. Department of the Interior Guide) and other appropriate guidance in effect at the time the evaluation is initiated.

This RMPA/EIS also includes an adaptive management strategy that can be found in **Appendix D**.

# 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 potential impacts described in **Chapter 4**. The resource topics included in this chapter reflect those in **Table I-2** as corresponding to an issue carried forward for detailed analysis in the 2015 Final EIS.

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 GRSG Plans and Instruction Memorandums (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.

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, due to the scale of this analysis covering 45,359,000 acres of BLM-administered lands, 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, as outlined in the Greater Sage-Grouse Monitoring Framework (Appendix D of the 2015 ARMPA/ROD), indicates that there has been a minimal overall increase in estimated disturbance of less than 1 percent from 2015 through 2017 of Priority Habitat Management Areas (PHMA) within BSUs. It is also important to note that consistent with the 2015 ARMPA/ROD, any discretionary actions contributing to anthropogenic disturbance were required to comply with the mitigation hierarchy of avoid, minimize, and compensate to achieve a net conservation gain.

Estimates of Greater Sage-Grouse Habitat Management Areas (HMA) burned for 2016 and 2017 indicate a sharp increase in potential habitat availability loss during 2017, compared with previous fire seasons (**Sections 3.1.1** and **3.4**, below); however, through the BLM’s Emergency, Stabilization, and Rehabilitation efforts, many of these areas are currently undergoing rehabilitation.

Actions since the 2015 Final EIS were authorized consistent with that document. The BLM would continue to implement the decisions in the 2015 Final EIS, unless those decisions are amended.

Acres figures and other numbers were approximated using a geographic information systems (GIS) technology; they do not reflect exact measurements or precise calculations.

### 3.1.1 Greater Sage-Grouse Literature, 2015–2018

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 inform the effort through the development of an annotated bibliography of Greater Sage-Grouse science published since January 2015 (Carter et al. 2018)<sup>1</sup> and a report that synthesized and outlined the potential management implications of this new science (Hanser et al. 2018).<sup>2</sup>

Following the 2015 Final EIS, the scientific community has continued to improve the knowledge available to inform implementation of management actions and an overall understanding of Greater Sage-Grouse populations, their habitat requirements, and their response to human activity. The report discussed the science related to six major topics identified by USGS and BLM (summarized below), as follows:

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

#### ***Multiscale Habitat Suitability (Habitat Objectives) and Mapping Tools***

Since the 1950s, biologists have worked to develop a set of site-scale vegetation indicators to inform habitat management, including the collection and analysis of Greater Sage-Grouse habitat use, nest success, and population trends relative to vegetation condition (Patterson 1952; Sveum et al. 1998a, 1998b; Connelly et al. 2000b; Holloran et al. 2005; Hagen et al. 2007; Kolada et al. 2009; Kaczor et al. 2011).

The existing state of knowledge for Greater Sage-Grouse habitat use at the site scale has been described and synthesized (Connelly et al. 2000a; 2011; Hagen et al. 2007; Stiver et al. 2015). This information was included in the Habitat Objectives (Table 2-2) in the 2015 Final EIS. The science developed since 2015 largely corroborates the knowledge prior to 2015 regarding Greater Sage-Grouse habitat selection.

Improvements at the site scale facilitate a better understanding that indicates the potential need for a reevaluation of the existing habitat objective indicators and associated values in Table 2-2 in the 2015 Final EIS (Hanser et al. 2018).

Some of the science that was developed since 2015 that may require reevaluation and incorporation in the Habitat Objectives for Greater Sage-Grouse (Table 2-2 in the 2015 Final EIS) includes the following:

The importance of mesic habitats for Greater Sage-Grouse brood-rearing identified in western Nevada, eastern California, and southeastern Oregon (Donnelly et al. 2016).

<sup>1</sup> Available online: <https://doi.org/10.3133/ofr20181008>

<sup>2</sup> Available online: <https://doi.org/10.3133/ofr20181017>



- Big and other sagebrush were important for Greater Sage-Grouse, but the species of sagebrush shrub usually varied across life stages within Nevada and northeastern California (Coates et al. 2016). Additionally, this study found selection for upland mesic sites during the brood-rearing season and general avoidance of landscapes dominated by nonnative annual grass across all seasons (Coates et al. 2016).
- Nesting and late brood-rearing microhabitat selection and linkages to survival were quantified in xeric and mesic regions of the Great Basin (primarily Nevada; Coates et al. 2017a). All vegetation measurements were phenologically corrected (Gibson et al. 2016), and the authors found strong selection and positive survival for high horizontal cover and total shrub cover during nesting and late brood-rearing across all sites. Indicator values for grass height need to be examined to ensure they have not been derived from studies using vegetation data collected at different times for successful and unsuccessful nests without applying correction factors and are geographically appropriate. Results from this study also provide more targeted guidelines for Greater Sage-Grouse microhabitat in Nevada and California, compared with broader range-wide guidelines published previously (Connelly et al. 2000).
- Adult females in areas impacted by wildfire 10 years prior tended to use other shrubs for nesting cover, suggesting that other shrub species might need to be considered in evaluations of fire-affected environments (Lockyer et al. 2015; Coates et al. 2017a).
- Hens and broods avoided pinyon-juniper by at least 68 meters in Nevada and California (Coates et al. 2016a).
- A model concluded hens and broods avoided edges with trees (conifers or willows) in late brood-rearing habitats (Westover et al. 2016).

The BLM has completed a plan maintenance action, whereby the agency has clarified its ability to modify the habitat objective indicator values in Table 2-2 in the 2015 Final EIS, based on local, site-specific information.

### **Mapping Tools**

Advances in modeling and mapping techniques at the range-wide scale can help inform broad-scale habitat assessment, allocations, and targeting of land management resources to benefit Greater Sage-Grouse conservation. The 2015 Final EIS included the 2014 version of the “Spatially explicit modeling of Greater Sage-Grouse (*Centrocercus urophasianus*) habitat in Nevada and northeastern California—A decision-support tool for management”-USGS Open-File Report 2014-1163 (Coates et al. 2014) to delineate Greater Sage-Grouse HMAs within the planning area.

In 2016, the USGS updated the 2014 decision support tool, as follows:

- Adding radio and global positioning system (GPS) telemetry locations from Greater Sage-Grouse monitored at multiple sites during 2014 to the original location dataset beginning in 1998
- Integrating high resolution maps of sagebrush and pinyon and/or juniper cover
- Modifying the spatial extent of the analyses to match newly available vegetation layers
- Accounting for differences in habitat availability between mesic sagebrush steppe communities in the northern part of the study area and drier Great Basin sagebrush in southerly regions

- Deriving updated land management categories and an updated index of Greater Sage-Grouse abundance and space-use
- Masking urban footprints and major roadways out of the final map products

Based on continued efforts to refine and improve Greater Sage-Grouse habitat mapping and incorporate the best available science, the BLM is considering adopting the updated 2016 spatially explicit model - USGS Open-File Report 2016-1080 (Coates et al. 2016), which was adopted by the State of Nevada and recommended for adoption by the State of California. Adoption of Coates et al. 2016 would allow the BLM to update delineations for Greater Sage-Grouse HMAs (PHMA, GHMA, and OHMA).

### ***Discrete Anthropogenic Activities***

The science developed since 2015 corroborates the knowledge prior to 2015 regarding 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, but they are not expected to reverse the declines, particularly where active oil and gas operations are present (Hanser et al. 2018). 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 the knowledge prior to 2015 regarding diffuse activities (e.g., livestock grazing, predation, hunting, wild horses and burros, fences, recreation, etc.); however, some study authors questioned current assumptions, provided refinements, or corroborated existing understanding. This information was considered when determining the scoping issues addressed in **Chapter I, Section I.5**.

Studies have shown that the effects of livestock grazing will vary with grazing intensity and season. Predation can be limiting to Greater Sage-Grouse populations in areas with overabundant predator numbers or degraded habitats. Application of 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 effects on Greater Sage-Grouse populations, but none of the studies implicated current application of hunting seasons and timings as a plausible cause for Greater Sage-Grouse declines. Finally, no new insights into the effects of wild horses and burros, fence collision, or recreational activity on Greater Sage-Grouse have been developed (Hanser et al. 2018).

### ***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 using links to soil temperature and moisture regimes. These concepts inform restoration and management strategies and help prioritize application of Greater Sage-Grouse management resources (Hanser et al. 2018).

### 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. Conifer removal benefited Greater Sage-Grouse through increased female survival and nest and brood success.

Treatment methods and site potential can affect post-treatment vegetation characteristics. Sagebrush manipulation treatments seem to benefit Greater Sage-Grouse populations and brood-rearing habitat availability, but benefits may be limited to areas with high sagebrush cover at higher elevations and in mountain big sagebrush (*Artemisia tridentata vaseyana*) communities. Studies indicate that Greater Sage-Grouse populations did not benefit from, or were negatively affected by, prescribed fire and mechanical sagebrush removal treatments (Hanser et. al. 2018). 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 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 to map Greater Sage-Grouse genetic structure at multiple spatial scales has also improved. This genetic data is 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). New information continues to affirm the BLM's understanding that Greater Sage-Grouse is a species that selects for large, intact landscapes and habitat patches.

## 3.2 RESOURCES AFFECTED

Per **Chapter 1** (see **Section 1.5**), the following resources may have potentially significant effects based on the actions considered in **Chapter 2. Table 3-1**, below, provides the location of baseline information in the 2015 Final EIS, and, where applicable, additional information contained in the Sagebrush Focal Area Withdrawal Draft EIS (BLM 2016b).

**Table 3-1**  
**Affected Environment Incorporated by Reference**

Resource Topic	Location of Baseline Information
Greater Sage-Grouse and its Habitat	Chapter 3, Section 3.2 (Greater Sage-Grouse and Greater Sage-Grouse Habitat), page 3-3 to 3-41 (BLM 2015) Chapter 3, Section 3.7 (Wildlife and Special Status Animals, including Greater Sage-Grouse), page 3-139 to 3-180 (BLM 2016)
Vegetation (Including Invasive and Exotic Species and Noxious Weeds)	Chapter 3, Section 3.3 (Vegetation [Including Invasive and Exotic Species and Noxious Weeds]), page 3-41 to 3-57 (BLM 2015) Chapter 3, Section 3.6 (Vegetation, Including Special Status Plants), page 3-128 to 3-138 (BLM 2016)
Livestock Grazing	Chapter 3, Section 3.8, (Livestock Grazing) page 3-93 to 3-101 (BLM 2015)
Land Use and Realty	Chapter 3, Section 3.11 (Land Use and Realty), page 3-110 to 3-121 (BLM 2015)
Renewable Energy	Chapter 3, Section 3.12 (Renewable Energy Resources), page 3-121 to 3-124 (BLM 2015)

**Table 3-1  
Affected Environment Incorporated by Reference**

<b>Resource Topic</b>	<b>Location of Baseline Information</b>
Mineral Resources	Chapter 3, Section 3.13 (Mineral Resources), page 3-124 to 3-143 (BLM 2015) Chapter 3, Section 3.4 (Geology and Mineral Resources), page 3-2 to 3-8 (BLM 2016)
Socioeconomics	Chapter 3, Section 3.23 (Socioeconomics and Environmental Justice), page 3-193 to 3-231 (BLM 2015) Chapter 3, Section 3.5 (Social and Economic Conditions), page 3-9 to 3-127 (BLM 2016)
Comprehensive Travel Management	Chapter 3, section 3.10 (Comprehensive Travel and Transportation Management), page 3-104 to 3-110 (BLM 2015)

### 3.2.1 Resources Not Carried Forward for Analysis

The following resources and resource uses analyzed in the 2015 Final EIS were reviewed to determine if they could have potentially significant effects based on the actions considered in **Chapter 2**. Aligning BLM management with the State of Nevada’s Conservation Plan and with the State of California’s conservation strategies and incorporating the best available current science and better balancing of multiple uses in regard to HMA mapping, adaptive management, mitigation, and seasonal timing restrictions would not substantially alter management direction or result in different outcomes. Because of this, no additional analysis was completed for the resources shown in **Table 3-2** below; therefore, no new information on affected environment is provided.

**Table 3-2  
Resources and Resource Uses Not Carried Forward for Analysis**

Riparian Areas and Wetlands	Recreation
Fish, Wildlife, and Special Status Species	Visual Resources
Wild Horses and Burros	Special Designations
Water Resources	Soils
Lands with Wilderness Characteristics	Air Quality
Climate Change	

### 3.3 GREATER SAGE-GROUSE AND ITS HABITAT

The existing condition of Greater Sage-Grouse in the planning area is described in the 2015 Final EIS in Section 3.2; therefore, except as otherwise expressly indicated by new or updated information contained in this section, the affected environment for Greater Sage-Grouse described in the 2015 Final EIS is hereby incorporated by reference.

Since 2015, the BLM and Forest Service have been implementing the Greater Sage-Grouse conservation measures outlined in the 2015 Final EIS. In addition to working with partners, such as NDOW, CDFW, and USGS, to monitor the status of Greater Sage-Grouse populations in the planning area, the BLM has also been tracking human disturbance, wildland fire, and reclamation/restoration efforts in Greater Sage-Grouse HMAs.

### 3.3.1 Greater Sage-Grouse Population Status

#### Management Zones

The Nevada and Northeastern California Sub-regional planning area includes Greater Sage-Grouse habitat and populations in three management zones (MZs), as delineated by Western Association of Fish and Wildlife Agencies (WAFWA). The boundaries of these MZs were delineated based on their ecological and biological attributes, rather than on arbitrary political boundaries (Stiver et al. 2006). Vegetation found in each management zone is similar, and Greater Sage-Grouse and its habitat in these areas are likely to respond similarly to environmental factors and management actions.

MZs in the Nevada and Northeastern California sub-region are as follows:

- MZ III—Southern Great Basin (includes Utah, Nevada, and California)
- MZ IV—Snake River Plain (includes Idaho, Utah, Nevada, Oregon, Montana and Wyoming)
- MZ V—Northern Great Basin (includes Oregon, California, and Nevada)

These MZs and their aggregate populations and subpopulations in the Nevada and Northeastern California Sub-region are described in Table 3-5 and Figure 3-3 of the 2015 Nevada and Northeastern California Proposed Land Use Plan Amendments and Final EIS (BLM 2015a; 2015 Final EIS).

As of 2017, there were 717 leks classified as active and 341 leks classified as inactive, as shown in **Table 3-3**.

**Table 3-3**  
**Leks in Population/Subpopulations**

Population/ Subpopulation	Active	Inactive	Total
<b>Management Zone III</b>			
Central Nevada	185	83	269
Northwestern Interior Nevada	0	8	8
Quinn Canyon Range Nevada	N/A	N/A	N/A
Southeastern Nevada	132	22	154
<b>Management Zone IV</b>			
North-central Nevada	60	40	100
Northeastern Nevada	195	82	277
<b>Management Zone V</b>			
Klamath-Oregon/California	1	0	1
Lake Area Oregon-NE California/NW Nevada	99	84	183
South-central Oregon/North- central Nevada	39	22	61
Warm Springs Valley Nevada	6	0	6

Sources: NDOW, CDFW and WAFWA 2017

In a recent publication by USGS (Coates et al. 2017b), data from monitored Greater Sage-Grouse lek sites across Nevada and Northeastern California from 2000 to 2016 were used to estimate annual rates of change in Greater Sage-Grouse populations. As of 2016, populations across Nevada and northeastern

California have declined at an average rate of 3.86 percent annually over the last 17 years. This estimated rate of population decline corresponds to other estimates documented for Greater Sage-Grouse in the Great Basin (Garton et al. 2011; Coates et al. 2016a).

Overall results indicate that localized fluctuations in lek attendance have occurred, but overall numbers of active and inactive leks have been relatively stable. Of all the MZs within the sub-region, MZ III had the most number of leks in decline.

### 3.4 WILDLAND FIRE AND HABITAT TREATMENT

The wildland fire threat was discussed in the 2015 Final EIS (Section 3.2.3). From 2015 to 2017 there have been additional large-scale wildfires within the decision area (**Table 3-4**, below). These wildfires burned over 1.3 million acres of HMAs (as depicted in **Figure 2-2a**) within the planning area, which included approximately 358,000 acres in PHMA, 400,500 acres in GHMA and 373,000 acres in OHMA, resulting in a reduction of available Greater Sage-Grouse habitat. During that same time, approximately 175,546 acres in Greater Sage-Grouse HMAs have been treated to improve habitat for the species (see **Table 3-5** and **Table 3-6**).

Since the 2015 plan, more habitat in Greater Sage-Grouse HMAs has been lost to wildfire than has been gained through treatment; however, the BLM intends to implement more habitat improvements projects, per the decisions in the 2015 Final EIS. Projects such as the Great Basin Ecosystem Strategy would further enhance the tools and priorities for implementing these activities. Under these projects, two programmatic EISs are being prepared for fuel breaks, fuels reduction, and rangeland restoration. See Wildland Fires (Section 3.7) in the 2015 Final EIS for acres burned by decade.

**Table 3-4**  
**Wildland Fire Statistics—Greater Sage-Grouse Habitat Acres Burned**

State	2015	2016	2017
Nevada	12,233	215,073	967,324
California	16,176	5,145	88,551
<b>Total</b>	<b>28,409</b>	<b>220,218</b>	<b>1,055,875</b>

Source: Greater Sage-Grouse Habitat Data for Wildland Fire Management Decision Making and Reporting of Acres Burned; Information Bulletin No. FA IB-2017-009; Bureau of Land Management. Note: habitat acres burned are based on **Figure 2-2a**.

**Table 3-5**  
**Acres of Greater Sage-Grouse Conservation Actions in Nevada**

Year	Conifer Removal	Fuel breaks	Invasive Species Removal	Habitat Protection	Habitat Restoration	Total
2015	12,883	3,809	7,311	351	17,957	42,311
2016	19,785	6,655	10,956	644	14,753	52,793
2017 <sup>1</sup>	40,386	4,455	2,265	12,561	1,378	61,045
<b>Total</b>	<b>73,054</b>	<b>14,919</b>	<b>20,532</b>	<b>13,556</b>	<b>34,088</b>	<b>156,149</b>

Source: National Fuels Reporting Operations Reporting System (NFPORS)

**Table 3-6  
Acres of Greater Sage-Grouse Conservation Actions in California**

<b>Year</b>	<b>Conifer Removal</b>	<b>Fuel breaks</b>	<b>Invasive Species Removal</b>	<b>Habitat Protection</b>	<b>Habitat Restoration</b>	<b>Total</b>
2015	5,403	217	2,545	1,360	0	9,525
2016	2,735	0	1,643	1,653	0	6,031
2017 <sup>1</sup>	5,769	0	1,802	2,260	0	9,831
<b>Total</b>	<b>13,907</b>	<b>217</b>	<b>5,990</b>	<b>5,273</b>	<b>0</b>	<b>25,387</b>

Source: NFPORS 2017

### 3.5 HUMAN DISTURBANCE

Human disturbance was discussed in the 2015 Final EIS (Section 3.2.4, Regional Context [Infrastructure]). The BLM tracked direct human disturbance in PHMA from 2015 to 2017, in accordance with the Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment Record of Decision, Management Decision, Special Status Species 2 (BLM 2015).

Direct human disturbance has incrementally increased over the Nevada and Northeastern California Sub-region, with the greatest percentage increase of 0.12 and an average across all of the BSUs of 0.01 percent. The level of human disturbance in the Butte/Buck/White Pine BSU decreased by 62 acres (0.01 percent) during this time. It is also important to note that consistent with the 2015 ARMPA/ROD, any discretionary actions contributing to anthropogenic disturbance during this time were required to comply with the mitigation hierarchy of avoid, minimize, and compensate to achieve a net conservation gain.

### 3.6 SOCIOECONOMICS

Since 2015, socioeconomic conditions in Nevada have changed to some degree. Income from non-service industries has fallen slightly, while service industry jobs and income have increased at a steady rate.

Many industry sectors remained mostly steady from 2014 to 2016, the most recent year for which verified data are available. For example, earnings from the mining industry, including fossil fuels, grew by slightly more than 1 percent during that period. In contrast, earnings from government (which includes federal, military, state, and local government employment, as well as government enterprise) grew by 6.1 percent; earnings from the medical and social assistance industries grew by 11.5 percent, and earnings from the construction industry increased by more than 26 percent from 2014 to 2016. Construction has been in recovery, after falling by more than 63 percent from 2006 to 2013.

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# Chapter 4. Environmental Consequences

## 4.1 INTRODUCTION

This chapter presents the anticipated direct, indirect, and cumulative impacts on the human and natural environment from implementing the alternatives in **Chapter 2**. The purpose of this chapter is to describe to the decision maker and the public how the environment could change if the alternatives, including the Proposed Plan Amendment were implemented. It is meant to aid in the decision between continuing current management (No-Action Alternative), as directed in the 2015 Final EIS, or adopting the Management Alignment Alternative or Proposed Plan Amendment to incorporate the best available science, adjust the multiple use balance, and improve compatibility between federal management plans and state conservation plans and strategies.

This chapter is organized by topic, based on the affected resources identified in **Chapters 1** and **3**. Only those issues listed in **Table 1-2** were carried forward for analysis.

Impact analysis is a cause-and-effect process. The detailed 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, commensurate with resource issues and concerns identified through the NEPA process. At times, impacts are described in qualitative terms or using ranges of potential impacts.

## 4.2 ANALYTICAL ASSUMPTIONS

Several overarching assumptions have been made in order to facilitate the analysis of the potential impacts. These assumptions set guidelines and provide reasonably foreseeable projected levels of development that would occur in the planning area during the planning period. These assumptions should not be interpreted as constraining or redefining the management objectives and actions proposed for each alternative, as described in **Chapter 2**.

The following general assumptions apply to all resource categories; 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 in this Proposed RMPA/Final EIS would be subject to further environmental review, including that under NEPA.
- Direct impacts of implementing the RMPA/EIS would primarily occur on public lands administered by the BLM in the planning area. Indirect impacts of implementing the Proposed RMPA/Final EIS could occur on either BLM-administered lands, or adjacent lands, regardless of

ownership/administration. The discussion of impacts is based on best available science and data. Knowledge of the planning area, 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.
- GIS data have been used in developing acreage calculations and to generate the figures in **Appendix A**. 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.

### 4.3 GENERAL METHOD FOR ANALYZING IMPACTS

Potential impacts are described in terms of type, context, duration, and intensity, which are generally defined below.

*Type of impact*—Impacts are characterized using the indicators described in the [2015 Final EIS](#) (where applicable). The presentation of impacts for key planning issues is intended to provide the BLM decision maker and reader with an understanding of the multiple use trade-offs associated with each alternative.

*Context*—This describes the area or site-specific, local, planning area-wide, or regional location where the impact would occur. Site-specific impacts would occur at the location of the action; local impacts would occur in the general vicinity of the action area; planning area-wide impacts would affect a greater portion of decision area lands in Nevada and northeast California; and regional impacts would extend beyond the planning area boundaries.

*Duration*—This describes the associated time period of an impact, either short term or long term. Unless otherwise noted, short-term is defined as anticipated to begin and end within the first 5 years after the action is implemented; long-term is defined as lasting beyond 5 years to the end of or beyond the life of this RMPA/EIS.

*Intensity*—Rather than categorize impacts with qualitative statements (e.g., major, moderate, or minor), this analysis discusses impacts using quantitative data wherever possible.

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

For ease of reading, the impacts of the management actions for a particular alternative on a specific resource are generally compared with the status quo or baseline for that resource; however, in order to properly and meaningfully evaluate the impacts under each alternative, its expected impacts should be measured against those projected to occur under the No-Action Alternative. This alternative is the baseline for comparing the alternatives to one another. This is because it represents what is anticipated to occur should the RMPA/EIS not be implemented.

Irreversible and irretrievable commitment of resources is discussed in **Section 4.12**, below. Irreversible commitments of resources result from actions in which resources are considered permanently changed; irretrievable commitments of resources result from actions in which resources are considered permanently lost.

#### 4.3.1 No-Action Alternative with the Inclusion of SFAs (No-Action Alternative)

The impacts of the No-Action Alternative, or current management, of this Proposed RMPA/Final EIS were analyzed as the Proposed Plan in the [2015 Final EIS](#), and within the various alternatives analyzed in the Sagebrush Focal Areas Withdrawal Draft EIS (2016 SFA Draft EIS; BLM 2016b). The BLM has reviewed new information to verify that the analysis in the 2015 Final EIS remains sound; therefore, impacts from implementing the No-Action Alternative are substantially the same as those analyzed in the 2015 Final EIS.

**Table 4-1**, below, shows where information on the impacts of the No-Action Alternative can be found.

**Table 4-1**  
**Environmental Consequences for the No-Action Alternative Incorporated by Reference**

Issue	Resource / Resource Use	Location of Impact Analysis from the 2015 Final EIS
Habitat Management Area (HMA) Boundaries	Greater Sage-Grouse	The impacts on Greater Sage-Grouse and its habitat through the management of established HMAs are discussed in Section 4.4.10 of the 2015 Final EIS beginning on page 4-51.
	Vegetation	The impacts on Vegetation through the management of the established HMAs are discussed in Section 4.5.10 of the 2015 Final EIS beginning on page 4-91.
	Land Use and Realty	The impacts on Land Use and Realty through the management of the established HMAs are discussed in Section 4.13.10 of the 2015 Final EIS beginning on page 4-269.
	Renewable Energy	The impacts on Renewable Energy through the management of the established HMAs are discussed in Section 4.14.10 of the 2015 Final EIS beginning on page 4-284.
	Minerals and Energy	The impacts on Minerals and Energy through the management of the established HMAs are discussed in Section 4.15 of the 2015 Final EIS beginning on page 4-286.
	Socioeconomics	The impacts on Socioeconomics through the management of the established HMAs are discussed in Section 4.21 of the 2015 Final EIS beginning on page 4-402.
	Livestock Grazing	The impacts on Livestock Grazing through the management of the established HMAs are discussed in Section 4.10.10 of the 2015 Final EIS beginning on page 4-232.
	Comprehensive Travel Management	The impacts on Comprehensive Travel Management through the management of the established HMAs are discussed in Section 4.12.10 of the 2015 Final EIS beginning on page 4-252.
Sagebrush Focal Areas (SFA)	Greater Sage-Grouse	The impacts on Greater Sage-Grouse from withdrawing SFAs from location and entry under the Mining Law of 1872 are discussed in the 2016 SFA Draft EIS, Section 4.5 of the 2015 Final EIS beginning on page 4-82.
	Vegetation	The impacts on Vegetation from withdrawing SFAs from location and entry under the Mining Law of 1872 are discussed in Section 4.5.10 of the 2015 Final EIS beginning on page 4-91 and the 2016 SFA Draft EIS, Section 4.4 Vegetation, including Special Status Plants, beginning on page 4-68.

**Table 4-1  
Environmental Consequences for the No-Action Alternative Incorporated by Reference**

<b>Issue</b>	<b>Resource / Resource Use</b>	<b>Location of Impact Analysis from the 2015 Final EIS</b>
Sagebrush Focal Areas (SFA) ( <i>cont'd</i> )	Land Use and Realty	The impacts of establishing SFAs on Land Use and Realty are discussed in Section 4.13.10 of the 2015 Final EIS beginning on page 4-269.
	Renewable Energy	The impacts of establishing SFAs on Renewable Energy are discussed in Section 4.14.10 of the 2015 Final EIS beginning on page 4-284.
	Minerals and Energy	The impacts of establishing SFAs on Minerals and Energy are discussed in Section 4.15 of the 2015 Final EIS beginning on page 4-286 and the 2016 SFA Draft EIS, Section 4.2 Geology and Mineral Resources, beginning on page 4-7.
	Socioeconomics	The impacts of establishing SFAs on Socioeconomics are discussed in Section 4.21 of the 2015 Final EIS beginning on page 4-402 and the 2016 SFA Draft EIS, Section 4.3 Social and Economic, beginning on page 4-20.
	Livestock Grazing	The impacts of establishing SFAs on Livestock Grazing are discussed in Section 4.10.10 of the 2015 Final EIS beginning on page 4-232.
	Comprehensive Travel Management	The impacts of establishing SFAs on Comprehensive Travel Management are discussed in Section 4.12.10 of the 2015 Final EIS beginning on page 4-252.
	Adaptive Management	Greater Sage-Grouse
Vegetation		The Adaptive Management Plan analyzed in 2015 can be found in Section 2.7.1 of the 2015 Final EIS. The impacts on Vegetation through the application of the established Adaptive Management Plan are discussed in Section 4.5.10 of the 2015 Final EIS beginning on page 4-91.
Land Use and Realty		The Adaptive Management Plan analyzed in 2015 can be found in Section 2.7.1 of the 2015 Final EIS. The impacts on Land Use and Realty through the application of the established Adaptive Management Plan are discussed in Section 4.13.10 of the 2015 Final EIS beginning on page 4-269.
Renewable Energy		The Adaptive Management Plan analyzed in 2015 can be found in Section 2.7.1 of the 2015 Final EIS. The impacts on Renewable Energy through the application of the established Adaptive Management Plan are discussed in Section 4.14.10 of the 2015 Final EIS beginning on page 4-284.
Minerals and Energy		The Adaptive Management Plan analyzed in 2015 can be found in Section 2.7.1 of the 2015 Final EIS. The impacts on Minerals and Energy through the application of the established Adaptive Management Plan are discussed in Section 4.15 of the 2015 Final EIS beginning on page 4-286.
Socioeconomics		The Adaptive Management Plan analyzed in 2015 can be found in Section 2.7.1 of the 2015 Final EIS. The impacts on Socioeconomics through the application of the established Adaptive Management Plan are discussed in Section 4.21 of the 2015 Final EIS beginning on page 4-402.
Livestock Grazing		The Adaptive Management Plan analyzed in 2015 can be found in Section 2.7.1 of the 2015 Final EIS. The impacts on Livestock Grazing through the application of the established Adaptive Management Plan are discussed in Section 4.10.10 of the 2015 Final EIS beginning on page 4-232.
Comprehensive Travel Management		The Adaptive Management Plan analyzed in 2015 can be found in Section 2.7.1 of the 2015 Final EIS. The impacts on Comprehensive Travel Management through the application of the established Adaptive Management Plan are discussed in Section 4.12.10 of the 2015 Final EIS beginning on page 4-252.

**Table 4-1  
Environmental Consequences for the No-Action Alternative Incorporated by Reference**

<b>Issue</b>	<b>Resource / Resource Use</b>	<b>Location of Impact Analysis from the 2015 Final EIS</b>
Allocation Exception Process	Greater Sage-Grouse	A number of exceptions were outlined in the 2015 Final EIS according to specific resource uses or conditions. These are summarized in Section 2.5 of this Proposed RMPA/Final EIS under the heading Issue: Allocation Exception Process, under the No-Action Alternative. The impacts on Greater Sage-Grouse through the management of the established Allocation Exception Process are discussed in Section 4.4.10 of the 2015 Final EIS beginning on page 4-51.
	Vegetation	A number of exceptions were outlined in the 2015 Final EIS according to specific resource uses or conditions. These are summarized in Section 2.5 of this Proposed RMPA/Final EIS under the heading Issue: Allocation Exception Process, under the No-Action Alternative. The impacts on Vegetation through the management of the established Allocation Exception Process are discussed in Section 4.5.10 of the 2015 Final EIS beginning on page 4-91.
	Land Use and Realty	A number of exceptions were outlined in the 2015 Final EIS according to specific resource uses or conditions. These are summarized in Section 2.5 of this Proposed RMPA/Final EIS under the heading Issue: Allocation Exception Process, under the No-Action Alternative. The impacts on Land Use and Realty through the management of the established Allocation Exception Process are discussed in Section 4.13.10 of the 2015 Final EIS beginning on page 4-269.
	Renewable Energy	A number of exceptions were outlined in the 2015 Final EIS according to specific resource uses or conditions. These are summarized in Section 2.5 of this Proposed RMPA/Final EIS under the heading Issue: Allocation Exception Process, under the No-Action Alternative. The impacts on Renewable Energy through the management of the established Allocation Exception Process are discussed in Section 4.14.10 of the 2015 Final EIS beginning on page 4-284.
	Minerals and Energy	A number of exceptions were outlined in the 2015 Final EIS according to specific resource uses or conditions. These are summarized in Section 2.5 of this Proposed RMPA/Final EIS under the heading Issue: Allocation Exception Process, under the No-Action Alternative. The impacts on Minerals and Energy through the management of the established Allocation Exception Process are discussed in Section 4.15 of the 2015 Final EIS beginning on page 4-286.
	Socioeconomics	A number of exceptions were outlined in the 2015 Final EIS according to specific resource uses or conditions. These are summarized in Section 2.5 of this Proposed RMPA/Final EIS under the heading Issue: Allocation Exception Process, under the No-Action Alternative. The impacts on Socioeconomics through the management of the established Allocation Exception Process are discussed in Section 4.21 of the 2015 Final EIS beginning on page 4-402.
	Livestock Grazing	A number of exceptions were outlined in the 2015 Final EIS according to specific resource uses or conditions. These are summarized in Section 2.5 of this Proposed RMPA/Final EIS under the heading Issue: Allocation Exception Process, under the No-Action Alternative. The impacts on Livestock Grazing through the management of the established Allocation Exception Process are discussed in Section 4.10.10 of the 2015 Final EIS beginning on page 4-232.

**Table 4-1  
Environmental Consequences for the No-Action Alternative Incorporated by Reference**

<b>Issue</b>	<b>Resource / Resource Use</b>	<b>Location of Impact Analysis from the 2015 Final EIS</b>
Allocation Exception Process (cont'd)	Comprehensive Travel Management	A number of exceptions were outlined in the 2015 Final EIS according to specific resource uses or conditions. These are summarized in Section 2.5 of this Proposed RMPA/Final EIS under the heading Issue: Allocation Exception Process, under the No-Action Alternative. The impacts on Comprehensive Travel Management through the management of the established Allocation Exception Process are discussed in Section 4.12.10 of the 2015 Final EIS beginning on page 4-252.
Mitigation	Greater Sage-Grouse	The mitigation strategy that constitutes the action under this alternative is described in Section 2.7.3 of the 2015 Final EIS beginning on page 2-88. The impacts on Greater Sage-Grouse through the management of the established mitigation are discussed in Section 4.4.10 of the 2015 Final EIS beginning on page 4-51. The Regional Mitigation Strategy is explained in Appendix I of the 2015 Final EIS.
	Vegetation	The mitigation strategy that constitutes the action under this alternative is described in Section 2.7.3 of the 2015 Final EIS beginning on page 2-88. The impacts on Vegetation through the management of the established mitigation are discussed in Section 4.5.10 of the 2015 Final EIS beginning on page 4-91.
	Land Use and Realty	The mitigation strategy that constitutes the action under this alternative is described in Section 2.7.3 of the 2015 Final EIS beginning on page 2-88. The impacts on Land Use and Realty through the management of the established mitigation are discussed in Section 4.13.10 of the 2015 Final EIS beginning on page 4-269.
	Renewable Energy	The mitigation strategy that constitutes the action under this alternative is described in Section 2.7.3 of the 2015 Final EIS beginning on page 2-88. The impacts on Renewable Energy through the management of the established mitigation are discussed in Section 4.14.10 of the 2015 Final EIS beginning on page 4-284.
	Minerals and Energy	The mitigation strategy that constitutes the action under this alternative is described in Section 2.7.3 of the 2015 Final EIS beginning on page 2-88. The impacts on Minerals and Energy through the management of the established mitigation are discussed in Section 4.15 of the 2015 Final EIS beginning on page 4-286.
	Socioeconomics	The mitigation strategy that constitutes the action under this alternative is described in Section 2.7.3 of the 2015 Final EIS beginning on page 2-88. The impacts on Socioeconomics through the management of the established mitigation are discussed in Section 4.21 of the 2015 Final EIS beginning on page 4-402.
	Livestock Grazing	The mitigation strategy that constitutes the action under this alternative is described in Section 2.7.3 of the 2015 Final EIS beginning on page 2-88. The impacts on Livestock Grazing through the management of the established mitigation are discussed in Section 4.10.10 of the 2015 Final EIS beginning on page 4-232.
	Comprehensive Travel Management	The mitigation strategy that constitutes the action under this alternative is described in Section 2.7.3 of the 2015 Final EIS beginning on page 2-88. The impacts on Comprehensive Travel Management through the management of the established mitigation are discussed in section 4.12.10 of the 2015 Final EIS beginning on page 4-252.

**Table 4-1  
Environmental Consequences for the No-Action Alternative Incorporated by Reference**

<b>Issue</b>	<b>Resource / Resource Use</b>	<b>Location of Impact Analysis from the 2015 Final EIS</b>
Seasonal Timing Restrictions	Greater Sage-Grouse	The seasonal timing restrictions are tied to specific seasonal habitat needs for Greater Sage-Grouse. The discussion related to these restrictions is found in Management Action SSS-2 of the 2015 Final EIS beginning on page 2-20. The discussion specific to seasonal timing restrictions begins on page 2-23. The impacts on Greater Sage-Grouse through the management of the established seasonal timing restrictions are discussed in Section 4.4.10 of the 2015 Final EIS beginning on page 4-51.
	Vegetation	The seasonal timing restrictions are tied to specific seasonal habitat needs for Greater Sage-Grouse. The discussion related to these restrictions is found in Management Action SSS-2 of the 2015 Final EIS beginning on page 2-20. The discussion specific to seasonal timing restrictions begins on page 2-23. The impacts on Vegetation through the management of the established seasonal timing restrictions are discussed in Section 4.5.10 of the 2015 Final EIS beginning on page 4-91.
	Land Use and Realty	The seasonal timing restrictions are tied to specific seasonal habitat needs for Greater Sage-Grouse. The discussion related to these restrictions is found in Management Action SSS-2 of the 2015 Final EIS beginning on page 2-20. The discussion specific to seasonal timing restrictions begins on page 2-23. The impacts on Land Use and Realty through the management of the established seasonal timing restrictions are discussed in Section 4.13.10 of the 2015 Final EIS beginning on page 4-269.
	Renewable Energy	The seasonal timing restrictions are tied to specific seasonal habitat needs for Greater Sage-Grouse. The discussion related to these restrictions is found in Management Action SSS-2 of the 2015 Final EIS beginning on page 2-20. The discussion specific to seasonal timing restrictions begins on page 2-23. The impacts on Renewable Energy through the management of the established seasonal timing restrictions are discussed in Section 4.14.10 of the 2015 Final EIS beginning on page 4-284.
	Minerals and Energy	The seasonal timing restrictions are tied to specific seasonal habitat needs for Greater Sage-Grouse. The discussion related to these restrictions is found in Management Action SSS-2 of the 2015 Final EIS beginning on page 2-20. The discussion specific to seasonal timing restrictions begins on page 2-23. The impacts on Minerals and Energy through the management of the established seasonal timing restrictions are discussed in Section 4.15 of the 2015 Final EIS beginning on page 4-286.
	Socioeconomics	The seasonal timing restrictions are tied to specific seasonal habitat needs for Greater Sage-Grouse. The discussion related to these restrictions is found in Management Action SSS-2 of the 2015 Final EIS beginning on page 2-20. The discussion specific to seasonal timing restrictions begins on page 2-23. The impacts on Socioeconomics through the management of the established seasonal timing restrictions are discussed in Section 4.21 of the 2015 Final EIS beginning on page 4-402.
	Livestock Grazing	The seasonal timing restrictions are tied to specific seasonal habitat needs for Greater Sage-Grouse. The discussion related to these restrictions is found in Management Action SSS-2 of the 2015 Final EIS beginning on page 2-20. The discussion specific to seasonal timing restrictions begins on page 2-23. The impacts on Livestock Grazing through the management of the established seasonal timing restrictions are discussed in Section 4.10.10 of the 2015 Final EIS beginning on page 4-232.

**Table 4-1  
Environmental Consequences for the No-Action Alternative Incorporated by Reference**

<b>Issue</b>	<b>Resource / Resource Use</b>	<b>Location of Impact Analysis from the 2015 Final EIS</b>
Seasonal Timing Restrictions ( <i>cont'd</i> )	Comprehensive Travel Management	The seasonal timing restrictions are tied to specific seasonal habitat needs for Greater Sage-Grouse. The discussion related to these restrictions is found in Management Action SSS-2 of the 2015 Final EIS beginning on page 2-20. The discussion specific to seasonal timing restrictions begins on page 2-23. The impacts on Comprehensive Travel Management through the management of the established seasonal timing restrictions are discussed in Section 4.12.10 of the 2015 Final EIS beginning on page 4-252.
Habitat Objectives	Greater Sage-Grouse	The habitat objectives are discussed in Section 2.6.2 under Objective SSS-I and the Habitat Objectives (table 2-2) in the 2015 Final EIS beginning on page 2-17. The impacts on Greater Sage-Grouse through the management of the established Habitat Objectives are discussed in Section 4.4.10 of the 2015 Final EIS beginning on page 4-51.
	Vegetation	The habitat objectives are discussed in Section 2.6.2 under Objective SSS-I and the Habitat Objectives (table 2-2) in the 2015 Final EIS beginning on page 2-17. The impacts on Vegetation through the management of the established Habitat Objectives are discussed in Section 4.5.10 of the 2015 Final EIS beginning on page 4-91.
	Land Use and Realty	The habitat objectives are discussed in Section 2.6.2 under Objective SSS-I and the Habitat Objectives (table 2-2) in the 2015 Final EIS beginning on page 2-17. The impacts on Land Use and Realty through the management of the established Habitat Objectives are discussed in Section 4.13.10 of the 2015 Final EIS beginning on page 4-269.
	Renewable Energy	The habitat objectives are discussed in Section 2.6.2 under Objective SSS-I and the Habitat Objectives (table 2-2) in the 2015 Final EIS beginning on page 2-17. The impacts on Renewable Energy through the management of the established Habitat Objectives are discussed in Section 4.14.10 of the 2015 Final EIS beginning on page 4-284.
	Minerals and Energy	The habitat objectives are discussed in Section 2.6.2 under Objective SSS-I and the Habitat Objectives (table 2-2) in the 2015 Final EIS beginning on page 2-17. The impacts on Minerals and Energy through the management of the established Habitat Objectives are discussed in Section 4.15 of the 2015 Final EIS beginning on page 4-286.
	Socioeconomics	The habitat objectives are discussed in Section 2.6.2 under Objective SSS-I and the Habitat Objectives (table 2-2) in the 2015 Final EIS beginning on page 2-17. The impacts on Socioeconomics through the management of the established Habitat Objectives are discussed in Section 4.21 of the 2015 Final EIS beginning on page 4-402.
	Livestock Grazing	The habitat objectives are discussed in Section 2.6.2 under Objective SSS-I and the Habitat Objectives (table 2-2) in the 2015 Final EIS beginning on page 2-17. The impacts on Livestock Grazing through the management of the established Habitat Objectives are discussed in Section 4.10.10 of the 2015 Final EIS beginning on page 4-232.
	Comprehensive Travel Management	The habitat objectives are discussed in Section 2.6.2 under Objective SSS-I and the Habitat Objectives (table 2-2) in the 2015 Final EIS beginning on page 2-17. The impacts on Comprehensive Travel Management through the management of the established Habitat Objectives are discussed in Section 4.12.10 of the 2015 Final EIS beginning on page 4-252.



### 4.3.2 Management Alignment Alternative

**Table 4-2**, below, summarizes if and how decisions in the Management Alignment Alternative were considered in the 2015 Final EIS. Issues needing further analysis are analyzed under the resource/resource use headings in this chapter.

**Table 4-2**  
**Impacts from Management Alignment Alternative**

Plan Alignment Issue	Considered in 2015 Final EIS
Modifying HMA Boundaries	As part of the proposed action for Alternative E in the 2015 Final EIS, as defined in Action E-SSS-AM 9 found on page 2-197: "Greater Sage-Grouse management categories must be evaluated every 3-5 years, based on new or improved spatial data through a scientifically based, peer-reviewed process. Adjustments of the mapped management categories within the population management zone would be made without further analysis." The impacts on resources associated with Alternative E are contained in Chapter 4 of the 2015 Final EIS.  Note: If the most current Greater Sage-Grouse HMA boundaries are adopted, the following changes would occur: PHMA: 44,000 acre decrease GHMA: 27,300 acre increase OHMA: 1,007,600 acre decrease
Removing Sagebrush Focal Areas	Alternatives B through F in the 2015 Final EIS did not include SFAs as a management area. The impacts on resources associated with Alternatives B through F are contained in Chapter 4 of the 2015 Final EIS.
Adaptive Management	Adaptive Management was analyzed as part of the 2015 Final EIS; see Section 2.7.1 on page 2-75.
Allocation Exception Process	Exceptions were outlined in the 2015 Final EIS according to specific resource uses or conditions. These are summarized in Section 2.5 of this document (No-Action Alternative) under the heading Issue: Allocation Exception Process.  Although specific exceptions, modifications, and waivers were only analyzed for certain land uses, the 2015 Final EIS analyzed a range of alternatives that took into account the various impacts from different types of management actions associated with these land use allocations.  Note: The No-Action Alternative of the 2015 Final EIS allowed for the disposal of lands within Greater Sage-Grouse HMAs.
Mitigation	The mitigation standard (net conservation gain) was analyzed in Alternative E of the 2015 Final EIS, including the use of the Nevada Conservation Credit System. See Sections 4.4.8, page 4-42; Section 4.5.8, page 4-85; Section 4.6.8, page 4-126; Section 4.9.7, page 4-186; Section 4.13.8, page 4-265; and Section 4.15, page 4-286.
Seasonal Timing Restrictions	Applying limited seasonal timing restrictions was analyzed in Alternative C of the 2015 Final EIS. See Sections 4.4.6; 4.5.6; 4.6.6; 4.9.5; 4.10.6; 4.13.6; 4.14.6; and 4.18.6.
Modifying Habitat Objectives	The Habitat Objectives (table 2-2) for Greater Sage-Grouse were analyzed in the 2015 Final EIS. See Section 2.6.2, page 2-17 for additional information and Sections 4.4.7; 4.4.8; 4.4.10; and 4.5.9 for the analysis of Habitat Objectives under the Proposed RMPA/Final EIS and Alternatives A, B, D, E, and F of the 2015 Final EIS.

### 4.3.3 Proposed Plan Amendment

**Table 4-2**, above, summarizes if and how decisions in the Management Alignment Alternative were considered in the 2015 Final EIS. While there have been minor changes between the Proposed Plan

Amendment and the Management Alignment Alternative, the analysis completed in 2015, and hence, **Table 4-2** remains applicable to both the Management Alignment Alternative and the Proposed Plan Amendment.

#### 4.4 INCOMPLETE OR UNAVAILABLE INFORMATION

The Council on Environmental Quality (CEQ) established implementing regulations for NEPA, requiring that a federal agency identify relevant information that may be incomplete or unavailable for evaluating reasonably foreseeable significant adverse impacts in an EIS (40 CFR 1502.22). If the information is essential to a reasoned choice among alternatives, it must be included or addressed in an EIS, unless the cost of obtaining such information is exorbitant. Knowledge and information is, and would always be, incomplete, particularly with infinitely complex ecosystems considered at various scales.

The best available information pertinent to the decisions to be made was used in developing the 2015 Final EIS as well as this Proposed RMPA/Final EIS. The BLM made a considerable effort to acquire and convert resource data into digital format from the BLM and outside sources (e.g., NDOW, USGS, etc.).

Under the FLPMA, the inventory of public land resources is ongoing and continuously updated; however, certain information was unavailable for use in developing the Proposed RMPA/Final EIS. This was because inventories either had not been conducted or were incomplete.

Some of the major types of data that are incomplete or unavailable are the following:

- Comprehensive planning area-wide inventory of wildlife and special status species occurrence and condition
- GIS data used for disturbance calculations on private lands
- Site-specific surveys of cultural and paleontological resources
- Lack of quantifiable social or economic effects specific to counties, from the Statewide Socioeconomic Baseline Data collection for Nevada that is currently being developed by the University of Nevada, Reno

For these resources, estimates were made concerning their number, type, and significance, based on previous surveys and existing knowledge.

In addition, some impacts could not be quantified, given the proposed management actions. Where there was this gap, impacts were projected in qualitative terms or, in some instances, were described as unknown. Subsequent site-specific, project-level analyses would provide the opportunity to collect and examine site-specific inventory data to determine appropriate application of RMP-level guidance. In addition, the BLM and other agencies in the planning area continue to update and refine information used to implement this plan.

#### 4.5 IMPACTS ON GREATER SAGE-GROUSE AND GREATER SAGE-GROUSE HABITAT

##### 4.5.1 No-Action Alternative with the Inclusion of SFAs (No-Action Alternative)

Under this alternative, 2,767,552 acres of Greater Sage-Grouse HMAs would be designated as SFAs and would be recommended for withdrawal from location and entry under the Mining Law of 1872 for 20 years, subject to valid existing rights. The potential for future mining operations that would affect Greater Sage-Grouse and its habitat would be reduced because additional protections from habitat

disturbance and fragmentation associated with mining would be placed on some of the most important landscapes for Greater Sage-Grouse conservation (as identified by the USFWS; BLM 2016b).

Based on the reasonably foreseeable development (RFD) scenario, estimates for the number and size of future mines and exploration projects in the planning area over the proposed 20-year withdrawal would not be substantially different (see **Table 4-3**, below). The difference, therefore, between the nature and type of effects on Greater Sage-Grouse described in Section 4.4.10 of the 2015 Final EIS would be negligible. A withdrawal within the SFA could have beneficial impacts on Greater Sage-Grouse by potentially reducing mining activities that may cause disturbance to Greater Sage-Grouse and its habitat within and adjacent to the withdrawal areas.

**Table 4-3**  
**Estimated Number of Mines and Exploration Projects**

State	Inclusion of SFA		No SFA	
	Mines	Exploration	Mines	Exploration
Nevada	1	32	3	78
California	N/A	N/A	N/A	N/A

Source: BLM 2016b

#### 4.5.2 Management Alignment Alternative

Adopting the changes proposed in the Management Alignment Alternative would be consistent with both Nevada and California's overall objective to provide for the long-term conservation of Greater Sage-Grouse by protecting the habitat upon which the species depends. Despite minor differences between the actions described in this alternative and those analyzed in the 2015 Final EIS, the difference between the nature and type of impacts described would be negligible. These impacts are discussed in Section 4.4 of the 2015 Final EIS. Alignment with the states' conservation and management strategies would improve coordination and opportunities for enhanced management.

The Management Alignment Alternative proposes to update the HMA boundaries for PHMA, GHMA, and OHMA to reflect the best available science, and outlines a process for periodically revising these boundaries in the future, as new data becomes available. This would ensure that current and future renditions of HMA boundaries accurately reflect Greater Sage-Grouse habitat on the ground and guide management actions appropriately. As the boundaries are updated, the land use plan allocations associated with each HMA (see **Table 2-1**) would be adjusted to match the newest USGS map model (Coates et al. 2016). This would help to conserve the species by ensuring allocations and any of their associated restrictions are applied in the appropriate areas, while allowing infrastructure and economic development to occur in areas that would not affect the species.

The allocation exception process would be updated and standardized, to allow for the consideration of projects within PHMA, GHMA, and OHMA provided they meet the prescribed criteria, as described in **Table 2-2**. Because these criteria 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, no new impacts on Greater Sage-Grouse and its habitat are anticipated above those analyzed in the 2015 Final EIS.

Adaptive management hard and soft triggers would be updated as summarized and described in **Table 2-2** and **Appendix D**. This update would ensure that the BLM is utilizing the best available science, data and decision support tools to guide management at the appropriate spatial scale. Impacts on Greater Sage-Grouse and its habitat would be beneficial as a result of this update to adaptive management triggers, providing the ability to detect declining populations and/or habitat and change management on the ground.

The State of Nevada adopted a mitigation standard of net benefit (net conservation gain). Consistent with the State approach, this standard would be retained in the Management Alignment Alternative (and the No-Action Alternative), with additional clarification regarding implementation provided in **Appendix F** of the Draft RMPA/EIS. The improved coordination among state and federal partners, along with using consistent metrics for tracking changes in habitat quality and quantity over time, is anticipated to benefit the species through enhanced knowledge of baseline conditions and restoration/reclamation/mitigation effectiveness.

Beneficial impacts were identified for addressing seasonal timing restrictions and modifying indicators and their values in the Habitat Objectives (Table 2-2 of the 2015 ARMPA/ROD) in the 2015 Final EIS, in coordination with the state wildlife agencies and other partners and others as described in **Table 2-2**. The criteria established for modifying or removing seasonal timing restrictions to ensure that these protections are still applied where applicable and allow for beneficial Greater Sage-Grouse projects (i.e., juniper and/or pinyon removal, riparian restoration projects, reseeding, etc.) to be implemented in an expedited manner. Modifying the Habitat Objectives would improve the accuracy of Greater Sage-Grouse habitat management by using the best available science to inform Greater Sage-Grouse seasonal habitat requirements.

SFAs would not be designated under this alternative and therefore not recommended for withdrawal from location and entry under the Mining Law of 1872; however, they would still be managed according to their underlying Greater Sage-Grouse HMAs and associated allocations and management decisions (PHMA, GHMA, or OHMA). Impacts on Greater Sage-Grouse would be consistent with those described in 2015 because SFAs presented no additional conservation or management restrictions above PHMA with the exception of the withdrawal recommendation discussed above. Given the subsequent information obtained through the 2016 SFA Draft EIS's associated Mineral Potential Report and Socioeconomic Impacts Analysis (BLM 2016b), the October 4, 2017, *Notice of Cancellation of Withdrawal Application and Withdrawal Proposal* explained that "the BLM determined the proposal to withdraw 10 million acres was unreasonable in light of the data that showed that mining affected less than 0.1 percent of Greater Sage-Grouse-occupied range."

#### **4.5.3 Proposed Plan Amendment**

Adopting the changes in the Proposed Plan Amendment would result in similar impacts and outcomes as described in section 4.5.2 for the Management Alignment Alternative. The Proposed Plan Amendment would remain consistent with both Nevada and California's overall objective to provide for the long-term conservation of Greater Sage-Grouse by protecting the habitat upon which the species depends. Despite minor differences between the actions described in the Proposed Plan Amendment and those analyzed in the 2015 Final EIS, the difference between the nature and type of impacts described would be negligible. These impacts are discussed in Section 4.4 of the 2015 Final EIS. Alignment with the states'

conservation and management strategies would improve coordination and opportunities for enhanced management.

Under the Proposed Plan Amendment, the adaptive management strategy would be revised as summarized and described in **Table 2-2** and **Appendix D**. The adaptive management strategy presented in the Proposed Plan Amendment has been modified to better align with the strategy approved by the State of Nevada's Sagebrush Ecosystem Council on July 17, 2018 and August 30, 2018. Habitat triggers have been replaced with a system of adaptive management warnings related to fire risk, wildland fire, anthropogenic and natural disturbances. If these warnings justify a response, this would be considered an adaptive management habitat trigger. Impacts on Greater Sage-Grouse and its habitat from this change to the adaptive management strategy would be beneficial, providing the ability to detect declining populations and/or habitat and change management on the ground with other Federal, state, and local partners. These warnings would also allow BLM to assess the threats that are present and widespread across the Nevada and Northeastern California Sub-region, which are wildfire and invasive plant species.

In accordance with the state of Nevada's adopted goal of seeking a net conservation gain for Greater-Sage Grouse, the Proposed Plan Amendment retains net conservation gain as a goal for the planning area, however, the mitigation standard that applies to third party actions is modified to reflect BLM's determination that compensatory mitigation must be voluntary unless required by other applicable law but in recognition that states may require mandatory compensatory mitigation in accordance with state law. Consistent therewith, the BLM would continue to require appropriate mitigation to adequately conserve Greater Sage-Grouse and its habitat and would pursue a net conservation gain as a broader planning goal and objective in alignment with State management plans and policy. 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.

The BLM would continue to apply the mitigation hierarchy as described in the CEQ Regulations at 40 CFR 1508.20; however, the BLM would focus on avoiding, minimizing, rectifying or reducing impacts over time. Compensation, which involves replacing or providing substitute resources for the impacts (including payment) would only be considered when voluntarily offered by a proponent, in coordination with the States of Nevada and California; however, when authorizing third-party actions that would result in direct, indirect, or cumulative impacts on Greater Sage-Grouse or their habitat, the BLM would require those impacts to be quantified using the most current version of the State of Nevada's Habitat Quantification Tool (HQT) to ensure consistency in tracking/reporting changes to Greater Sage-Grouse habitat quality and quantity. The Proposed Plan Amendment also removes Appendix F, Mitigation, and clarifies how the BLM would apply the mitigation hierarchy to comply with current policy and guidance.

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 mitigation requirement or recommendation 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 would 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 Amendments would be nominal, in part, because the BLM would continue to ensure consistency of its actions and authorizations with the land use planning level goals and objectives of the Proposed Plan Amendments. The implementation of compensatory mitigation actions would be directed by MOAs that describe how the BLM would align with State authorities and incorporated in the appropriate NEPA analysis subsequent to the Proposed Plan Amendment. 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-imposed mitigation recommendations 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 \$22 million in fiscal year 2019 through the implementation of habitat management projects in the Great Basin Region.

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.

In all designated Greater Sage-Grouse habitat, the BLM would ensure 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 would 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 would 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 would include all lands in the area of interest, regardless of surface management, and would help inform where finer-scale evaluations are needed.

The criteria established for modifying or removing seasonal timing restrictions has been revised in the Proposed Plan Amendment through the addition of an exception to modify or waive seasonal timing restrictions to allow for priority routine administrative functions (consistent with the exceptions proposed for allocations). Prior to permitting this exception, BLM would still be required to coordinate with NDOW and/or CDFW to ensure the seasonal lifecycle periods that are necessary for the Greater Sage-Grouse are protected, while still allowing these types of functions to occur in a timely manner. Due to the fact that it would be speculative to anticipate at the land use planning level how often and when this exception would be pursued on a project-by-project basis, impacts would be more appropriate at the project scale.

## **4.6 IMPACTS ON VEGETATION AND SOILS**

### **4.6.1 No-Action Alternative with the Inclusion of SFAs (No-Action Alternative)**

Under this alternative, 2,767,552 acres of Greater Sage-Grouse habitat management areas would be designated as SFAs, and would be recommended for withdrawal from location and entry under the Mining Law of 1872 for 20 years, subject to valid existing rights. Under this alternative, less mining activity would be authorized (see **Table 4-3**, above), thus reducing the overall potential for disturbance associated with mining activities.

The reduction in overall disturbance would provide a positive benefit to vegetation and soils; however, because localized disturbance from mining activities requires reclamation and is only one factor affecting the extent and condition of vegetation and soils, the designation of SFAs is unlikely to result in a substantially different outcome for vegetation and soils as those described in Section 4.5.10 of the 2015 Final EIS.

### **4.6.2 Management Alignment Alternative**

Adopting the changes proposed in the Management Alignment Alternative would not substantially alter vegetation and soil resources because they would continue to be managed according to their underlying habitat management area and associated allocations and management decisions (PHMA, GHMA, or OHMA). Despite minor differences between the actions described in this alternative and those analyzed in the 2015 Final EIS, the difference between the nature and type of impacts described would be negligible. These impacts are discussed in Section 4.5 of the 2015 Final EIS.

The Management Alignment Alternative proposes to update the HMA boundaries for PHMA, GHMA, and OHMA to reflect the best available science, and outlines a process for periodically revising these boundaries in the future, as new data becomes available. The allocations associated with each HMA (**Table 2-2**) would be adjusted based on updates to the USGS map model (Coates et al. 2016). The allocation exception process would be updated and standardized, as described in **Table 2-2**, to allow for the consideration of projects within HMAs, provided they meet prescribed criteria.

Adaptive management hard and soft triggers would be updated as summarized and described in **Table 2-2** and **Appendix D**. The mitigation standard (net conservation gain) would be retained in the

Management Alignment Alternative (and the No-Action Alternative), with additional clarification regarding implementation provided in **Appendix F**. Seasonal timing restrictions and modifying Habitat Objectives (Table 2-2 of the 2015 ARMPA/ROD) indicators and values would be addressed in coordination with state wildlife agencies and other partners as described in **Table 2-2**. SFAs would not be designated under this alternative and therefore not recommended for withdrawal from location and entry under the Mining Law of 1872; however, they would still be managed according to their underlying HMA and associated allocations and management decisions (PHMA, GHMA, or OHMA).

#### **4.6.3 Proposed Plan Amendment**

Adopting the changes in the Proposed Plan Amendment would result in similar impacts on vegetation and soil resources as described in section 4.6.2 for the Management Alignment Alternative, except that under the Proposed Plan Amendment, the adaptive management strategy would be revised as summarized and described in **Table 2-2** and **Appendix D**. Impacts on vegetation and soil resources from the modifications identified in **Appendix D** would be beneficial, providing the ability to address fire risk in a collaborative and expeditious manner, which would beneficially impact vegetation and soil resources. The proposed adaptive management strategy would allow BLM to assess the threats that are present and widespread across the Nevada and Northeastern California Sub-region, which are wildfire and invasive plant species.

The criteria established for modifying or removing seasonal timing restrictions has been revised in the Proposed Plan Amendment through the addition of an exception to modify or waive seasonal timing restrictions to allow for routine administrative functions (consistent with the exceptions proposed for allocations). Due to the fact that it would be speculative to anticipate at the land use planning level how often and when this exception would be pursued on a project-by-project basis, impacts would be more appropriate at the project scale.

### **4.7 IMPACTS ON LAND USE AND REALTY**

#### **4.7.1 No-Action Alternative with the Inclusion of SFAs (No-Action Alternative)**

The designation of SFAs would be specific to recommending lands for withdrawal from location and entry under the Mining Law of 1872. Because this would not alter the underlying allocations for land use and realty associated with Greater Sage-Grouse HMAs, the nature and type of effects on land use and realty described in Section 4.13.10 of the 2015 Final EIS (BLM 2015a) would be the same as under this alternative.

#### **4.7.2 Management Alignment Alternative**

Adopting the changes proposed in the Management Alignment Alternative would result in boundary adjustments for where land use and realty allocations are applied. Given the relatively minor shift in PHMA (-0.5 percent) and GHMA (+0.5 percent), these changes would not result in discernible differences from the No-Action Alternative. The decrease in OHMA (-17 percent) would have negligible impacts on land use and realty, as there are limited allocation decisions tied to OHMA; therefore, the difference between the nature and type of impacts described would be negligible. These impacts are discussed in Section 4.13 of the 2015 Final EIS (BLM 2015a).

The Management Alignment Alternative proposes to update the HMA boundaries for PHMA, GHMA, and OHMA to reflect the best available science, and outlines a process for periodically revising these boundaries in the future, as new data becomes available. The land use plan allocations associated with



each HMA (**Table 2-2**) would be adjusted to align with the USGS map model, as updated (Coates et al. 2016). The allocation exception process would be updated and standardized, as described in **Table 2-2**, to allow for the consideration of projects within HMAs, provided they meet the prescribed criteria.

Adaptive management hard and soft triggers would be updated as summarized and described in **Table 2-2** and **Appendix D**. The mitigation standard (net conservation gain) would be retained in the Management Alignment Alternative and the No-Action Alternative, with additional clarification regarding implementation provided in **Appendix F** of the Draft RMPA/EIS. Seasonal timing restrictions and modifying Habitat Objectives (Table 2-2 of the 2015 ARMPA/ROD) indicators and values would be addressed in coordination with state wildlife agencies and other partners as described in **Table 2-2**. SFAs would not be designated under this alternative and therefore not recommended for withdrawal from location and entry under the Mining Law of 1872; however, they would still be managed according to their underlying habitat management area designation and associated allocations and management decisions (PHMA, GHMA, or OHMA).

### 4.7.3 Proposed Plan Amendment

Adopting the changes in the Proposed Plan Amendment would result in similar impacts on land use and realty resources as described in section 4.7.2 for the Management Alignment Alternative. The adjustments made between the Management Alignment Alternative and the Proposed Plan Amendment regarding adaptive management and seasonal timing restrictions would have no measurable effects on the land use and realty program.

## 4.8 IMPACTS ON RENEWABLE ENERGY RESOURCES

### 4.8.1 No-Action Alternative with the Inclusion of SFAs (No-Action Alternative)

The designation of SFAs would be specific to recommending lands for withdrawal from location and entry under the Mining Law of 1872. Because this would not alter the underlying allocations for renewable energy resources associated with Greater Sage-Grouse HMAs, the nature and type of effects on renewable energy resources described in Section 4.14.10 of the 2015 Final EIS would be the same as under this alternative.

### 4.8.2 Management Alignment Alternative

Adopting the changes proposed in the Management Alignment Alternative would result in boundary adjustments for where renewable energy allocations are applied. Given the relatively minor shift in PHMA (-0.5 percent) and GHMA (+0.5 percent), these changes would not result in discernible differences from the No-Action Alternative. The decrease in OHMA (-17 percent) would make additional areas available for solar development in Nevada only, but this is not expected to result in increased development proposals based on the reasonably foreseeable development scenarios discussed in the 2015 Final EIS.

Therefore, the difference between the nature and type of impacts described would not be discernable without specific, new applications or project proposals, regarding development in those areas. These impacts are discussed in Section 4.14 of the 2015 Final EIS.

The Management Alignment Alternative proposes to update the HMA boundaries for PHMA, GHMA, and OHMA to reflect the best available science, and outlines a process for periodically revising these boundaries in the future, as new data becomes available. The land use plan allocations associated with

each HMA (**Table 2-2**) would be adjusted to align with USGS map model as updated (Coates et al. 2016). The allocation exception process would be updated and standardized, as described in **Table 2-2**, to allow for the consideration of projects within HMAs, provided they meet prescribed criteria.

Adaptive management hard and soft triggers would be updated as summarized and described in **Table 2-2** and **Appendix D**. The mitigation standard (net conservation gain) would be retained in the Management Alignment Alternative (and the No-Action Alternative), with additional clarification regarding implementation provided in **Appendix F** of the Draft RMPA/EIS. Seasonal timing restrictions and modifying Habitat Objectives (Table 2-2 of the 2015 ARMPA/ROD) indicators and values would be addressed in coordination with state wildlife agencies and other partners as described in **Table 2-2**. SFAs would not be designated under this alternative and therefore not recommended for withdrawal from location and entry under the Mining Law of 1872; however, they would still be managed according to their underlying habitat management area designation and associated allocations and management decisions (PHMA, GHMA, or OHMA).

### 4.8.3 Proposed Plan Amendment

Adopting the changes in the Proposed Plan Amendment would result in similar impacts on renewable energy resources as described in section 4.8.2 for the Management Alignment Alternative. The adjustments made between the Management Alignment Alternative and the Proposed Plan Amendment regarding adaptive management and seasonal timing restrictions would have no measurable effects on renewable energy resources.

## 4.9 IMPACTS ON MINERALS AND ENERGY

### 4.9.1 No-Action Alternative with the Inclusion of SFAs (No-Action Alternative)

The nature and type of effects on leasable minerals (geothermal and oil and gas), salable minerals, and solid (non-energy) leasable minerals as described in Section 4.15.10 of the 2015 Final EIS would be the same. The inclusion of SFAs would be specific to recommending lands for withdrawal from location and entry under the Mining Law of 1872, which would not affect the land use allocations associated with leasable minerals.

The withdrawal of 2,767,552 acres of BLM-administered lands in Nevada from location and entry under the Mining Law of 1872 for a period of 20 years would reduce the estimated number of future mines and exploration projects in the state (BLM 2016b). Because this withdrawal would not apply to valid existing rights, the designation of SFAs is only expected to reduce the number of new mines from three down to one during the initial 20-year withdrawal. As identified in Table 4-7 of the 2016 SFA Draft EIS, exploration projects would see a sharper decline with the inclusion of SFAs, dropping from an estimated 78 new projects down to 32 during the initial 20-year withdrawal.

When compared with the Management Alignment Alternative, which does not include SFAs, the withdrawal of 2,767,552 acres to locatable minerals would reduce access and availability of geology and mineral resources in Nevada because the number of new mines would be reduced by 33 percent and the number of exploration projects would be reduced by 41 percent (BLM 2016b). The reduction in mining activity would also result in socioeconomic impacts, which are discussed below in **Section 4.10.1**.

### 4.9.2 Management Alignment Alternative

Adopting the changes proposed in the Management Alignment Alternative would result in boundary adjustments for where minerals and energy allocations are applied. Given the relatively minor shift in PHMA (-0.5 percent) and GHMA (+0.5 percent), these changes would not result in discernible differences from the No-Action Alternative. The decrease in OHMA (-17 percent) would be negligible, as there are limited allocation decisions tied to OHMA; therefore, the difference between the nature and type of impacts described would be negligible. These impacts are discussed in Section 4.15 of the 2015 Final EIS.

The Management Alignment Alternative proposes to update the HMA boundaries for PHMA, GHMA, and OHMA to reflect the best available science, and outlines a process for periodically revising these boundaries in the future, as new data becomes available. The land use plan allocations associated with each HMA (**Table 2-2**) would be adjusted to align with USGS map model as updated (Coates et al. 2016). The allocation exception process would be updated and standardized, as described in **Table 2-2**, to allow for the consideration of projects within HMAs, provided they meet prescribed criteria.

Adaptive management hard and soft triggers would be updated as summarized and described in **Table 2-2** and **Appendix D**. The mitigation standard (net conservation gain) would be retained in the Management Alignment Alternative (and the No-Action Alternative), with additional clarification regarding implementation provided in **Appendix F** of the Draft RMPA/EIS.

Seasonal timing restrictions and modifying Habitat Objectives (Table 2-2 of the 2015 ARMPA/ROD) would be addressed in coordination with state wildlife agencies and other partners as described in **Table 2-2**. SFAs would not be designated under this alternative and therefore not recommended for withdrawal from location and entry under the Mining Law of 1872; however, they would still be managed according to their underlying habitat management area designation and associated allocations and management decisions (PHMA, GHMA, or OHMA).

### 4.9.3 Proposed Plan Amendment

Adopting the changes in the Proposed Plan Amendment would result in similar impacts on minerals and energy resources as described in section 4.9.2 for the Management Alignment Alternative. The adjustments made between the Management Alignment Alternative and the Proposed Plan Amendment regarding adaptive management and seasonal timing restrictions would have no measurable effects on the minerals and energy program.

## 4.10 IMPACTS ON SOCIOECONOMICS

### 4.10.1 No-Action Alternative with the Inclusion of SFAs (No-Action Alternative)

The withdrawal of 2,767,552 acres of BLM-administered lands in Nevada from location and entry under the Mining Law of 1872 for a period of 20 years would have additional socioeconomic impacts beyond those described in Section 4.21 and 4.22 of the 2015 Final EIS. Based on the RFD scenario presented in the 2016 SFA Draft EIS, withdrawal would lead to broad economic impacts on the national and international mining industry (BLM 2016b). While extensive areas of BLM-administered lands in Nevada would remain open to mining, the mining industry could be adversely affected from having less potential locations to explore and develop.

The economic impacts in Nevada would differ considerably depending on whether the one new mine that was developed was a large gold/silver mine or a smaller barite mine. The best estimate is that future mines would support \$133 million in annual output, 267 to 388 jobs, and between \$20.5 and \$35.7 million in annual labor income. Relative to the Management Alignment Alternative, which does not include SFAs, withdrawal would support between 414 to 739 fewer jobs in Nevada (primarily Elko, Humboldt, and Washoe Counties), and between \$25.8 and \$56.5 million less in annual labor income (BLM 2016b).

SFA designation would also reduce the number of exploration projects from 78 to 32 based on RFD scenarios for Nevada. As a result, exploration expenditures would be expected to fall by approximately 41 percent (approximately \$3.8 million, as opposed to \$9.1 million; BLM 2016b). The reduction in future mining operations could have tangible social impacts in Elko and Humboldt Counties. In particular, the potential reduction in future employment opportunities in the mining sector could lead to an increase in future unemployment and/or potential future out migration of some of the workers in that sector. Intangible social impacts from the SFA designation could be larger than the tangible social impacts, particularly outside of Elko and Humboldt Counties.

#### 4.10.2 Management Alignment Alternative

Adopting the changes proposed in the Management Alignment Alternative, and not recommending SFAs for withdrawal, could lead to a corresponding increase in populations and employment for the counties that would see new mine development. Within the analysis area, the projected economic impacts from operation of future mines would result in 801 jobs, a labor income of \$62 million, and approximately \$12 million in state/local tax revenue. With the exception of not including SFAs, the difference between the nature and type of impacts described would be negligible given the similarity of the alternatives. These impacts are discussed in Section 4.21 of the 2015 Final EIS and 4.3.6 of the 2016 SFA Draft EIS (BLM 2016b).

The Management Alignment Alternative proposes to update the HMA boundaries for PHMA, GHMA, and OHMA to reflect the best available science, and outlines a process for periodically revising these boundaries in the future, as new data becomes available. The land use plan allocations associated with each habitat management area (**Table 2-2**) would be adjusted to align with USGS map model as updated (Coates et al. 2016). The allocation exception process would be updated and standardized, as described in **Table 2-2**, to allow for the consideration of projects within Greater Sage-Grouse HMA, provided they meet prescribed criteria.

Adaptive management hard and soft triggers would be updated as summarized and described in **Table 2-2** and **Appendix D**. The mitigation standard (net conservation gain) would be retained in the Management Alignment Alternative (and the No-Action Alternative), with additional clarification regarding implementation provided in **Appendix D** (Adaptive Management).

Seasonal timing restrictions and modifying Habitat Objectives (Table 2-2 of the 2015 ARMPA/ROD) would be addressed in coordination with state wildlife agencies and other partners as described in **Table 2-2**. SFAs would not be designated under this alternative and therefore not recommended for withdrawal from location and entry under the Mining Law of 1872; however, they would still be managed according to their underlying habitat management area designation and associated allocations and management decisions (PHMA, GHMA, or OHMA).

### 4.10.3 Proposed Plan Amendment

Adopting the changes in the Proposed Plan Amendment would result in similar impacts on socioeconomics across the sub-region as described in section 4.10.2 for the Management Alignment Alternative. The adjustments made between the Management Alignment Alternative and the Proposed Plan Amendment regarding adaptive management and seasonal timing restrictions would be beneficial to state and local economies, as state and local administrative functions (in coordination with state wildlife agencies and other partners) may be permitted to move forward with shortened and/or waived seasonal timing restrictions, thus allowing these projects to occur in a more expeditious manner. In addition, threats to Greater Sage-Grouse habitat would be addressed in a more collaborative and expeditious manner based on the refinements outlined in the adaptive management strategy (**Appendix D**), which would benefit local economies that are impacted by similar threats such as wildfire and invasive plant species.

## 4.11 IMPACTS ON LIVESTOCK GRAZING

### 4.11.1 No-Action Alternative with the Inclusion of SFAs (No-Action Alternative)

The designation of SFAs would be specific to recommending lands for withdrawal from location and entry under the Mining Law of 1872. Because this would not alter the underlying allocations for livestock grazing associated with Greater Sage-Grouse HMAs, the nature and type of effects on livestock grazing described in Section 4.10.10 of the 2015 Final EIS would be the same as under this alternative.

### 4.11.2 Management Alignment Alternative

Despite minor differences between the actions described in the Management Alignment Alternative and those analyzed in the 2015 Final EIS, the difference between the nature and type of impacts described would be negligible. These impacts are discussed in Section 4.10 of the 2015 Final EIS.

The Management Alignment Alternative proposes to update the HMA boundaries for PHMA, GHMA, and OHMA to reflect the best available science, and outlines a process for periodically revising these boundaries in the future, as new data becomes available. The land use plan allocations associated with each HMA (**Table 2-2**) would be adjusted to align with the USGS map model as updated (Coates et al. 2016). The allocation exception process would be updated and standardized, as described in **Table 2-2**, to allow for the consideration of projects within HMAs, provided they meet prescribed criteria.

Adaptive management hard and soft triggers would be updated as summarized and described in **Table 2-2** and **Appendix D**. The mitigation standard (net conservation gain) would be retained in the Management Alignment Alternative (and the No-Action Alternative), with additional clarification regarding implementation provided in Appendix F of the Draft RMPA/EIS.

Seasonal timing restrictions and modifying Habitat Objectives (Table 2-2 of the 2015 ARMPA/ROD) would be addressed in coordination with state wildlife agencies and other partners as described in **Table 2-2**. SFAs would not be designated under this alternative and therefore not recommended for withdrawal from location and entry under the Mining Law of 1872; however, they would still be managed according to their underlying HMA designation and associated allocations and management decisions (PHMA, GHMA, or OHMA).

### 4.1.1.3 Proposed Plan Amendment

Adopting the changes in the Proposed Plan Amendment would result in similar impacts on livestock grazing as described in section 4.1.1.2 for the Management Alignment Alternative. The adjustments made between the Management Alignment Alternative and the Proposed Plan Amendment regarding adaptive management and seasonal timing restrictions would have no measurable effects on the livestock grazing program.

## 4.12 IMPACTS ON COMPREHENSIVE TRAVEL MANAGEMENT

### 4.12.1 No-Action Alternative with the Inclusion of SFAs (No-Action Alternative)

The designation of SFAs would be specific to recommending lands for withdrawal from location and entry under the Mining Law of 1872. Because this would not alter the underlying allocations for travel and transportation management associated with Greater Sage-Grouse HMAs, the nature and type of effects on travel and transportation management described in Section 4.12.10 of the 2015 Final EIS would be the same as under this alternative.

### 4.12.2 Management Alignment Alternative

Adopting the changes proposed in the Management Alignment Alternative would result in boundary adjustments for where travel and transportation allocations are applied. Given the relatively minor shift in PHMA (-0.5 percent) and GHMA (+0.5 percent), these changes would not result in discernible differences from the No-Action Alternative. The decrease in OHMA (-17 percent) would have negligible impacts on Comprehensive Travel Management, as there are limited allocation decisions tied to OHMA; therefore, the difference between the nature and type of impacts described would be negligible. These impacts are discussed in Section 4.12 of the 2015 Final EIS.

The Management Alignment Alternative proposes to update the HMA boundaries for PHMA, GHMA, and OHMA to reflect the best available science, and outlines a process for periodically revising these boundaries in the future, as new data becomes available. The land use plan allocations associated with each habitat management area (**Table 2-2**) would be adjusted to align with the USGS map model as updated (Coates et al. 2016). The allocation exception process would be updated and standardized, as described in **Table 2-2**, to allow for the consideration of projects within HMAs, provided they meet the prescribed criteria.

Adaptive management hard and soft triggers would be updated as summarized and described in **Table 2-2** and **Appendix D**. The mitigation standard (net conservation gain) would be retained in the Management Alignment Alternative (and the No-Action Alternative), with additional clarification regarding implementation provided in Appendix F of the Draft RMPA/EIS. Seasonal timing restrictions and modifying Habitat Objectives (Table 2-2 of the 2015 ARMPA/ROD) would be addressed in coordination with state wildlife agencies and other partners as described in **Table 2-2**. SFAs would not be designated under this alternative and therefore not recommended for withdrawal from location and entry under the Mining Law of 1872; however, they would still be managed according to their underlying HMA designation and associated allocations and management decisions (PHMA, GHMA, or OHMA).

### 4.12.3 Proposed Plan Amendment

Adopting the changes in the Proposed Plan Amendment would result in similar impacts on comprehensive travel management as described in section 4.12.2 for the Management Alignment

Alternative. The adjustments made between the Management Alignment Alternative and the Proposed Plan Amendment regarding adaptive management and seasonal timing restrictions would have no measurable effects on the comprehensive travel management program.

### 4.13 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 future 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 Proposed RMPA/Final EIS 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 Proposed RMPA/Final EIS incorporates by reference the analysis in the 2015 Final EIS and the 2016 SFA Draft EIS, which comprehensively analyzed the cumulative impacts associated with these planning decisions under consideration in that process. The 2015 Final EIS, and to some degree the 2016 SFA Draft EIS evaluated the cumulative impacts associated with the No-Action Alternative in this Proposed RMPA/Final EIS. The Management Alignment Alternative's and Proposed Plan Amendment's impacts are effectively within the range of effects analyzed by the 2015 Final and 2016 SFA Draft EISs. The 2015 Final EIS is quite recent, and the BLM has determined that conditions in the Nevada and Northeastern California Sub-region have not changed significantly based, in part, on the USGS science review (see **Chapter 3**), as well 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 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. Additionally, changes that have occurred on a smaller scale, 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 EIS 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 EIS 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 and Management Alignment Alternatives 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 WAFWA 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 Endangered Species Act (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 Sage Grouse Task Force team (SGTF), 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 on 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 LUPs 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 mitigation 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 actions as described previously. In many cases, it is still too soon in the implementation of these compensatory 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 compensatory mitigation with their relevant State authorities. All of the Proposed Plan Amendments modify the existing standard for compensatory mitigation, but maintain that the BLM would 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 2018 planning process. These data were carried forward as the



alternative allocation decision data. The BLM also provided allocation decision data representing changes included in the Management Alignment Alternative in the Proposed RMPA/Final EIS, which were then used in the comparative analysis.

#### **4.13.1 Range-wide Cumulative Effects Analysis - Greater Sage-Grouse**

The 2015 ARMPA/ROD is the No-Action Alternative in this Proposed RMPA/Final EIS and was part of the cumulative impact analysis for Greater Sage-Grouse at the WAFWA Management Zone (MZ) scale in the 2015 Final EIS (see Table 4-4 of the 2015 Final EIS). Additionally, the cumulative impacts anticipated from the Management Alignment Alternative and the Proposed Plan Amendment presented in this Proposed RMPA/Final EIS 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 Nevada and northeastern California 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 Alternatives and the Proposed Plan Amendment at scales beyond the individual planning areas associated with the 2018 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 Greater Sage-Grouse's range.

Under the Management Alignment Alternative, the recommendation to withdraw SFAs 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 Draft 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 Draft EIS similarly demonstrated negligible benefit of the proposed withdrawal to Greater Sage-Grouse and its habitat.<sup>1</sup>

The cumulative effects of implementing the Management Alignment Alternative are as described in the 2016 SFA 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 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.

#### 4.13.2 Why Use the WAFWA Management Zone?

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. **Appendix H** includes a map that depicts the WAFWA MZs across the range of the Greater Sage-Grouse. 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 USFWS's 2013 Conservation Objectives Team (COT) Report, the 2015 Regional RODs (BLM 2015c), and the USFWS' 2010 Listing Decision. The 2015 Regional RODs (BLM 2015c) identify how planning level allocation decisions address the identified threats to populations, which are aggregated in this analysis by MZs. The 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.

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<sup>1</sup>Importantly, 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).

**Table 4-4** 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 Proposed RMPA/Final EIS are covered by the 2015 Final EIS and the 2016 SFA 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 4-4  
Cumulative Effects Analysis Incorporated by Reference**

<b>Resource Topic</b>	<b>Location of Cumulative Effects Analysis and Updated Impacts Analysis</b>
Greater Sage-Grouse	Chapter 5, Section 5.1 of the 2015 Final EIS and Chapter 4 of the 2016 SFA Draft EIS, Section 4.5.9. Additional information regarding Greater Sage-Grouse is included in <b>Chapter 4, Section 4.5</b> , of this Proposed RMPA/Final EIS.
Vegetation and Soils	Chapter 5, Section 5.4 of the 2015 Final EIS and Chapter 4 of the 2016 SFA Draft EIS, Section 4.4.9. Additional information regarding Vegetation and Soils is included in <b>Chapter 4, Section 4.6</b> , of this Proposed RMPA/Final EIS.
Land Use and Realty	Chapter 5, Section 5.12 of the 2015 Final EIS. Additional information regarding Land Use and Realty is included in <b>Chapter 4, Section 4.7</b> , of this Proposed RMPA/Final EIS.
Renewable Energy	Chapter 5, Section 5.13 of the 2015 Final EIS. Additional information regarding Renewable Energy is included in <b>Chapter 4, Section 4.8</b> , of this Proposed RMPA/Final EIS.
Minerals and Energy	Chapter 5, Section 5.14 of the 2015 Final EIS and Chapter 4 of the 2016 SFA Draft EIS, Section 4.2.9. Additional information regarding Minerals and Energy is included in <b>Chapter 4, Section 4.9</b> , of this Proposed RMPA/Final EIS.
Socioeconomics	Chapter 5, Section 5.19 of the 2015 Final EIS and Chapter 4 of the 2016 SFA Draft EIS, Section 4.3.13. Additional information regarding Socioeconomics is included in <b>Chapter 4, Section 4.10</b> , of this Proposed RMPA/Final EIS.
Livestock Grazing	Chapter 5, Section 5.9 of the 2015 Final EIS. Additional information regarding Livestock Grazing is included in <b>Chapter 4, Section 4.11</b> , of this Proposed RMPA/Final EIS.
Comprehensive Travel Management	Chapter 5, Section 5.11 of the 2015 Final EIS. Additional information regarding Comprehensive Travel Management is included in <b>Chapter 4, Section 4.12</b> , of this Proposed RMPA/Final EIS.

The sum of past, present, and reasonably foreseeable actions listed in **Appendix H** represent cumulative effects across the range of Greater Sage-Grouse habitat and HMAs. 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 describes the threats to Greater Sage-Grouse and its habitat. The magnitude of change between the No-Action Alternative and Proposed Plan Amendment, by decision, is represented in pie charts and tables within this section and in **Appendix H**. Those effects, in addition to synthesizing the plan decisions and comparing the current condition to the condition that would 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.

Habitat fragmentation and disturbance from energy development, mining, and infrastructure remain the greatest threat to Greater Sage-Grouse in the Rocky Mountain region. Wildfire threat remains a concern in the Rocky Mountain Region and is the greatest threat to Greater Sage-Grouse in the Great

Basin Region as well as invasive plant species. Between 2008 and 2018, wildfires burned an average of 900,000 acres per year in Greater Sage-Grouse habitat range-wide; 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 treated 1.4 million acres of Greater Sage-Grouse habitat range-wide over the past 5 years.

The interagency (including the 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 (Mayer 2018). 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) and they pointed to three new gaps involving program capacity, resource specialists, and developing guidelines on drought and climate adaptation to manage sagebrush ecosystems.

The increased flexibility proposed in these Proposed Plan Amendments can allow for responsible development of other uses in Greater Sage-Grouse HMAs and may reduce costs to proponents but is not expected to result in a large increase in development proposals on public land. Similarly, the increased protections from the 2015 Final EIS have not resulted in a large decrease in right-of-way (ROW) applications or an increase in rejected applications; therefore, the changes proposed under the Management Alignment Alternative and Proposed Plan Amendment are not expected to result in large changes to the rate of development across the range, or in its economy.

Some 350 obligate species of plants and wildlife rely on the sagebrush steppe ecosystems and coexist with Greater Sage-Grouse. They may be similarly affected by development or disturbance; however, nothing in the considered alternatives would lessen the BLM's authority or responsibility to provide for the needs of special status species, as described in BLM's 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. Site-specific NEPA analysis, including an evaluation of impacts on special status species, is required for on-the-ground projects within the planning area.

#### **4.13.3 Cumulative Effects on Greater Sage-Grouse: Management Zone I**

In addition to the analysis in the 2015 Final EIS in Table 4-4, other anticipated incremental impacts are discussed below in association with planning issues being analyzed in this Proposed RMPA/Final EIS.

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 HMAs.

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 MZs. 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 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 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 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 HMAs 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 MZ. Any future modifications of HMAs would be documented using the appropriate level of NEPA if applicable, that would provide analysis regarding any potential impacts; however, because the underlying HMA 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 utilization 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 vegetation 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 Plan Amendment in Wyoming would remove the Greater Sage-Grouse specific language in Management Action 4 (see Table 2-1, Permit Renewals, in the 2018

Wyoming Proposed RMPA/Final EIS), the wildlife/special status species standards are emphasized. As Greater Sage-Grouse habitat 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 habitat. It would ensure 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 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 Proposed RMPA/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 they 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 populations across MZ I.

The BLM's Proposed Plan Amendments in MZ I are also unlikely to preclude the reasonably foreseeable actions listed in **Appendix H** 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 Proposed Plan Amendments retain 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 MZs, to adequately conserve and manage Greater Sage-Grouse habitat.

#### **4.13.4 Cumulative Effects on Greater Sage-Grouse: Management Zone II/VII**

In addition to the analysis in the 2015 Final EIS in Table 4-4, other anticipated incremental impacts are discussed below in association with planning issues being analyzed in this Proposed RMPA/Final EIS.

MZ II/VII encompasses portions of Wyoming, Colorado, Utah, Montana, and Idaho. Under the Proposed 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 HMA 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 Sage-Grouse Management Areas

identified by the State of Utah. In Idaho, approximately 50,000 acres would change from PHMA to Important Habitat Management Area (IHMA) for population monitoring purposes as a result of a tripped adaptive management trigger; however, the habitat would continue to be managed as PHMA, which results in no net change to overall acreages included in the HMAs. Across this MZ, no other modifications to HMAs 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 Plan Amendment would open PHMA within 1 mile of active leks to leasing, subject to NSO stipulations with restrictive criteria for waivers, exceptions, and modifications. Although this allocation change would make additional acres available to leasing, the impact on Greater Sage-Grouse and its habitat 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 its habitat.

For the remainder of the planning areas within MZ II and VII, RMP allocations tied to HMAs did not change between the No-Action and the Proposed 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 and the Proposed 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 MZ II/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 need to persist. Additionally, the relevant distribution of land use plan allocations associated with these HMA changes would not significantly change (0-3 percent; see **Appendix H**).

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 Mining Law of 1872, and they 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 MZs II/VII would be consistent with those impacts identified in the 2015 Final EISs for the then Proposed Plan Amendments. The currently Proposed Plan Amendments changes 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 HMAs and the allocations associated with those HMAs are not being proposed for change in any plan in MZs 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 HMAs across MZs 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 the zone. Future modifications of HMAs would be documented using the appropriate level of NEPA analysis, if applicable, that would provide analysis regarding any potential impacts; however, because the underlying HMA 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 utilization 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 HMA, 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. There would be no appreciable additive impact, therefore, 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 analysis, 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; the conservation benefits of a future withdrawal would be minimal, as documented in the 2016 SFA 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' Proposed 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 the vegetation 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. In Wyoming and Utah, they 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 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 Proposed RMPA/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 populations across this MZ.

Similarly, no appreciable additive impacts are anticipated from updating the adaptive management process as described in the Proposed 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 Plan Amendment, but, in some cases, the lek buffers may be smaller than those identified in the No-Action Alternative. The existing disturbance screening criteria and the disturbance development criteria, however, would highly restrict development activities in both PHMA and IHMA; therefore, the changes in lek buffer sizes would have no additive effect.

The BLM's Proposed Plan Amendments in MZ II/VII are also unlikely to preclude the reasonably foreseeable actions listed in **Appendix H** 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 wildfire, drought, and an associated decline in Greater Sage-Grouse habitat quality. The Proposed Plan Amendments, however, retain conservation measures that would be applied consistent with State management plans. They continue 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 and the expansion of the Blowout Penstemon Area of Critical Environmental Concern (ACEC) during this Greater Sage-Grouse planning effort (BLM 2018c). The visual resource management 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 (*Penstemon haydenii*). 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.

#### 4.13.5 Cumulative Effects on Greater Sage-Grouse: Management Zone III

In addition to the analysis in the 2015 Final EIS in Table 4-4, other anticipated incremental impacts are discussed below in association with planning issues being analyzed in this Proposed RMPA/Final EIS.

This area encompasses portions of California, Nevada, and Utah. Under the Proposed Plan Amendments in Nevada, northeastern California, and Utah, 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 HMA acres between the No-Action and the Proposed Plan Amendment in Nevada and northeastern California is based on adjustments made to habitat modeling used to delineate HMAs and improve alignment with the State of Nevada's delineations for HMAs, which the State of Nevada adopted in December 2015. In Utah, GHMA (approximately 860,000 acres) were removed in the Proposed Plan Amendment in an effort to align with the HMAs identified by the State of Utah. Following this HMA modification, planning-level allocation decisions have also been adjusted in the Proposed Plan Amendment to reflect the distribution of HMA in the Nevada and Northeastern California Sub-region.

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

Both planning efforts' 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. In both planning areas, it would allow for site specific adjustments for land use authorizations and adjustments to existing adaptive management strategies. Under both sets of Proposed Plan Amendments, the BLM would remove the recommendation to withdraw SFAs from location and entry under the Mining Law of 1872, make adjustments to habitat objectives, and identify exceptions or modifications 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 greatest threats to the Greater Sage-Grouse and its habitat.

The BLM's Proposed Plan Amendments in MZ III are also unlikely to preclude the reasonably foreseeable actions listed in **Appendix H** 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 an associated decline in Greater Sage-Grouse habitat quality. The Proposed Plan Amendments, however, 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 maintain Greater Sage-Grouse habitat.

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

Under the Management Alignment Alternative and Proposed Plan Amendment, HMA boundaries in Nevada and northeastern California would be adopted or revised to incorporate the best available science (Coates et al. 2016). Because the underlying HMA 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 utilization 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 and 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 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 Management Alignment Alternative and 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 HMA, 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. There would be no appreciable additive impact, therefore, 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 Management Alignment Alternative and 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.

#### 4.13.6 Cumulative Effects on Greater Sage-Grouse: Management Zone IV

In addition to the analysis in the 2015 Final EIS in Table 4-4, other anticipated incremental impacts are discussed below in association with planning issues being analyzed in this Proposed RMPA/Final EIS.

MZ IV encompasses portions of Idaho, Nevada, Montana, Oregon, Utah, and a small portion of Wyoming. Under the Proposed Plan Amendment PHMA would decrease by 2 percent, IHMA would decrease by 0 percent, GHMA would decrease by 0 percent, and OHMA would decrease by 1 percent, as compared with the acreage identified in the No-Action Alternative. The proposed changes in HMA acres between the No-Action Alternative and the Proposed Plan Amendment in Nevada and Northeastern California Sub-region is based on adjustments made to habitat modeling used to delineate HMA and to improve alignment with the State of Nevada's delineations for HMA. In Idaho, minor proposed changes in HMAs 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 Final EIS, 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. HMA 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, California and Oregon Proposed Plan Amendments are disclosed in each state's Proposed RMPA/Final EISs. Change in allocation decisions is a better indicator to determine how changes across a MZ would 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. See **Appendix H** for a description of 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 HMA would not change between the No-Action and Proposed Plan Amendment. The decrease in PHMA, GHMA, and OHMA within MZ IV between the No-Action Alternative and the 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 HMAs is not significantly changing (0-2 percent, see **Appendix H**).

Each planning efforts' Proposed Plan Amendment in MZ IV incorporate management flexibility that would allow exceptions to allocation decisions within HMA and would allow for site specific adjustments for land use authorizations and adjustments to existing adaptive management strategies. Under all Proposed Plan Amendments, the BLM would remove the recommendation to withdraw SFAs from location and entry under the Mining Law of 1872, make adjustments to habitat objectives, and identify new exceptions to seasonal timing restrictions. The cumulative impacts of these proposed changes on 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 this MZ, where wildfire, invasive plants, and conifer encroachment are greater threats to the Greater Sage-Grouse and its habitats.

The BLM's Proposed Plan Amendments in the MZ are also unlikely to preclude the reasonably foreseeable actions listed in **Appendix H** 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 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 they would not be contributing to any cumulative effects. Wyoming has approximately 4,000 acres of PHMA and 20,000 Acres of GHMA within MZ IV making their potential contribution to cumulative effects within the 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 reasonably foreseeable development scenario for the area predicts zero wells. The changes proposed in Utah's proposed plan would have no additive effect on Greater Sage-Grouse habitats within MZ IV.

The Oregon RMPA would change access on 21,959 acres in all or portions of key Research Natural Areas (RNAs) 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 acres in MZ IV.

The area of MZ IV that includes Utah is extremely isolated. The dominant use is grazing. Grazing management would follow rangeland health. Changes to Utah's Table 2-2 that incorporate local science would 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 reasonably foreseeable development scenario 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 acres in MZ IV.

Nevada and Northeastern California'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 HMA. Nevada and Northeastern California 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 be measurably different compared 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 Plan Amendment, but, in some cases, the lek buffers may be smaller than those identified in the No-Action Alternative. The existing disturbance screening criteria and the disturbance

development criteria, however, 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 stipulation without waivers, exceptions and modifications 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. There would be no appreciable additive impact, therefore, 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.

#### **4.13.7 Cumulative Effects on Greater Sage-Grouse: Management Zone V**

In addition to the analysis in the 2015 Final EIS in Table 4-4, other anticipated incremental impacts are discussed below in association with planning issues being analyzed in this Proposed RMPA/Final EIS.

MZ IV encompasses portions of California, Oregon and Nevada. All proposed changes to HMAs and recommended SFAs for withdrawal within this MZ occur in Nevada and northeastern California.. The Oregon amendment did not propose any changes in the extent of PHMA or GHMA. Oregon removed the recommendation for a withdrawal of SFA under a plan maintenance action in May 2018, prior to the start of this amendment process. That action resulted in no difference between No-Action and Management Alignment Alternatives and the Proposed Plan Amendment in terms of withdrawals.

Under the Proposed Plan Amendment 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 with the acreages identified in the No-Action Alternative. The proposed change in HMA acres between the No-Action Alternative and the Proposed Plan Amendment in Nevada and northeastern California is based on adjustments made to habitat modeling used to delineate HMA and improve alignment with the State of Nevada's delineations for HMA, which the State of Nevada adopted in December 2015. Following this HMA modification, planning level allocation decisions have also been adjusted to reflect the distribution of habitat in Nevada and Northeastern California Sub-region. Future adjustments to HMA in Nevada and 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 and Proposed Plan Amendment would retain livestock grazing within key Research Natural Areas. The Management Alignment Alternative and Proposed Plan Amendment would result in allowing livestock grazing on 21,959 acres within the Oregon planning area. 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.

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

Under the Nevada and northeastern California Proposed Plan Amendment, the Management Alignment Alternative and 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 HMA acres between the No-Action and Management Alignment Alternative and Proposed Plan Amendment would be the result of improved habitat modeling used to delineate HMAs using the best available science and to align with the State of Nevada's delineations for HMA (adopted by the State of Nevada in December 2015). Following this HMA modification, planning level allocation decisions have also been adjusted to reflect the distribution of habitat in Nevada and northeastern California.

The Management Alignment Alternative and Proposed Plan Amendment for the Nevada and Northeastern California Sub-region would also remove the recommendation for a withdrawal in the SFA; allow exceptions to allocation decisions within PHMA, GHMA, and OHMA; modify the existing adaptive management strategy; make adjustments to habitat objectives; and identify 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 H**). 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 and Proposed Plan Amendment 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 MZ V between the No-Action Alternative and Management Alignment Alternative and 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 HMAs would result in an estimated 2.5 to 3 percent decrease, all within Nevada and northeastern California (see **Appendix H**).

The BLM's Proposed Plan Amendments in MZ V are unlikely to preclude the reasonably foreseeable actions listed in **Appendix H** from proceeding. Overall, the 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 wildfire, drought, and other natural disturbances lead to declines in Greater Sage-Grouse habitat quality.

Under the Management Alignment Alternative and Proposed Plan Amendment, HMA boundaries in the Nevada and Northeastern California Sub-region would be adopted or revised to incorporate the best available science (Coates et al. 2016). Because the underlying HMA 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 and 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 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 Management Alignment Alternative and 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 HMA, 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. 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 Management Alignment Alternative and 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 impacts from the implementation of this aspect on Greater Sage-Grouse or the resources/uses analyzed herein, as compared with the No-Action Alternative.

#### **4.14 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 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.

#### **4.15 UNAVOIDABLE ADVERSE IMPACTS**

Section 102(C) of the 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 may occur from implementing this RMPA/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 could result in unavoidable adverse impacts. Although these impacts would be mitigated to the extent possible, unavoidable impacts would be inevitable under both the No-Action and Management Alignment alternatives and the Proposed Plan Amendment.

Impacts from permanent conversion of areas to other uses, such as transportation and mineral and energy development or off-highway vehicle use, would be greater under the Management Alignment Alternative and Proposed Plan Amendment, but overall minimal for both alternatives. The No-Action and Management Alignment Alternatives and the 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 the recovery from these impacts and maintain site stability and health. Vegetation treatments promoting recovery of Greater Sage-Grouse habitats would result in the destruction of the target species, be it annual grass, noxious weed, or encroachment of juniper. Some level of competition for forage between wildlife, livestock, and wild horses would occur. Instances of displacement, harassment, and injury to these species could also occur. The No-Action and Management Alignment Alternatives and the Proposed Plan Amendment would place restrictions on development and surface-disturbing activities, which would minimize the likelihood of displacement, harassment, and/or 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 be expected to decrease the potential for ignitions in the decision area; however, impacts would be greater under the No-Action Alternative.

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 could occur under the No-Action and Management Alignment Alternatives and the Proposed Plan Amendment.

#### **4.16 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 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 RMPA/EIS.

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 required design features (RDFs) are intended to minimize the effect of short-term commitments and to reverse changes over the long-term. These prescriptions and the associated reduction of impacts would be greater under the No-Action Alternative for resources such 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.

Rights of ways (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. The No-Action and Management Alignment Alternatives and the 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 could occur by displacing the 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 the No-Action and Management Alignment Alternatives and the 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 lekking, 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

This chapter describes the efforts undertaken by the BLM throughout the process of developing the Proposed RMPA/FEIS to ensure the process remained open and inclusive to the extent possible. This chapter also describes efforts taken to comply with legal requirements to consult and coordinate with various government agencies. These efforts include public scoping; identifying and designating cooperating agencies; consulting with applicable federal, state, and tribal governments; and identifying “any known inconsistencies with State or local plans, policies or programs” (43 CFR 1610.3-2[e]).

## 5.1 PUBLIC INVOLVEMENT

### 5.1.1 Public Scoping

The scoping period began with the publication of the Notice of Intent (NOI) in the *Federal Register* on October 11, 2017. The NOI was titled [Notice of Intent to Amend Land Use Plans Regarding Greater Sage-Grouse Conservation and Prepare Associated Environmental Impact Statements or Environmental Assessments](#). During the 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 whether the BLM should pursue a state-by-state amendment process or structure its planning effort differently, for example by completing a national programmatic process. Representatives of the BLM engaged with the Western Governors’ Association Sage-Grouse Task Force in October of 2017 and January of 2018 to discuss the progress of scoping efforts. In addition, the DOI Deputy Secretary emphasized that input from state governors would weigh heavily when considering what changes should be made and ensuring consistency with the BLM’s multiple use mission.

Information about scoping meetings, comments received, comment analysis, and issue development can be found in the scoping report available online here: <https://goo.gl/FopNgW>.

### 5.1.2 Public Comment on the Draft RMPA/EIS

#### Public Meetings

A Notice of Availability (NOA) for the Draft RMPA/EIS was published in the *Federal Register* on May 4, 2018. The NOA initiated a 90-day public comment period, which ended on August 2, 2018. The BLM notified the public of open house meetings via the project website and a news release to 33 media sites, including newspapers, radio, and television.

The BLM held four public comment open houses for the Draft RMPA/EIS from June 26–June 29, 2018:

- Reno, Nevada – June 26, 2018
- Ely, Nevada – June 27, 2018
- Elko, Nevada – June 28, 2018
- Alturas, California – June 29, 2018

All meetings were held from 5:00 to 7:00 pm. The goal of the open houses was to inform the public about the Draft RMPA/EIS and to obtain further public input on the alternatives that were developed and analyzed. At the open houses, displays introduced the various planning issues and presented the

alternatives for addressing these issues. Other displays explained the NEPA process and the methods for submitting comments. Public comments were solicited at the open houses.

### **Public Comments**

A total of 34,650 unique comment letters, forms, and emails were received during the 90-day public comment period. These documents resulted in 595 substantive comments. For a detailed description of the comment analysis methodology and the response to comments, refer to Appendix G.

#### **5.1.3 Future Public Involvement**

Public participation efforts will be ongoing throughout the remainder of the Proposed RMPA/FEIS process. A NOA will be published in the *Federal Register* to notify the public of the availability of the Proposed RMPA/Final EIS. The NOA will also outline protest procedures during the 30-calendar-day protest period. Concurrent with the first 30 days of the protest period, a 60-day joint governor's consistency review (one for California and one for Nevada) will be implemented. The Proposed RMPA/FEIS will be available for downloading from the project website at: <https://goo.gl/kcsF4w>. The Proposed RMPA/FEIS will also be available for review at the BLM Nevada and California State Offices. Press releases will be issued to notify the public of the Proposed RMPA/FEIS availability.

## **5.2 COOPERATING AGENCIES**

Federal regulation directs the BLM to invite eligible federal agencies, state and local governments, and federally recognized Indian tribes to participate as cooperating agencies when amending RMPs (43 CFR 1610.3-1(b)). A cooperating agency is any such agency or tribe that enters into a formal agreement with the lead federal agency to help develop an environmental analysis. More specifically, cooperating agencies “work with the BLM, sharing knowledge and resources, to achieve desired outcomes for public lands and communities within statutory and regulatory frameworks” (BLM Handbook H-1601-1). These agencies are invited to participate because they have jurisdiction by law or can offer special expertise. Cooperating agency status provides a formal framework for these government units to engage in active collaboration with a lead federal agency in the planning process.

In November 2017, the BLM Nevada and California mailed invitations to the 64 agencies and tribes identified in **Table 5-1**, inviting them to participate as a cooperating agency in this Proposed RMPA/FEIS effort. Of these 64 agencies and tribes, 29 accepted the BLM's invitation to become a cooperating agency.

**Table 5-1  
Cooperating Agencies**

<b>Agencies and Tribes Invited to be Cooperators</b>	<b>Agencies that Accepted</b>	<b>Agencies that Signed Memoranda of Understanding</b>
Army Corps of Engineers		
Alturas Rancheria		
California Department of Wildlife	X	
California State Historic Preservation Office		
Carson City		
Cedarville Rancheria		
Churchill County	X	X

**Table 5-1  
Cooperating Agencies**

<b>Agencies and Tribes Invited to be Cooperators</b>	<b>Agencies that Accepted</b>	<b>Agencies that Signed Memoranda of Understanding</b>
Douglas County		
Duckwater Shoshone Tribe of the Duckwater Reservation, Nevada	X	
Elko County	X	X
Ely Shoshone Tribe of Nevada		
Environmental Protection Agency, Region 9	X	
Esmeralda County		
Eureka County	X	X
Fallon Naval Air Station		
Federal Highway Administration		
Fish and Wildlife Service, Reno Fish and Wildlife Office	X	X
Fort Bidwell Reservation		
Fort McDermitt Paiute and Shoshone Tribes of the Fort McDermitt Indian Reservation, Nevada and Oregon		
Greenville Rancheria		
Honey Lake Maidu Tribe		
Humboldt County	X	
Humboldt-Toiyabe National Forest	X	X
Klamath Tribes		
Lander County	X	
Las Vegas Tribe of Paiute Indians of the Las Vegas Indian Colony, Nevada		
Lassen County	X	X
Lassen National Forest		
Lincoln County	X	
Lovelock Paiute Tribe of the Lovelock Indian Colony, Nevada		
Lyon County	X	
Mineral County	X	
Moapa Band of Paiute Indians of the Moapa River Indian Reservation, Nevada		
Modoc County	X	X
Modoc National Forest		
N-4 State Grazing Board	X	X
Natural Resources Conservation Service, Nevada	X	
Nellis Air Force Base		
Nevada Association of Counties (representing various Nevada Counties)	X	
Nevada Department of Agriculture	X	X
Nevada Department of Conservation and Natural Resources	X	X
Nevada Department of Transportation		
Nevada Department of Wildlife	X	X
Nevada Division of Minerals	X	X

**Table 5-1  
Cooperating Agencies**

Agencies and Tribes Invited to be Cooperators	Agencies that Accepted	Agencies that Signed Memoranda of Understanding
Nye County	X	
Pahrump Paiute Tribe		
Paiute-Shoshone Tribe of the Fallon Reservation and Colony, Nevada		
Pershing County	X	
Plumas County		
Pit River Tribe of California		
Pyramid Lake Paiute Tribe of the Pyramid Lake Reservation, Nevada		
Reno-Sparks Indian Colony		
Shoshone-Paiute Tribes of the Duck Valley Reservation, Nevada		
Sierra County		
Storey County	X	
Summit Lake Paiute Tribe		
Susanville Indian Rancheria		
Te-Moak Tribe of Western Shoshone Indians of Nevada		
US Geological Survey		
Walker River Paiute Tribe of the Walker River Reservation, Nevada	X	X
Washoe County	X	
Washoe Tribe of Nevada and California	X	
White Pine County	X	X
Winnemucca Indian Colony of Nevada		
Yerington Paiute Tribe of the Yerington Colony and Campbell Ranch, Nevada		
Yomba Shoshone Tribe of the Yomba Reservation, Nevada		

The BLM worked closely with the State of Nevada and the California Department of Fish and Wildlife (CDFW) to develop an alternative that would address the states' issues while keeping the pieces of the existing 2015 Final EIS that were not problematic for the states. The BLM and the states met with all cooperators as a group on March 21, 2018. In addition, the BLM met with various cooperators four times following this March meeting. On August 28, 2018, the BLM held a cooperating agency meeting to discuss modifications made to the Draft RMPA/EIS to formulate the Proposed Plan Amendment/Final EIS.

### 5.3 AMERICAN INDIAN TRIBAL CONSULTATION

Various federal laws require the BLM to consult with American Indian tribes during the planning/NEPA decision-making process. In addition to formal government-to-government consultations, in the fall of 2017, the BLM mailed letters to the tribes identified in **Table 5-1**, inviting them to participate as a cooperating agency for this Proposed RMPA/FEIS effort. The Duckwater Shoshone Tribe of the Duckwater Reservation, Walker River Paiute Tribe of the Walker River Reservation, and the Washoe

Tribe of Nevada and California formally accepted the BLM's invitation to be cooperating agencies. The Washoe Tribe of Nevada and California executed a Memorandum of Understanding (MOU) with the BLM to be a cooperating agency and also attended and participated in the cooperating agency meeting held on March 21, 2018. On March 28, 2018, BLM Nevada and California followed up (via email) with those tribes that did not respond to the fall invitation to become cooperators.

#### 5.4 LIST OF PREPARERS

This Proposed RMPA/FEIS was prepared by an interdisciplinary team of staff from the BLM, in collaboration with Environmental Management and Planning Solutions, Inc. (Table 5-2).

**Table 5-2  
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#### 5.5 PROPOSED RMPA/FINAL EIS DISTRIBUTION

A notification of the availability of this Proposed RMPA/FEIS is published in the *Federal Register*. Copies of the Proposed RMPA/FEIS are available at the BLM Nevada and California State Offices and can also be viewed at the following website: <https://goo.gl/kcsF4w>.

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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. The 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.

**Anthropogenic Disturbance.** The direct loss or fragmentation of habitat due to human development and increased human activity causing the displacement of individuals through avoidance behavior (Holloran 2005).

**Avoidance/Avoidance Area.** These terms usually address mitigation of some activity (i.e., resource use). Paraphrasing the CEQ 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.

**Best Management Practices (BMPs).** A suite of techniques that guide or may be applied to management actions to aide 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 are used as the basis for comparative calculations to support evaluation of changes to habitat and populations. For adaptive management (**Appendix D**) BSUs are defined as nested lek clusters with similar climate and vegetation conditions.

**Breeding Habitat.** Habitats utilized by Greater Sage-Grouse for leks, pre-laying, nesting, and early brood-rearing.

**Compensatory Mitigation.** Compensating for the residual impacts by replacing or providing substitute resources or environments (40 CFR 1508.20).

**Connectivity.** The degree to which habitats for a species are continuous or interrupted across a spatial extent. Habitats defined as continuous are within a prescribed distance over which a species can successfully conduct key activities (e.g., effective dispersal distances of seeds or juveniles and mean distances moved for foraging, nesting, and brood-rearing). Habitats defined as interrupted are outside the prescribed distance (Wisdom et al. 2003).

**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.

**Disturbance.** Any relatively discrete event in time that disrupts ecosystem, community, or population structure and changes resources, substrate availability, or the physical environment (White and Pickett 1985). See also *Anthropogenic Disturbance*.

**Early Brood-Rearing Habitat.** Upland sagebrush sites relatively close to nest sites, typically characterized by high species richness, with an abundance of forbs and insects, where Greater Sage-Grouse hens raise chicks fewer than 21 days old (Connelly et al. 2000). Optimum early brood-rearing habitat consists of sagebrush stands and an herbaceous understory of grasses and forbs.

**Ecological Site (ES).** A conceptual division of the landscape that is defined as a distinctive kind of land, based on recurring soil, landform, geological, and climate characteristics. It differs from other kinds of land in its ability to produce distinctive kinds and amounts of vegetation and to respond similarly to management actions and natural disturbances (Caudle et al. 2013).

**Ecological Site Descriptions (ESD).** The documentation of the characteristics of an ecological site. It includes the data used to define the distinctive properties and characteristics of the ecological site; the biotic and abiotic characteristics that differentiate the site (i.e., climate, physiographic, and soil characteristics and plant communities); and the ecological dynamics of the site that describes how changes in disturbance processes and management can affect the site. An ESD also provides interpretations about the land uses and ecosystem services that a particular ecological site can support and management alternatives for achieving land management.

**Ecological Site Potential.** The plant community that can be supported in an area, given its edaphic<sup>1</sup> and climatic potential (Habich 2001).

**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(s) (GHMA).** An area that is likely to be occupied seasonally or year-round outside of a Priority Habitat Management Area and where management would apply to sustain the Greater Sage-Grouse populations. GHMA may include active leks, seasonal habitats, and fragmented or marginal habitat.

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

**Habitat.** An area with a combination of resources (such as space, food, cover, and water) and environmental conditions (such as temperature, precipitation, and the presence or absence of predators and competitors) that promotes occupancy by individuals of a given species and allows those individuals to survive and reproduce (Morrison et al. 1998).

**Habitat Fragmentation.** When connected natural areas are disjointed by habitat removal or converted to urban or agricultural land or physical barriers, such as fences and roadways, are constructed. Habitat fragmentation bisects the landscape and leaves smaller, more isolated land for wildlife, causing local and population level changes to native flora and fauna.

**Habitat Management Area(s) (HMA).** The spatial extent of Greater Sage-Grouse habitat management areas in Nevada and Northeastern California (specific to BLM-administered lands) in this RMPA; includes PHMA, GHMA, and Other Habitat Management Area(s) (OHMA).

**Habitat Suitability.** The relative appropriateness of a certain ecological area for meeting the life requirements of an organism (i.e., space, food, cover, and water). Categories of habitat suitability include suitable, marginal, potential, unsuitable, and non-habitat. Definitions of categories are included in this glossary (Stiver et al. 2015).

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

**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.

**Landscape.** A mosaic of landforms, vegetation, and land uses; a heterogeneous land area that is often hierarchically structured and varies in extent with the organisms being studied and the purpose for defining a landscape (Urban et al. 1987; Liu and Taylor 2002).

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<sup>1</sup> Of, produced by, or influenced by the soil.

**Late Brood-Rearing Habitat.** Habitats characterized by succulent forbs next to or intermixed with sagebrush. Hens typically move their chicks to more mesic conditions, such as higher elevation sagebrush communities, wet meadow complexes, or agricultural fields. In general, a sagebrush ecosystem with a good understory of grasses and forbs and associated wet meadow areas, where succulent grasses and insects are available.

**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.** A traditional display area where two or more male Greater Sage-Grouse have attended in 2 or more of the previous 5 years. The area is typically in an open site in or next to sagebrush-dominated habitats (Connelly et al. 2003). Generally, lek sites are traditional, with the same lek sites used year after year (Scott 1942; Batterson and Morse 1948; Wiley 1978; Autenrieth 1981). Taller sagebrush on the outskirts of the leks is necessary as a food source, escape cover, nesting cover for females, and loafing cover during the day (Patterson 1952; Gill 1965; Klebenow 1985). Lek status as defined by the NDOW and CDFW as follows:

Active Lek—2 or more male observed at least twice in the last 5 years

Pending Lek—2 or more males observed only once in the last 5 years

Inactive—0 or 1 male observed during every visit (minimum two visits) in the last 5 years

Historic—0 or 1 male observed during every visit (minimum five visits) in the last 30 years

**Lek Cluster.** A group of leks in the same vicinity, among which Greater Sage-Grouse may interchange over time, and representing a group of closely related individuals.

**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.

**Marginal Habitat.** An area that supports the species but has generally lower survival rates and reproductive success by comparison and may or may not have the potential to become suitable in the future (Cooperrider et al. 1986).

**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 and have not been incorporated into a proposed action of an alternative (H-1790).

**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.

**Non-habitat.** An area in the historical distribution of Greater Sage-Grouse that is unoccupied, does not currently provide habitat, and does not have the potential to provide habitat in the foreseeable future (fewer than 100 years) (Stiver et al. 2015).

**Other Habitat Management Area(s) (OHMA).** Areas with appropriate environmental conditions for Greater Sage-Grouse that are less used by Greater Sage-Grouse or have marginal habitat suitability.

**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.

**Potential Habitat.** An area that is currently unoccupied but has the potential for occupancy in the foreseeable future (fewer than 100 years) through succession or restoration (Stiver et al. 2015).

**Priority Habitat Management Area(s) (PHMA).** Areas that have been identified as having the highest conservation value to maintaining sustainable Greater Sage-Grouse populations. These areas are occupied seasonally or year-round and include breeding, late brood-rearing, and winter concentration areas.

**Rectifying Mitigation.** Rectifying the impact by repairing, rehabilitating, or restoring the affected environment (40 CFR 1508.20)

**Reducing Mitigation.** Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action (40 CFR 1508.20)

**Resilience.** Ability of a species or its habitat to recover from stresses and disturbances. Resilient ecosystems regain their fundamental structure, processes, and functioning when altered by stresses, such as increased carbon dioxide, nitrogen deposition, and drought, and to disturbances, such as land development and fire (Allen et al. 2005; Holling 1973).

**Resistance.** Capacity of an ecosystem to retain its fundamental structure, processes and functioning or to remain largely unchanged, despite stresses, disturbances, or invasive species (Folke et al. 2004).

**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.

**State-and-Transition Model.** A method to organize and communicate complex information about the relationships between vegetation, soil, animals, hydrology, disturbances (fire, lack of fire, grazing and browsing, drought, unusually wet periods, insects, and disease), and management actions on an ecological site (Caudle et al. 2013).

**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, timing limitations, and controlled surface use. Lease stipulations are developed through the land use planning process.

**Suitable Habitat.** An area that provides environmental conditions necessary for successful survival and reproduction to sustain stable populations (Cooperrider et al. 1986; Morrison et al. 1998).

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

**Winter Habitat.** Characterized by highly variable sagebrush canopy cover. In general, winter movements are related to severity of winter weather, topography, and vegetation cover. Consists of sagebrush that is at least 10 to 12 inches above snow level in order to provide both food and cover for wintering Greater Sage-Grouse.



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2-23, 2-26, 4-1, 4-10, 4-14, 4-26, 4-28, 4-29,  
4-32, 4-40, 4-41, 5-2, 5-4, 5-5
- Nevada Department of Wildlife, ES-9, 1-14, 2-9,  
2-19, 2-23, 2-24, 2-25, 3-6, 3-7, 4-10, 4-15,  
5-3
- No Surface Occupancy (NSO), ES-7, 1-12, 2-10,  
4-26, 4-31, 4-38
- Other Habitat Management Area (OHMA),  
ES-4, ES-6, ES-11, ES-12, ES-13, ES-15, 1-9,  
1-11, 2-5, 2-6, 2-7, 2-8, 2-9, 2-10, 2-19, 3-4,  
3-8, 4-9, 4-11, 4-12, 4-15, 4-16, 4-17, 4-18,  
4-19, 4-20, 4-21, 4-22, 4-34, 4-36, 4-38, 4-39
- Priority Habitat Management Area (PHMA),  
ES-4, ES-5, ES-6, ES-7, ES-8, ES-11, ES-12,  
ES-13, ES-15, 1-9, 1-10, 1-11, 1-12, 1-13, 2-2,  
2-5, 2-6, 2-7, 2-8, 2-9, 2-10, 2-13, 2-14, 2-15,  
2-19, 2-20, 2-22, 3-1, 3-4, 3-8, 3-9, 4-9, 4-11,  
4-12, 4-15, 4-16, 4-17, 4-18, 4-19, 4-20, 4-21,  
4-22, 4-28, 4-29, 4-30, 4-31, 4-32, 4-33, 4-34,  
4-35, 4-36, 4-37, 4-38, 4-39, 4-40

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# Appendix A

## Maps



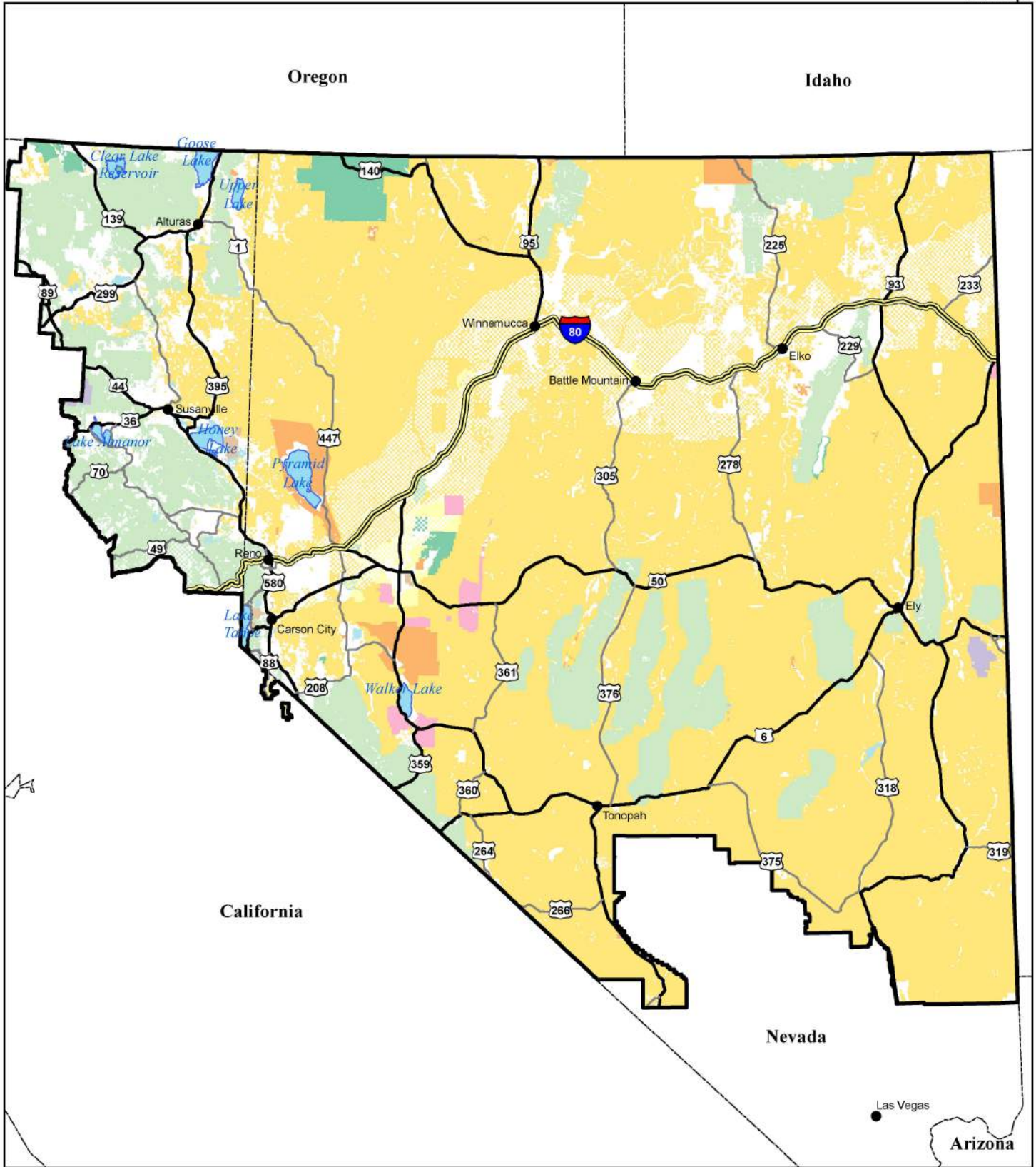
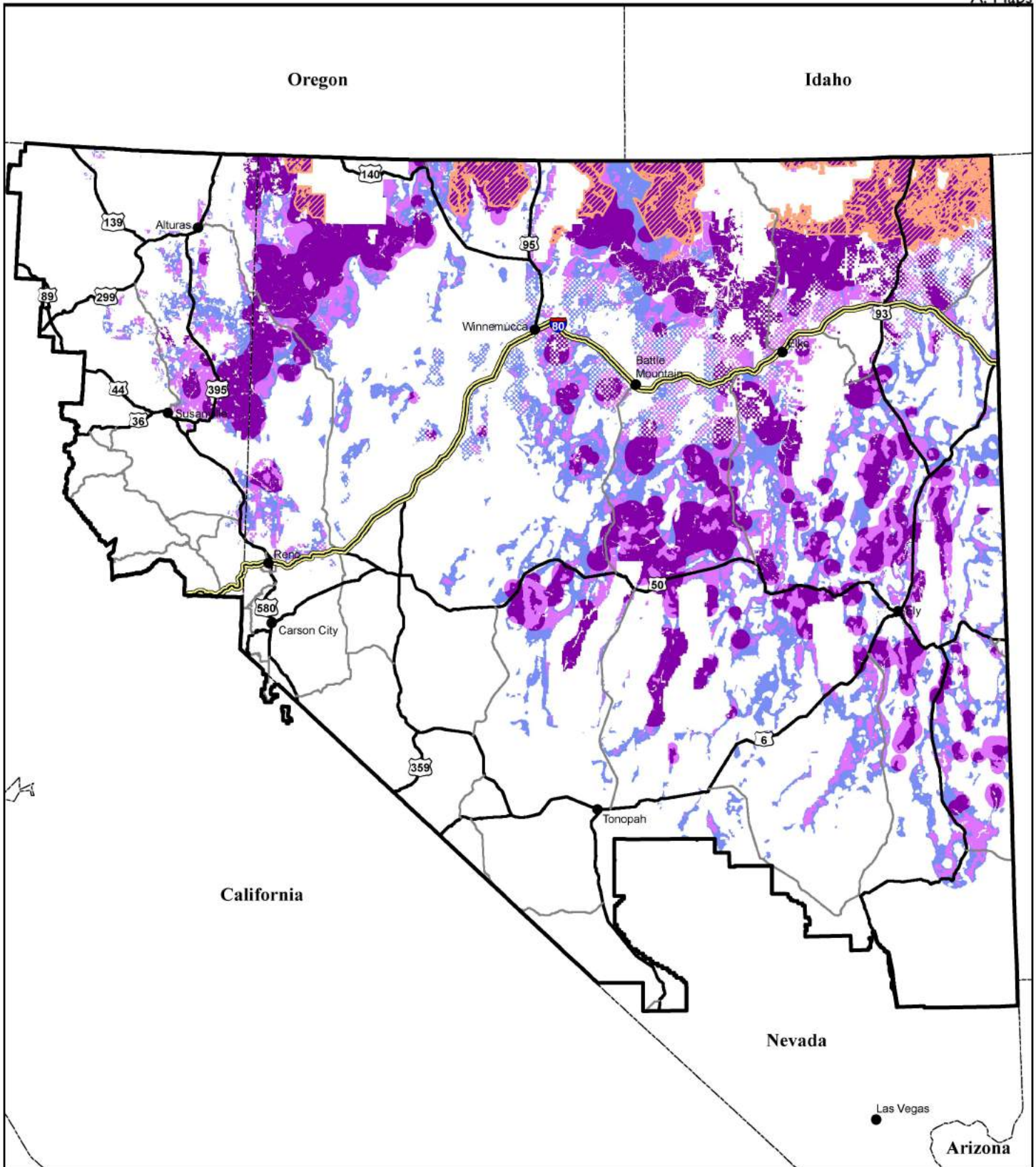


Figure 1-1: Nevada and Northeastern California Sub-Regional Planning Area, Surface Management

- Bureau of Land Management
- US Forest Service
- National Park Service
- US Fish and Wildlife
- Indian Reservation
- Bureau of Reclamation
- Department of Defense
- Planning Area Boundary
- State Boundary



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

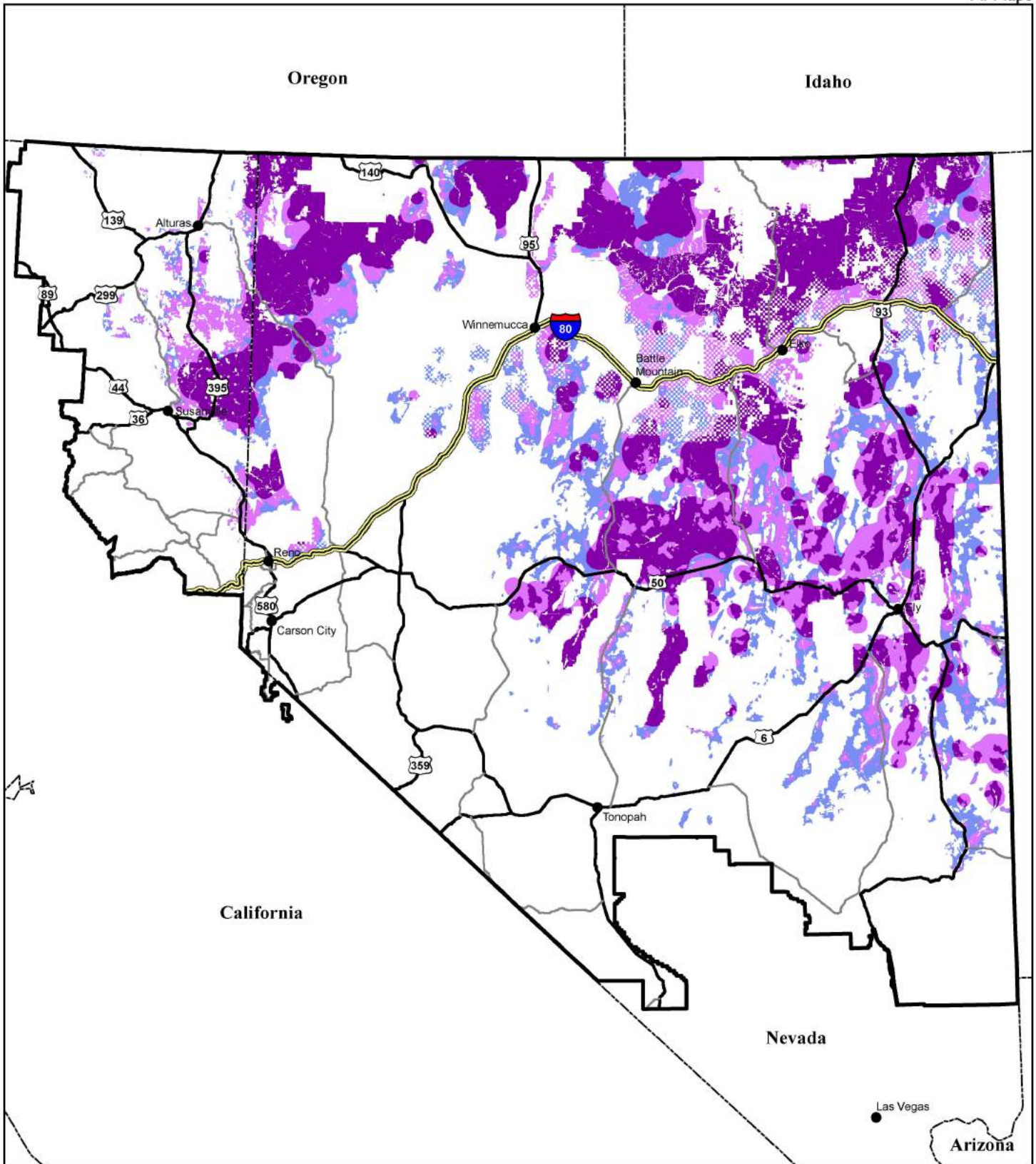


**Figure 2-1a: Nevada and Northeastern California Habitat Management Areas on BLM Managed Public Lands (No Action)**

- Sagebrush Focal Areas (SFAs)
- Priority Habitat Management Areas (PHMAs)
- General Habitat Management Areas (GHMAs)
- Other Habitat Management Areas (OHMAs)
- Planning Area Boundary
- State Boundary



Habitat Management Areas (PHMA, GHMA, and OHMA) were derived from modeling efforts (Coates et al., 2014). No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



**Figure 2-1b: Nevada and Northeastern California Habitat Management Areas on BLM Managed Public Lands (Management Alignment Alternative and Proposed Plan Amendment)**

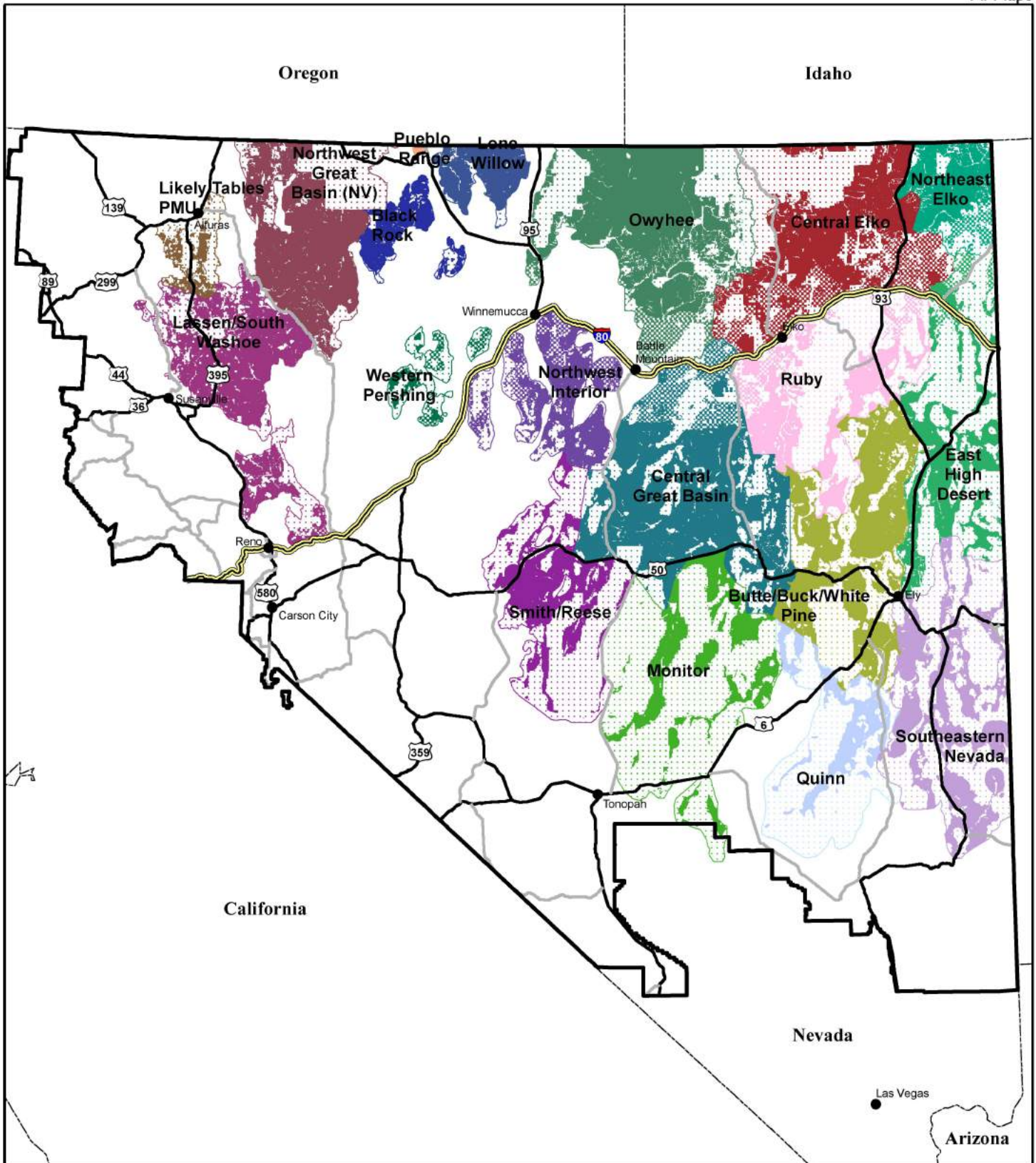
- Priority Habitat Management Areas (PHMAs)
- General Habitat Management Areas (GHMAs)
- Other Habitat Management Areas (OHMAs)
- Planning Area Boundary
- State Boundary



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Habitat Management Areas (PHMA, GHMA, and OHMA) were derived from modeling efforts (Coates et al., 2016, as amended by the State of Nevada through the Nevada Sagebrush Ecosystem Council in December 2015) and the model will be updated approximately every 3-5 years following a similar process for which these maps were approved. No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





**Figure 2-2a: Nevada and Northeastern California Biologically Significant Unit and Lek Clusters (No Action)**

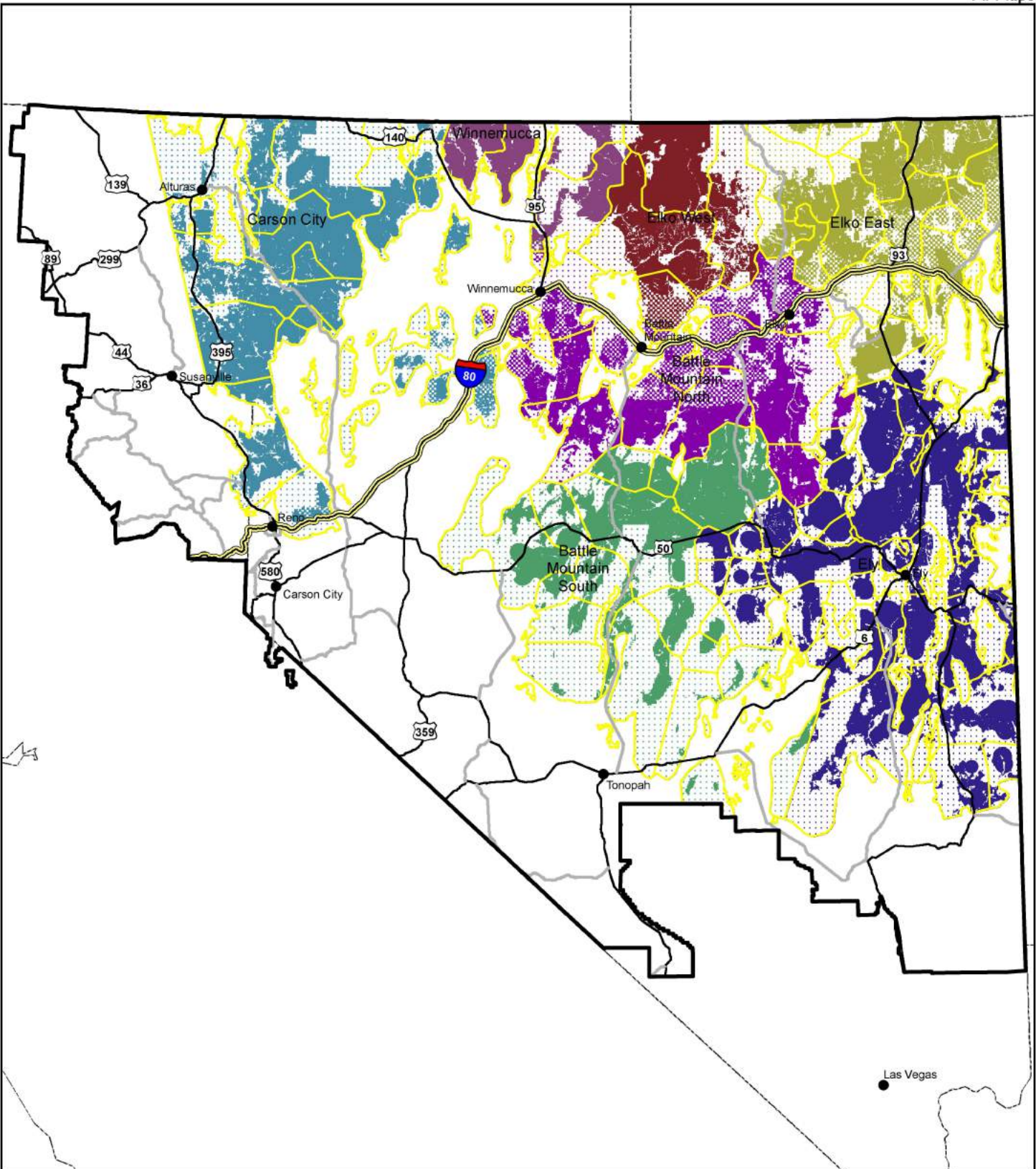
<p><b>Biologically Significant Unit</b></p> <ul style="list-style-type: none"> <li> Black Rock</li> <li> Butte/Buck/White Pine</li> <li> Central Elko</li> <li> Central Great Basin</li> <li> East High Desert</li> <li> Lassen/South Washoe</li> <li> Lively Tables PMU</li> <li> Lone Willow</li> <li> Monitor</li> <li> Northeast Elko</li> <li> Northwest Great Basin (NV)</li> <li> Northwest Interior</li> <li> Owyhee</li> <li> Pueblo Range</li> <li> Quinn</li> <li> Ruby</li> <li> Smith/Reese</li> <li> Southeastern Nevada</li> <li> Western Pershing</li> </ul>	<p><b>HMA Within BSU</b></p> <ul style="list-style-type: none"> <li> Black Rock</li> <li> Butte/Buck/White Pine</li> <li> Central Elko</li> <li> Central Great Basin</li> <li> East High Desert</li> <li> Lassen/South Washoe</li> <li> Lively Tables PMU</li> <li> Lone Willow</li> <li> Monitor</li> <li> Northeast Elko</li> <li> Northwest Great Basin (NV)</li> <li> Northwest Interior</li> <li> Owyhee</li> <li> Pueblo Range</li> <li> Quinn</li> <li> Ruby</li> <li> Smith/Reese</li> <li> Southeastern Nevada</li> <li> Western Pershing</li> </ul>	<ul style="list-style-type: none"> <li> Planning Area Boundary</li> <li> States Boundary</li> </ul>
--	---	---

**Map Area**

0 30 60 Miles  
October 2018

Habitat Management Areas (PHMA, GHMA, and OHMA) were derived from modeling efforts (Coates et al., 2016, as amended by the State of Nevada) and the model will be updated approximately every 3-5 years. BSU boundaries were delineated by NDCW in the 2015 ARMPA. No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



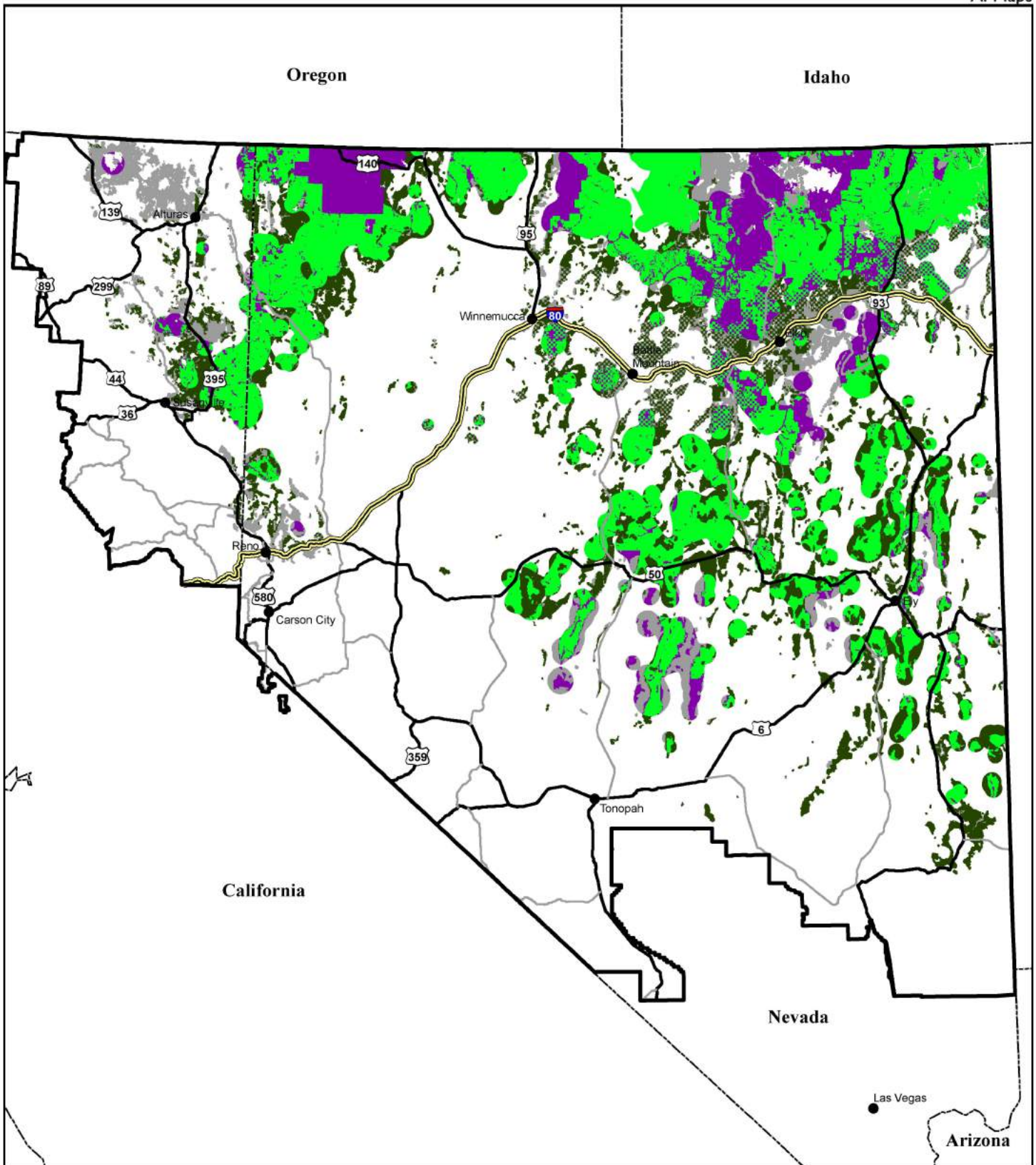


**Figure 2-2b: Nevada and Northeastern California Biologically Significant Unit and Lek Clusters (Management Alignment Alternative and Proposed Plan Amendment)**

<b>Biologically Significant Unit</b>		<b>HMA Within BSU</b>		Lek Cluster Boundary
Battle Mountain North	Battle Mountain North	Planning Area Boundary		
Battle Mountain South	Battle Mountain South	States Boundary		
Carson City	Carson City			
Elko East	Elko East			
Elko West	Elko West			
Ely	Ely			
Winnemucca	Winnemucca			

Habitat management areas on this map were derived from modeling efforts (Coates et al., 2016, as amended by the State of Nevada through the Nevada Sagebrush Ecosystem Council in December 2015) and the model will be updated approximately every 3-5 years following a similar process for which these maps were approved. BSU and lek cluster boundaries were derived from Coates et al., 2017. No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





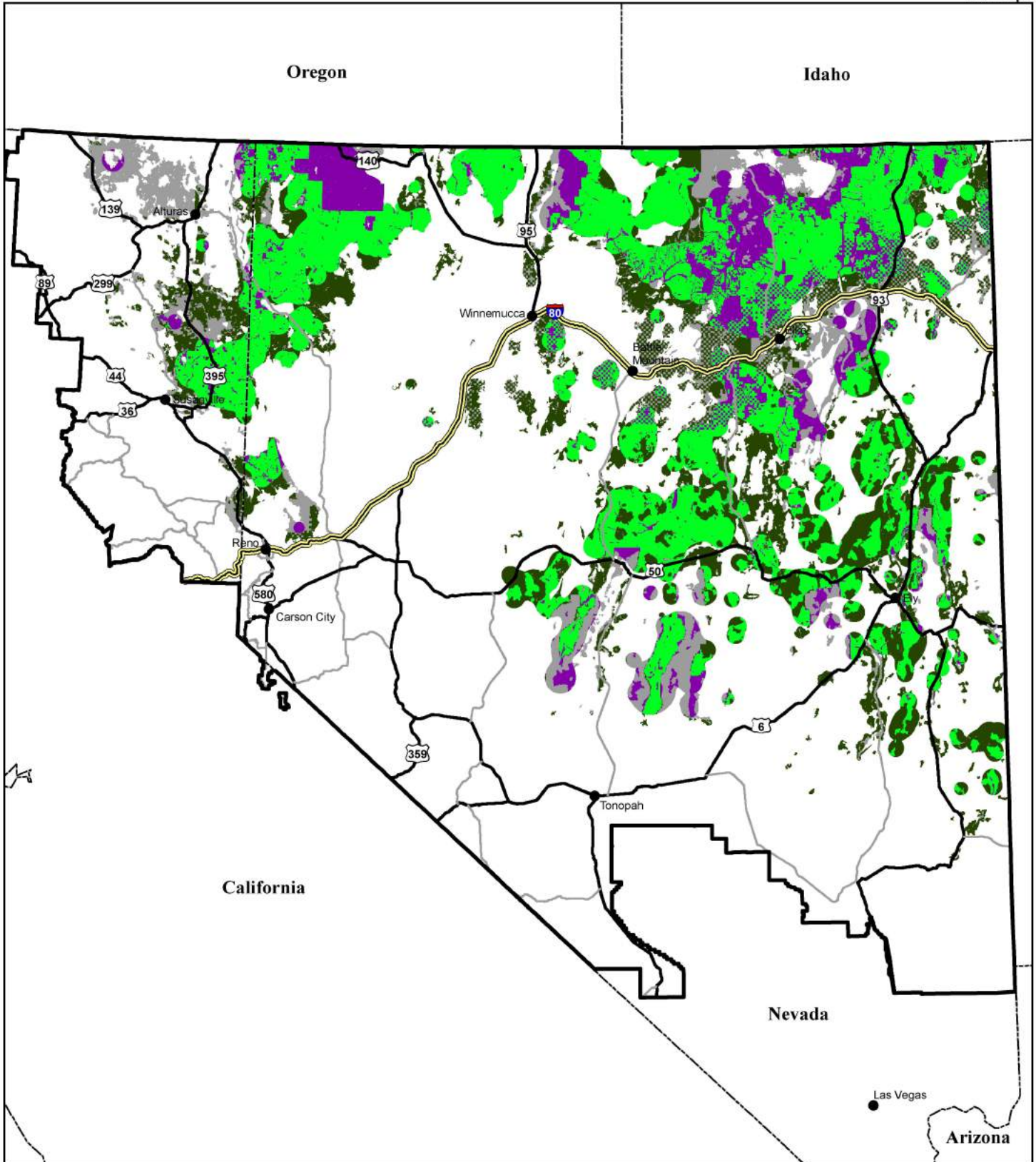
**Figure 2-3a: Nevada and Northeastern California Livestock Grazing (No Action)**

PHMA	GHMA		
		Outside BLM Decision Area	
		Areas Available for Livestock Grazing	
N/A	N/A	Areas Unavailable for Livestock Grazing	State Boundary
			Planning Area Boundary

October 2018



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**Figure 2-3b: Nevada and Northeastern California Livestock Grazing (Management Alignment Alternative and Proposed Plan Amendment)**

PHMA	GHMA		
		Outside BLM Decision Area	
		Areas Available for Livestock Grazing	
N/A	N/A	Areas Unavailable for Livestock Grazing	

October 2018



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

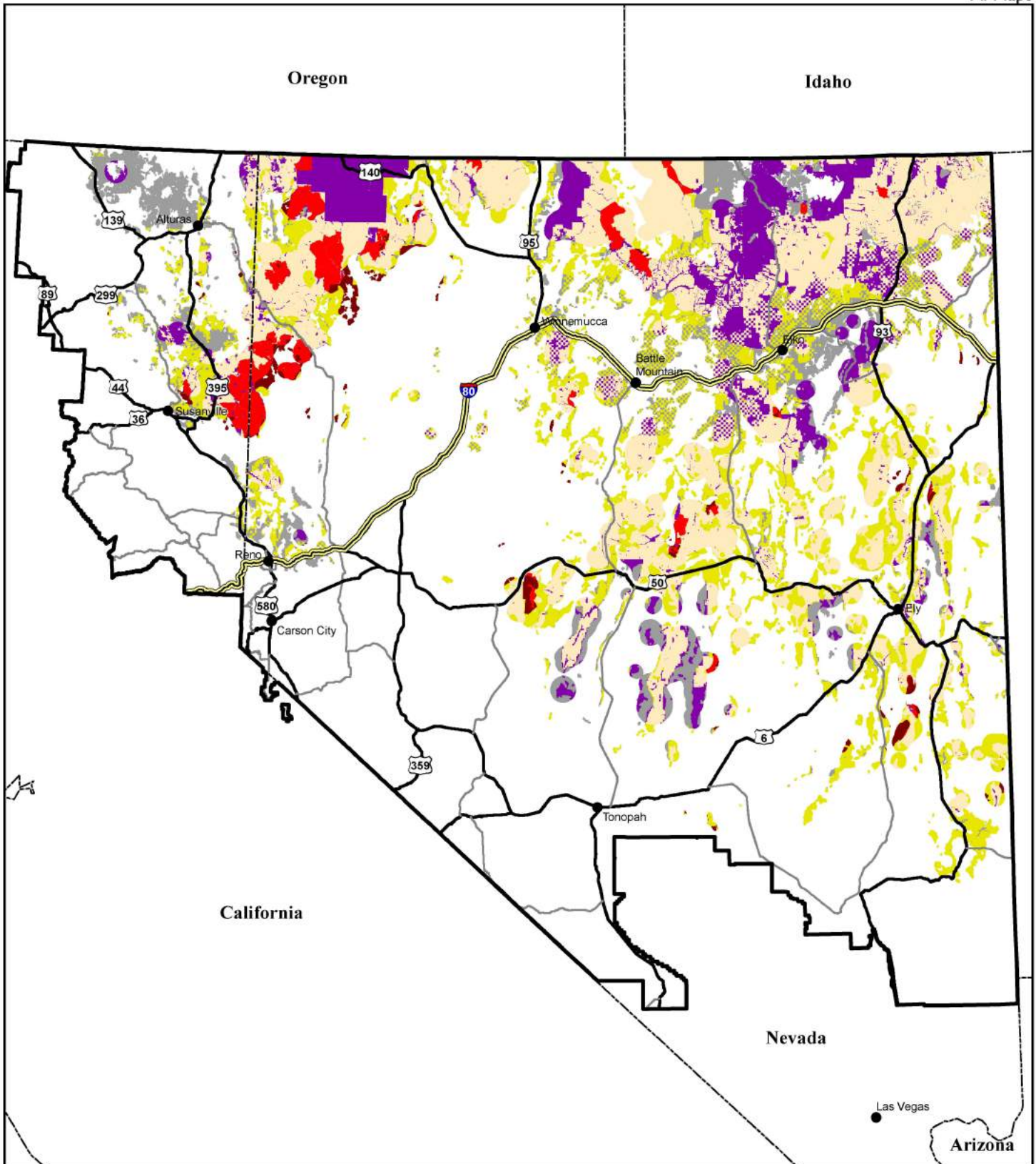
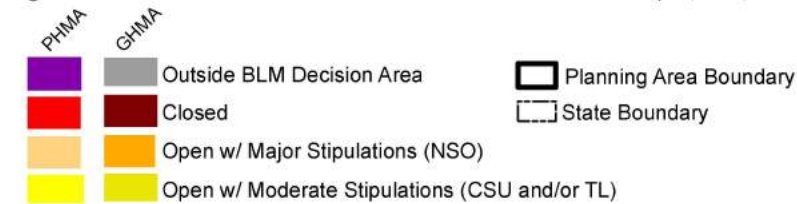
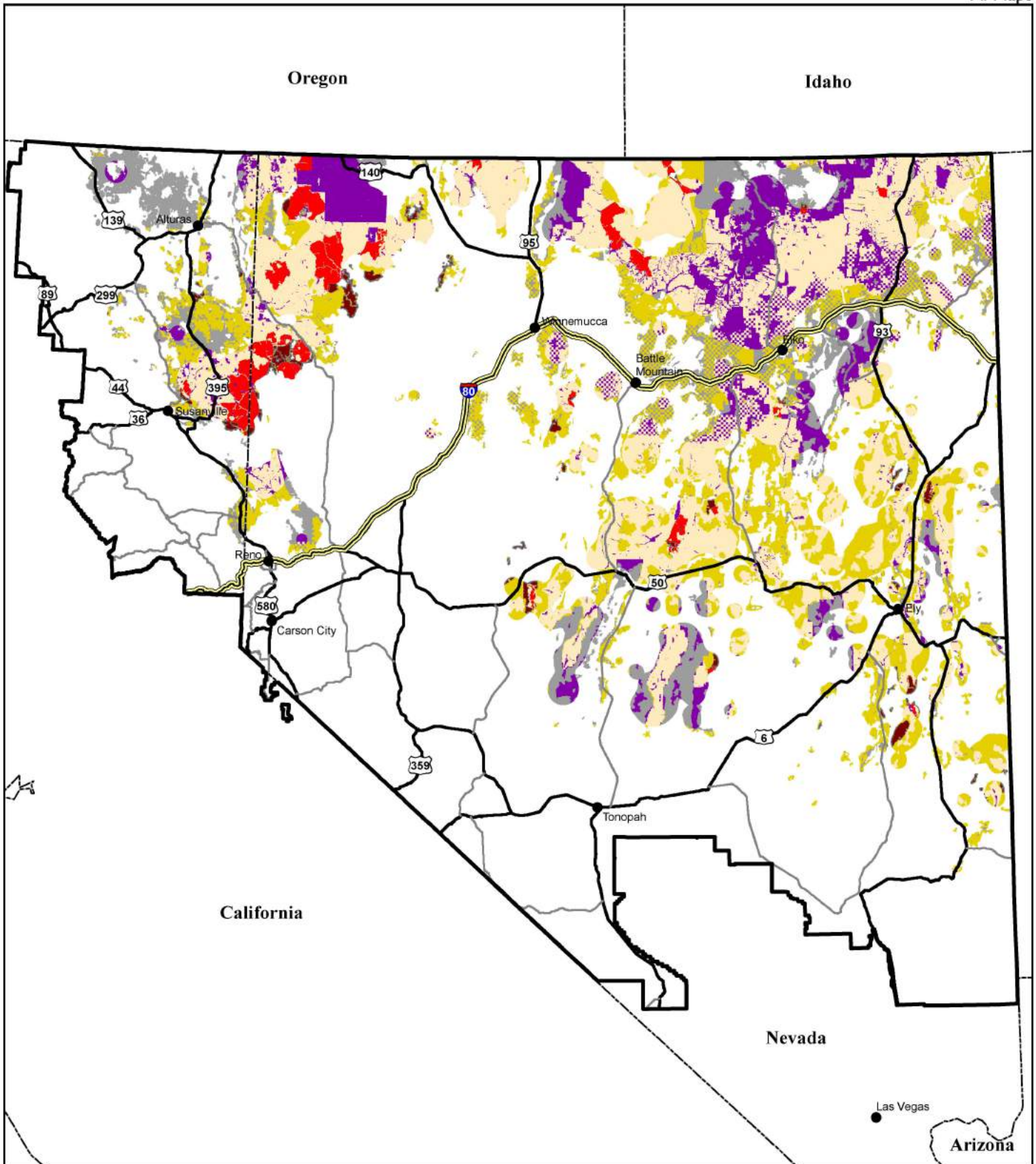


Figure 2-4a: Nevada and Northeastern California Fluid Minerals (Oil, Gas, and Geothermal) (No Action)



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



**Figure 2-4b: Nevada and Northeastern California Fluid Minerals (Oil, Gas, and Geothermal) (Management Alignment Alternative and Proposed Plan Amendment)**

PHMA	GHMA	Outside BLM Decision Area	Planning Area Boundary
		Closed	State Boundary
		Open w/ Major Stipulations (NSO)	
		Open w/ Moderate Stipulations (CSU and/or TL)	
N/A			



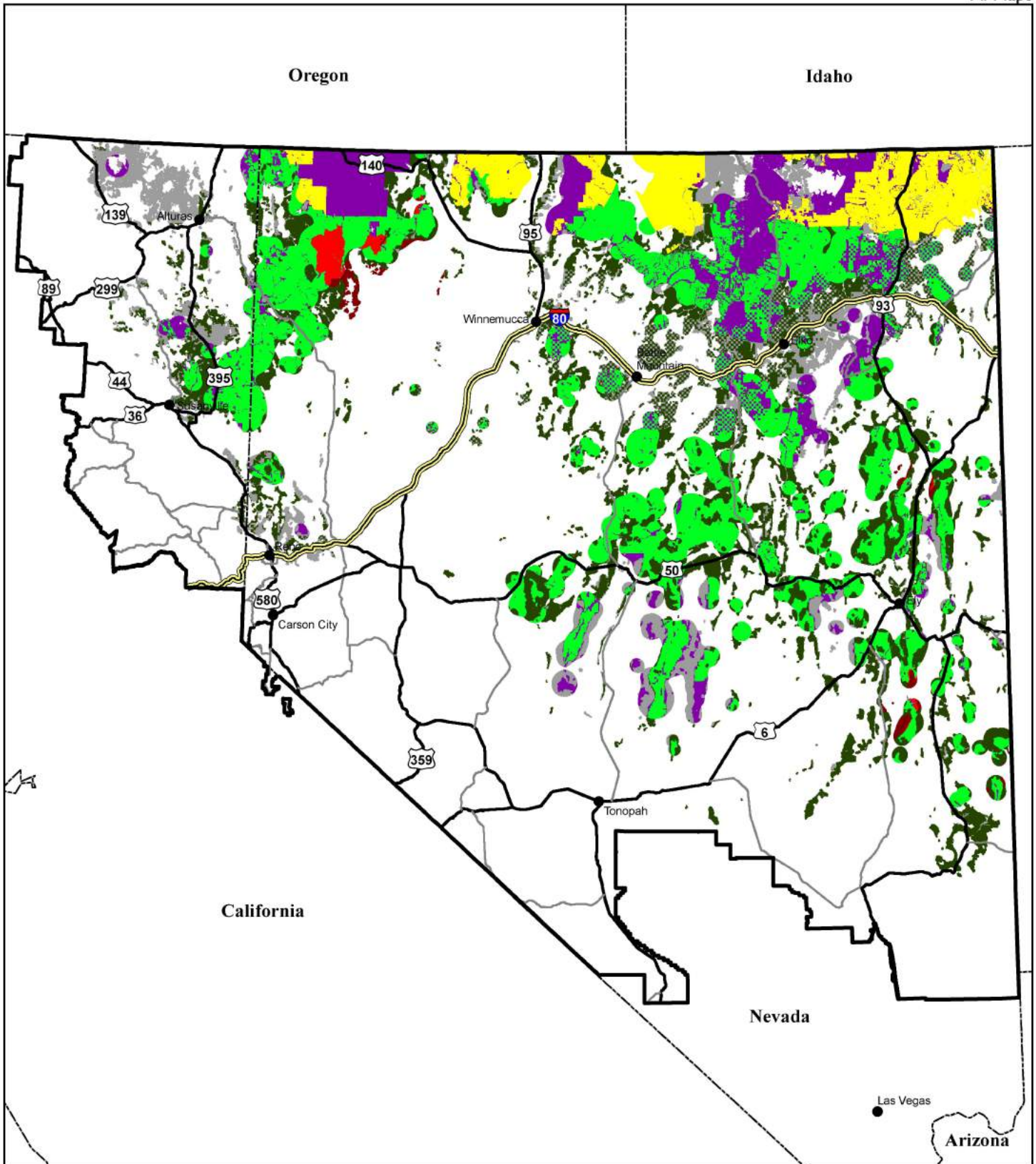


0 30 60 Miles

October 2018



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



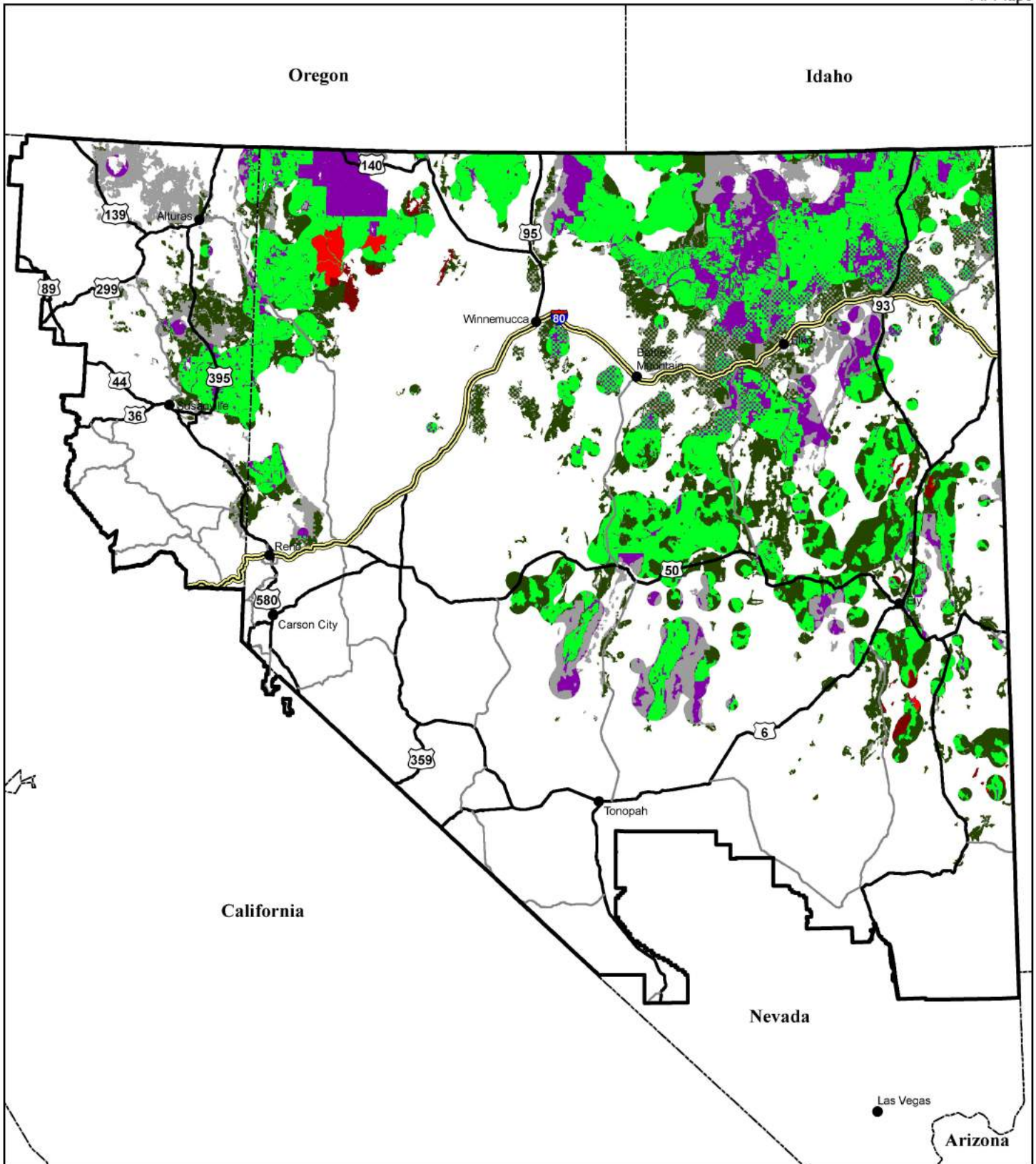
**Figure 2-5a: Nevada and Northeastern California Locatable Minerals (No Action)**

PHMA	GHMA		
		Planning Area Boundary	State Boundary

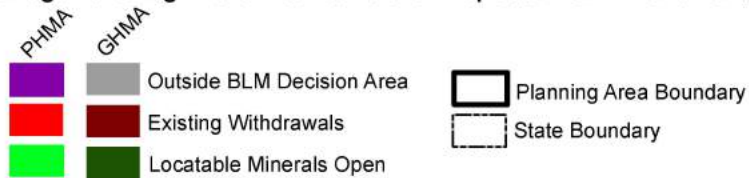
October 2018



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



**Figure 2-5b: Nevada and Northeastern California Locatable Minerals (Management Alignment Alternative and Proposed Plan Amendment)**



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

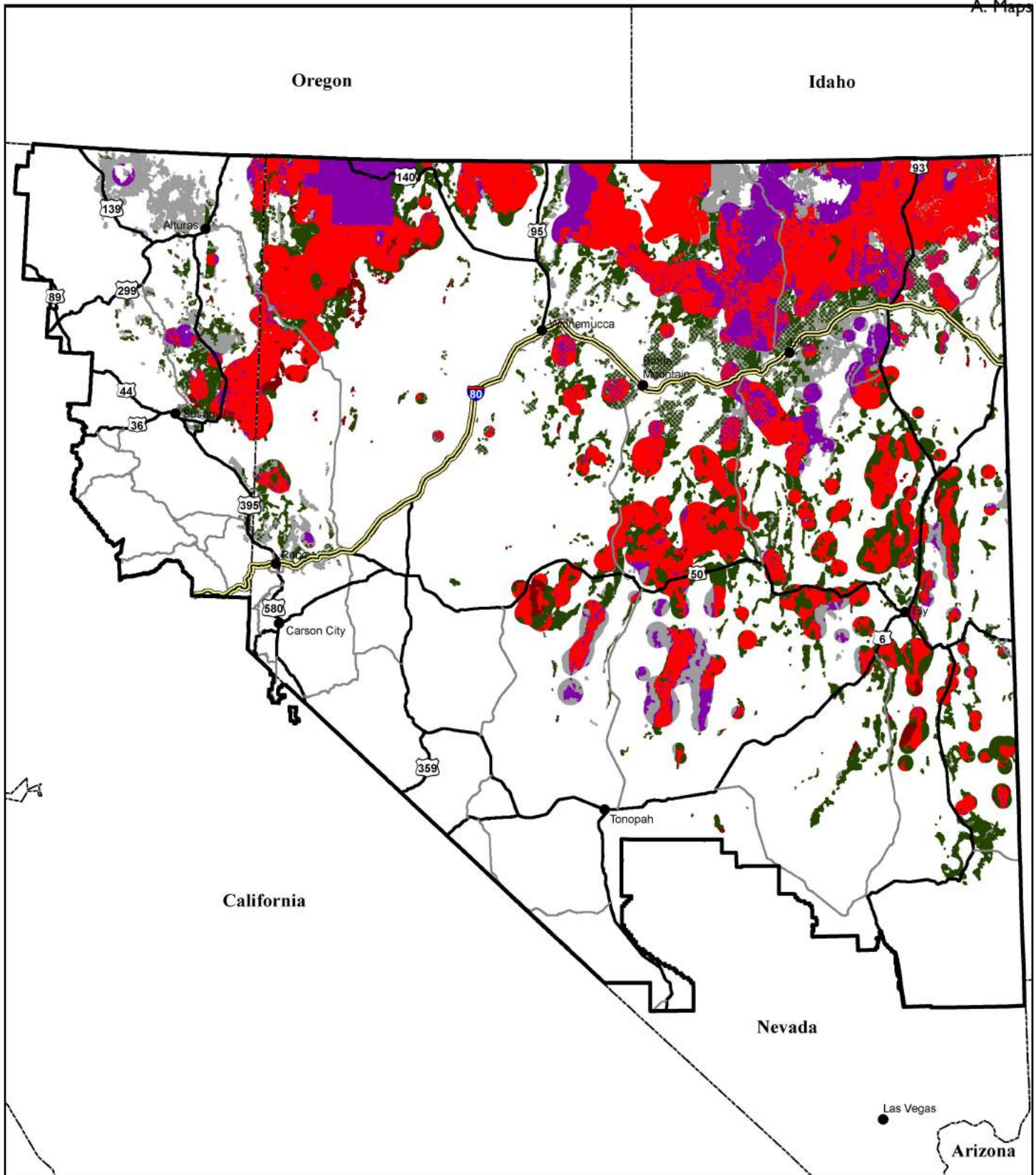


Figure 2-6a: Nevada and Northeastern California Salable Minerals (Mineral Materials) (No Action)

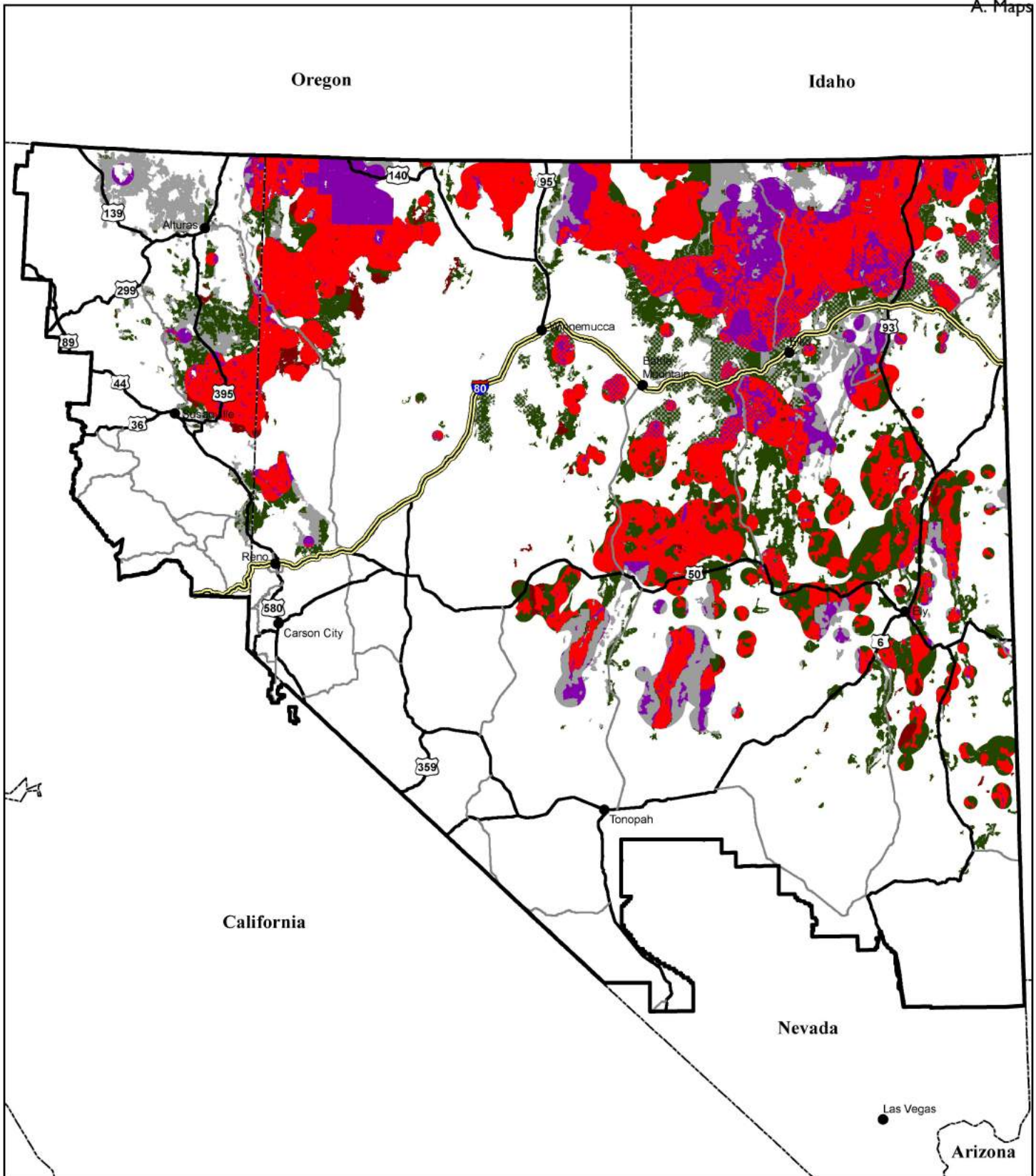
PHMA	GHMA		
		Outside BLM Decision Area	
		Closed	
N/A		Open	Planning Area Boundary
			State Boundary

October 2018



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





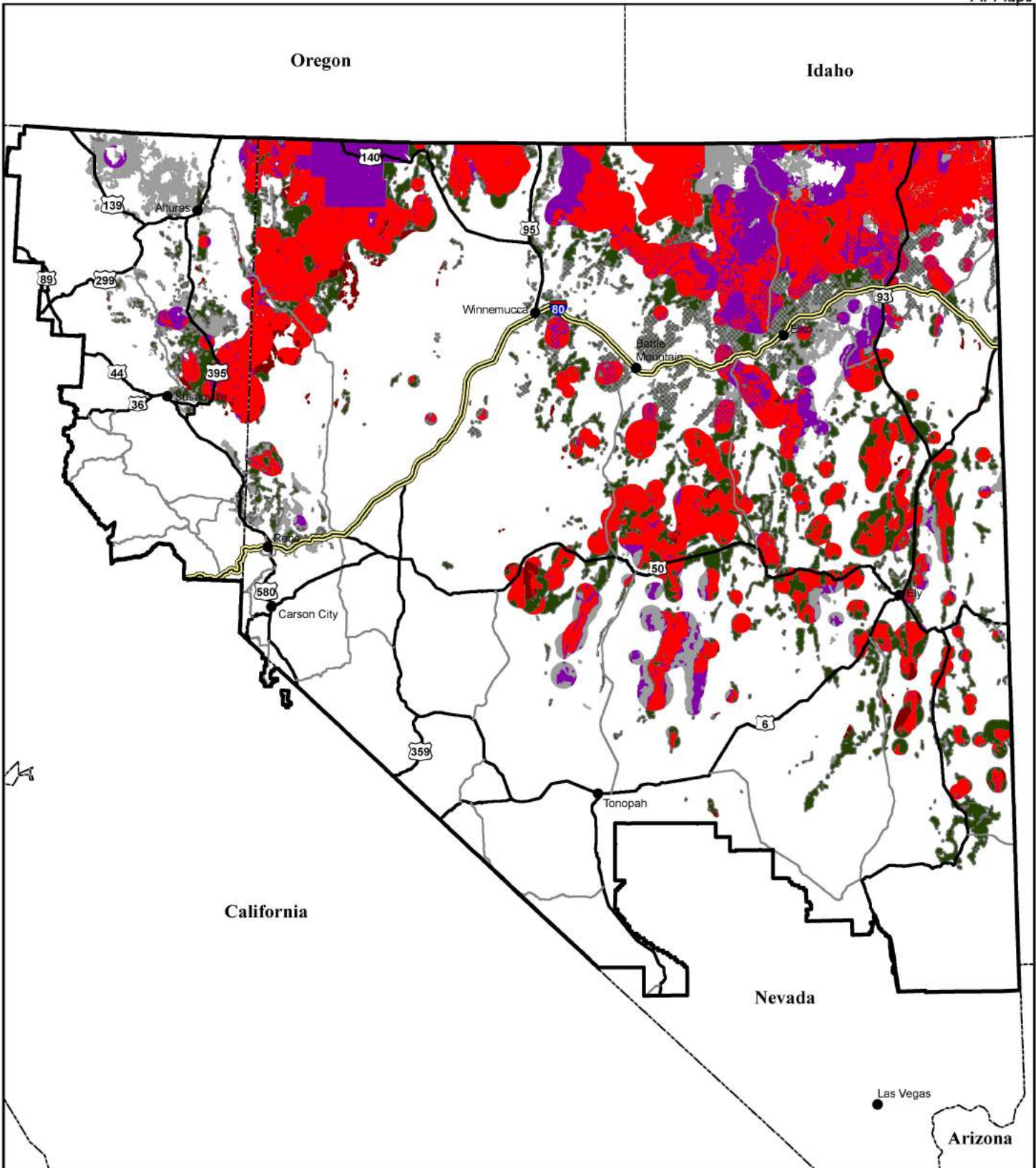
**Figure 2-6b: Nevada and Northeastern California Salable Minerals (Mineral Materials)**  
 (Management Alignment Alternative and Proposed Plan Amendment)

PHMA	GHMA		
		Outside BLM Decision Area	
		Closed	
N/A		Open	State Boundary

October 2018



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



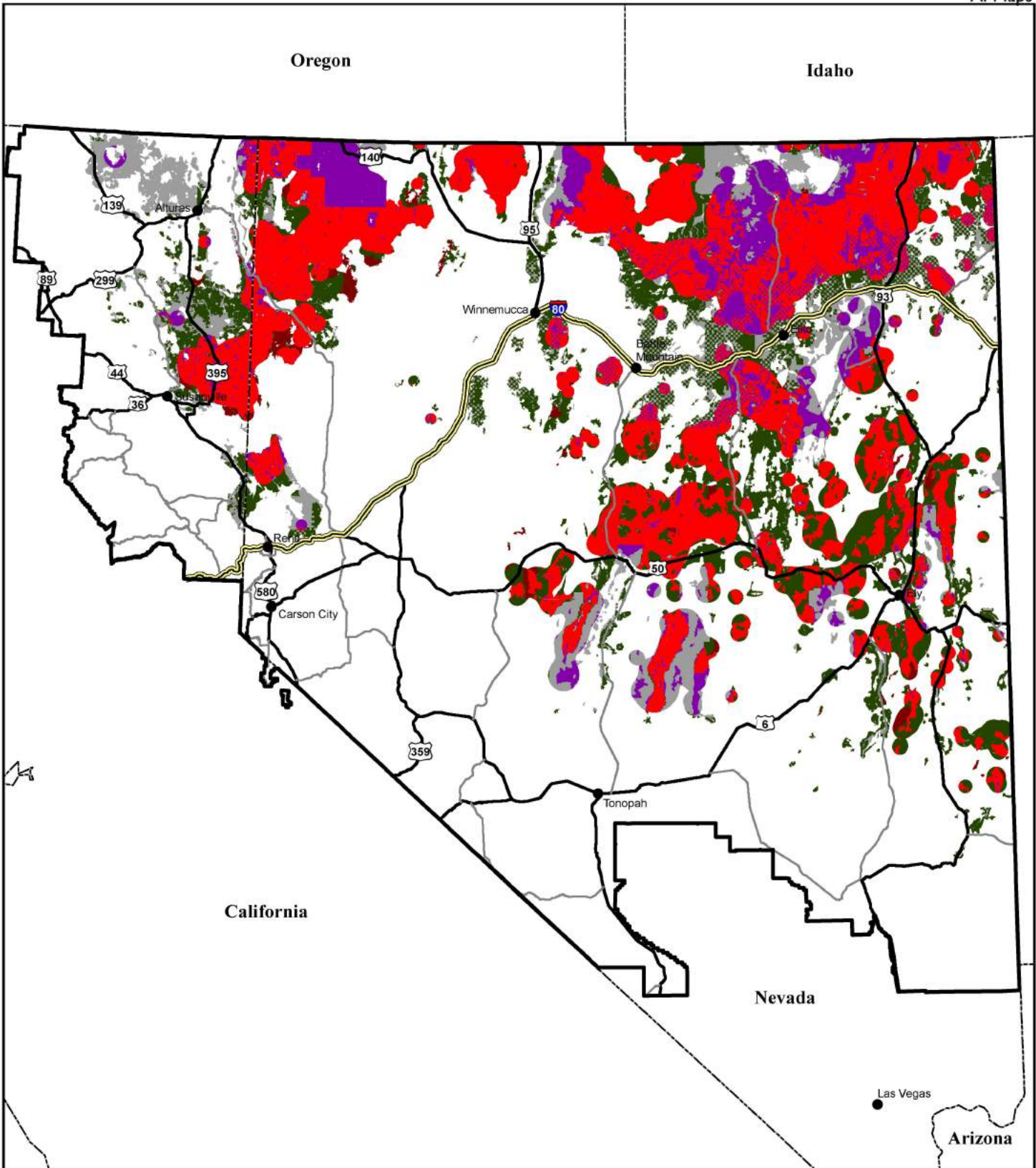
**Figure 2-7a: Nevada and Northeastern California Non Energy Leasable Minerals (No Action)**

PHMA	GHMA		
		Outside BLM Decision Area	Planning Area Boundary
		Closed	State Boundary
N/A		Open	

October 2018



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

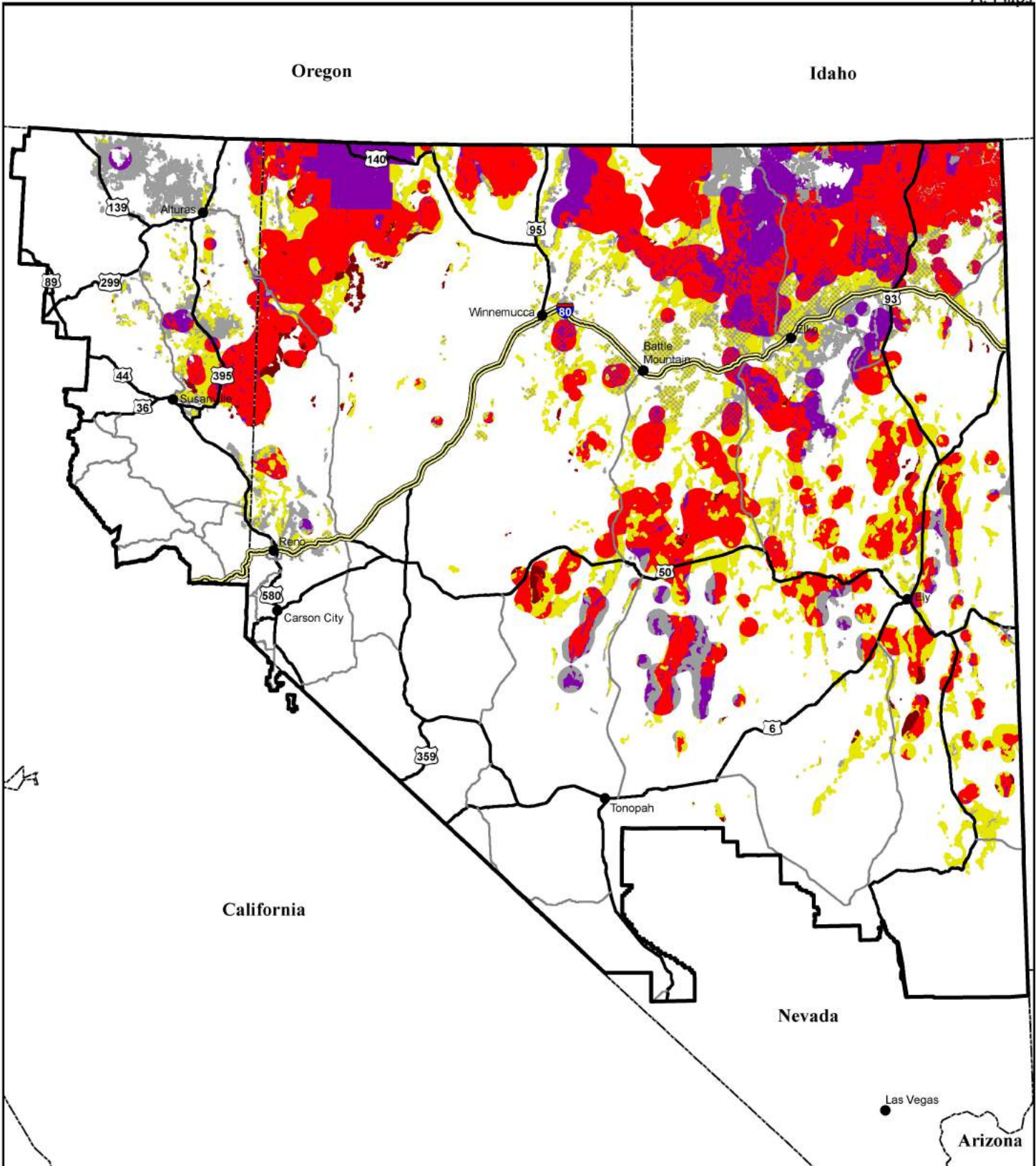


**Figure 2-7b: Nevada and Northeastern California Non Energy Leasable Minerals (Management Alignment Alternative and Proposed Plan Amendment)**

PHMA	GHMA		
		Outside BLM Decision Area	
		Closed	
N/A		Open	



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

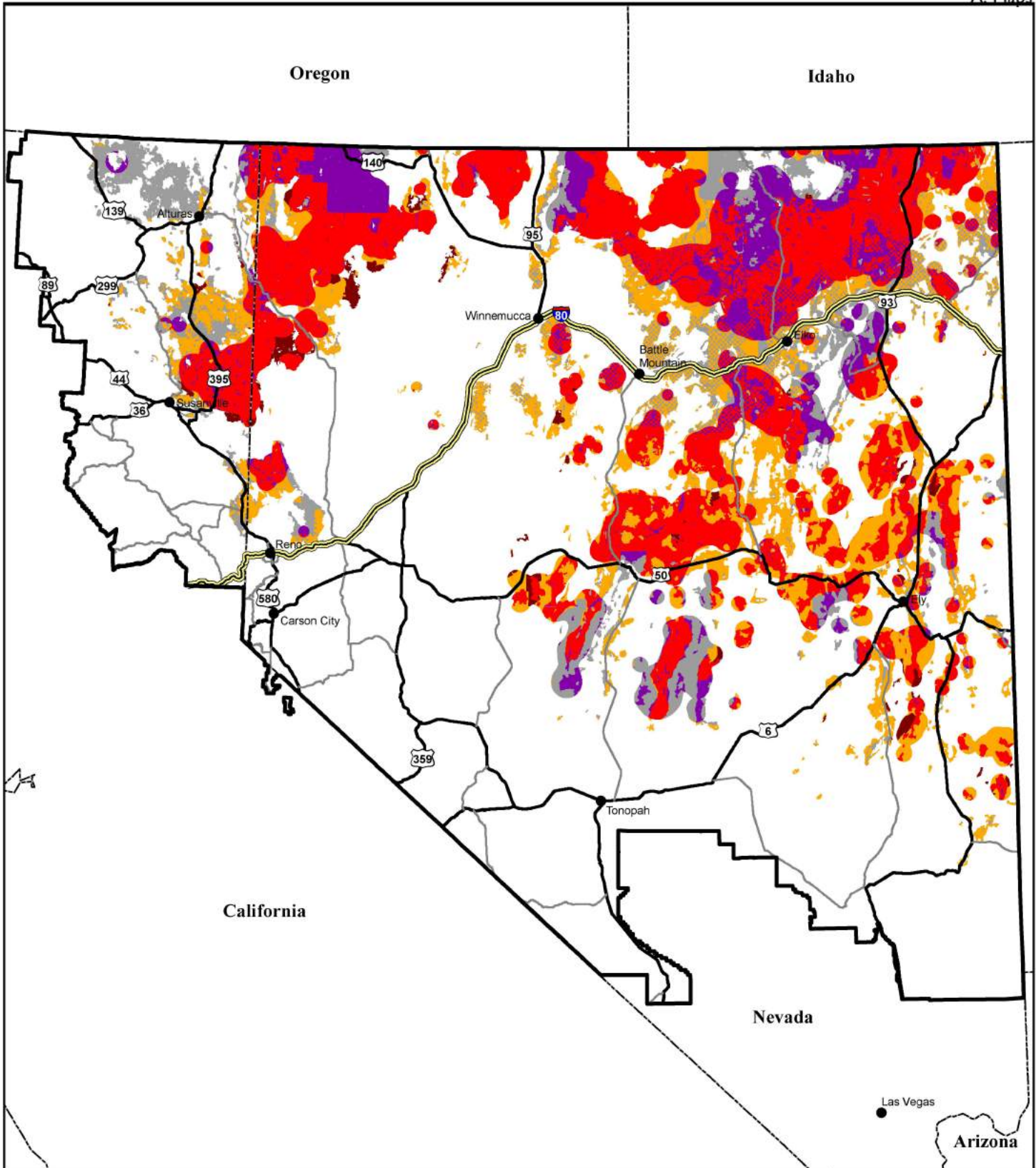


**Figure 2-8a: Nevada and Northeastern California Wind (No Action)**

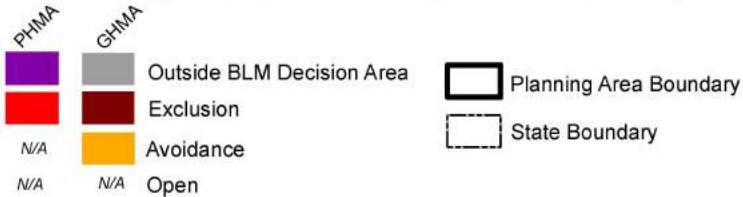
PHMA	GHMA		
		Outside BLM Decision Area	Planning Area Boundary
		Exclusion	State Boundary
N/A		Avoidance	



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



**Figure 2-8b: Nevada and Northeastern California Wind (Management Alignment Alternative and Proposed Plan Amendment)**



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

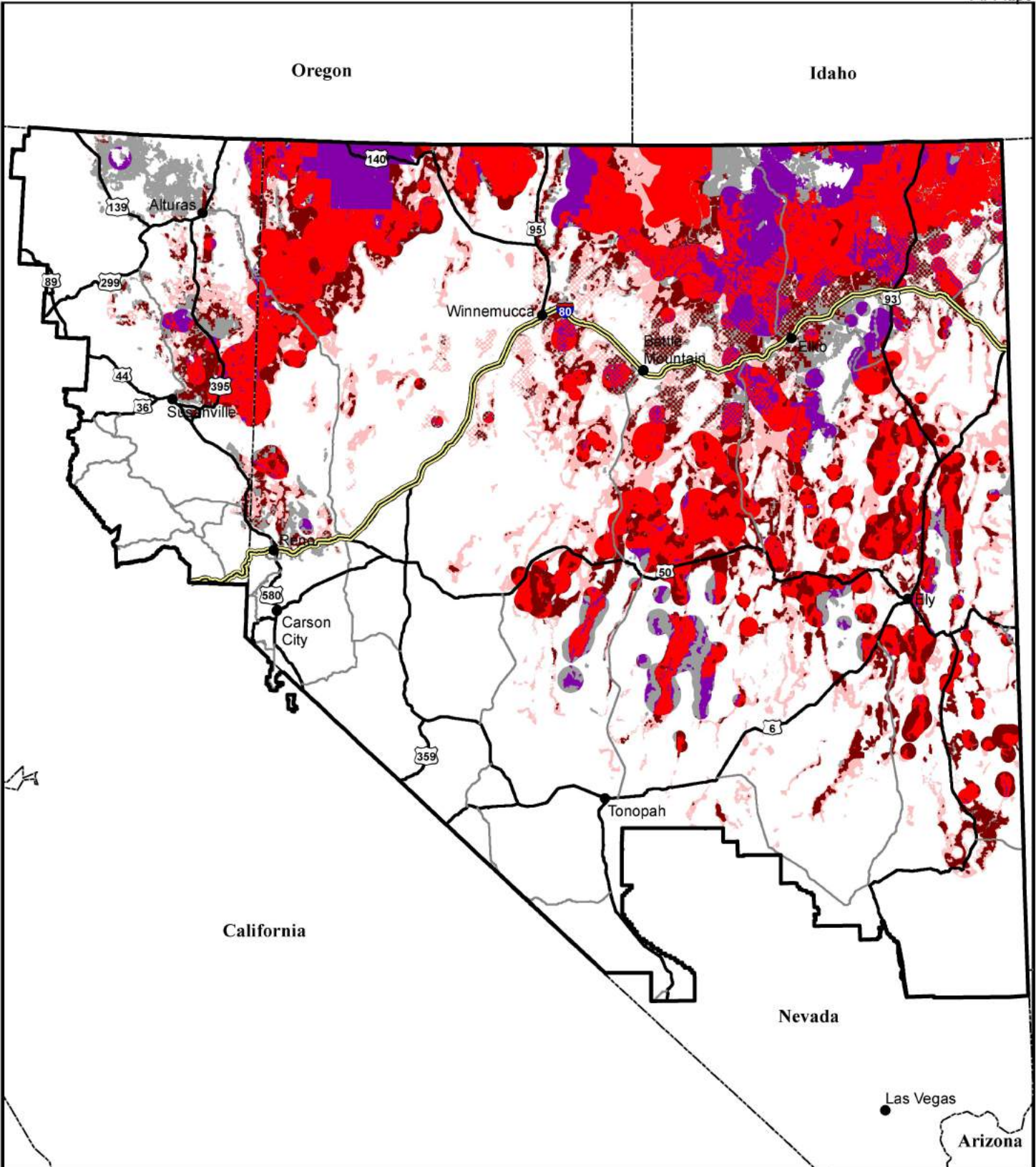


Figure 2-9a: Nevada and Northeastern California Solar (No Action)

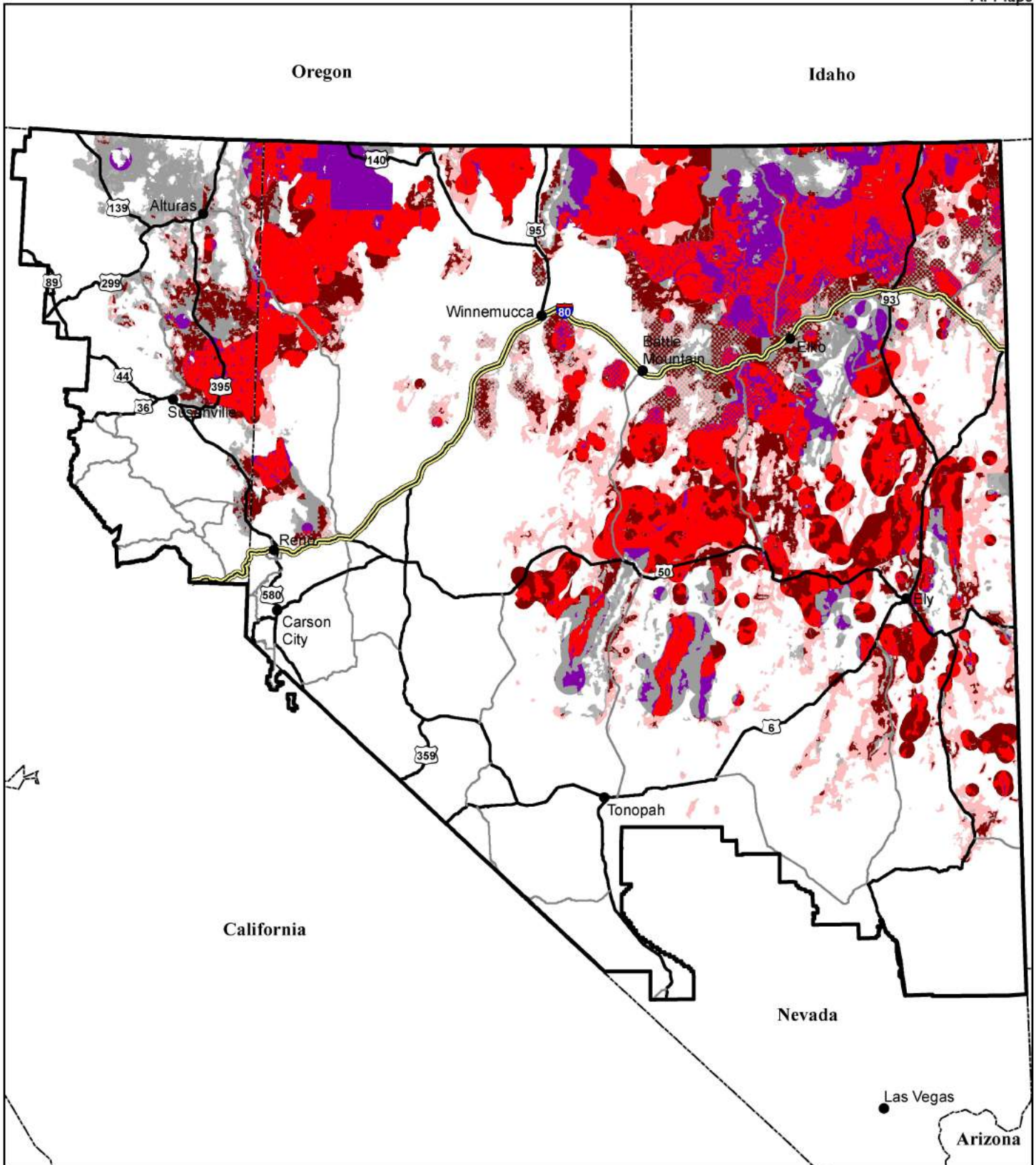
PHMA GHMA OHMA

Outside BLM Decision Area  
 Exclusion  
 Exclusion  
 Exclusion  
 Exclusion

Planning Area Boundary  
 State Boundary



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

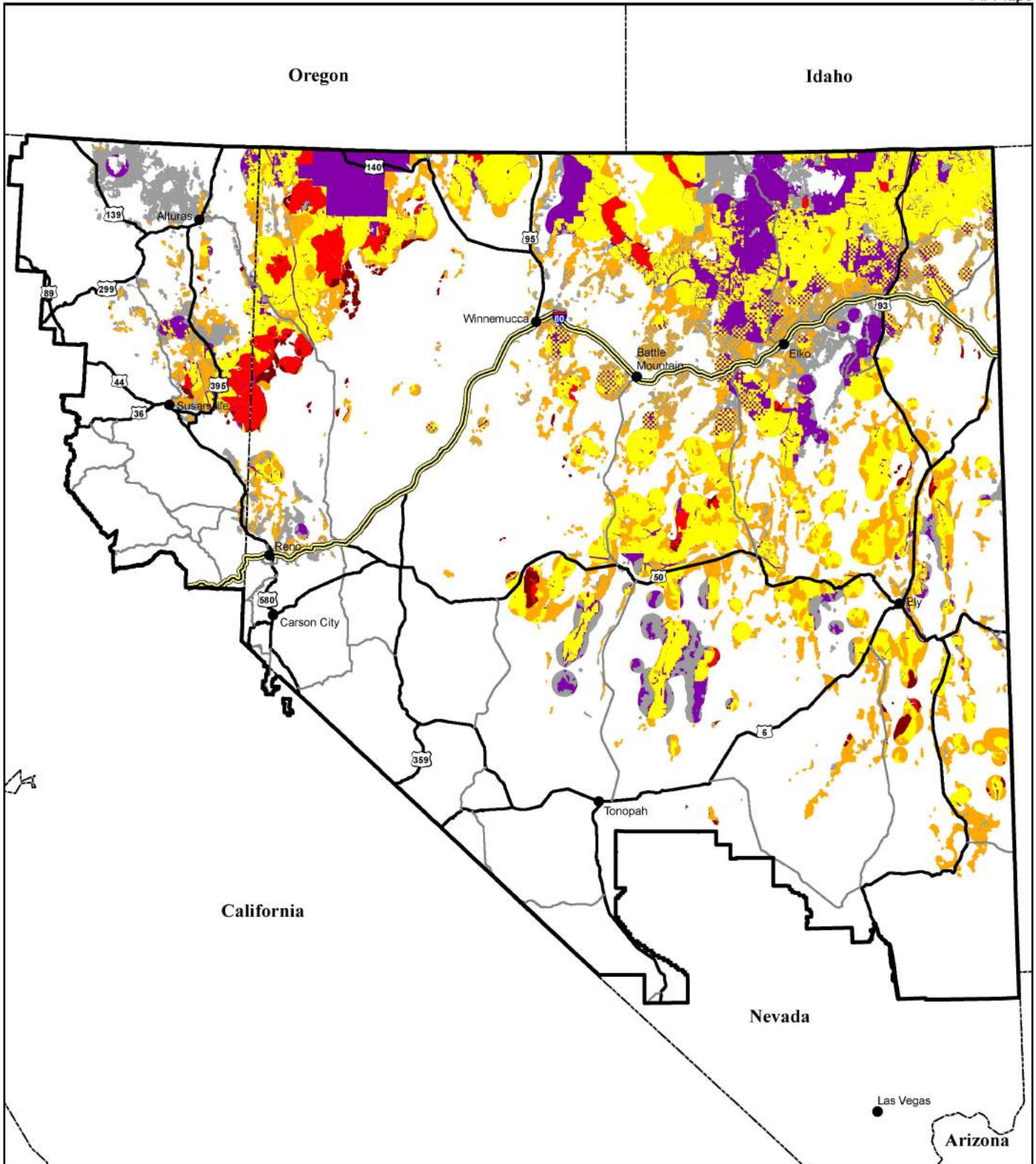


**Figure 2-9b: Nevada and Northeastern California Solar (Management Alignment Alternative and Proposed Plan Amendment)**

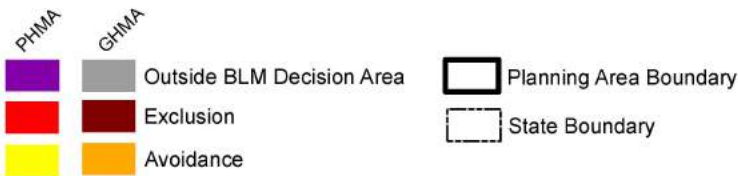
PHMA	GHMA	OHMA	Outside BLM Decision Area	Planning Area Boundary
Exclusion				State Boundary



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

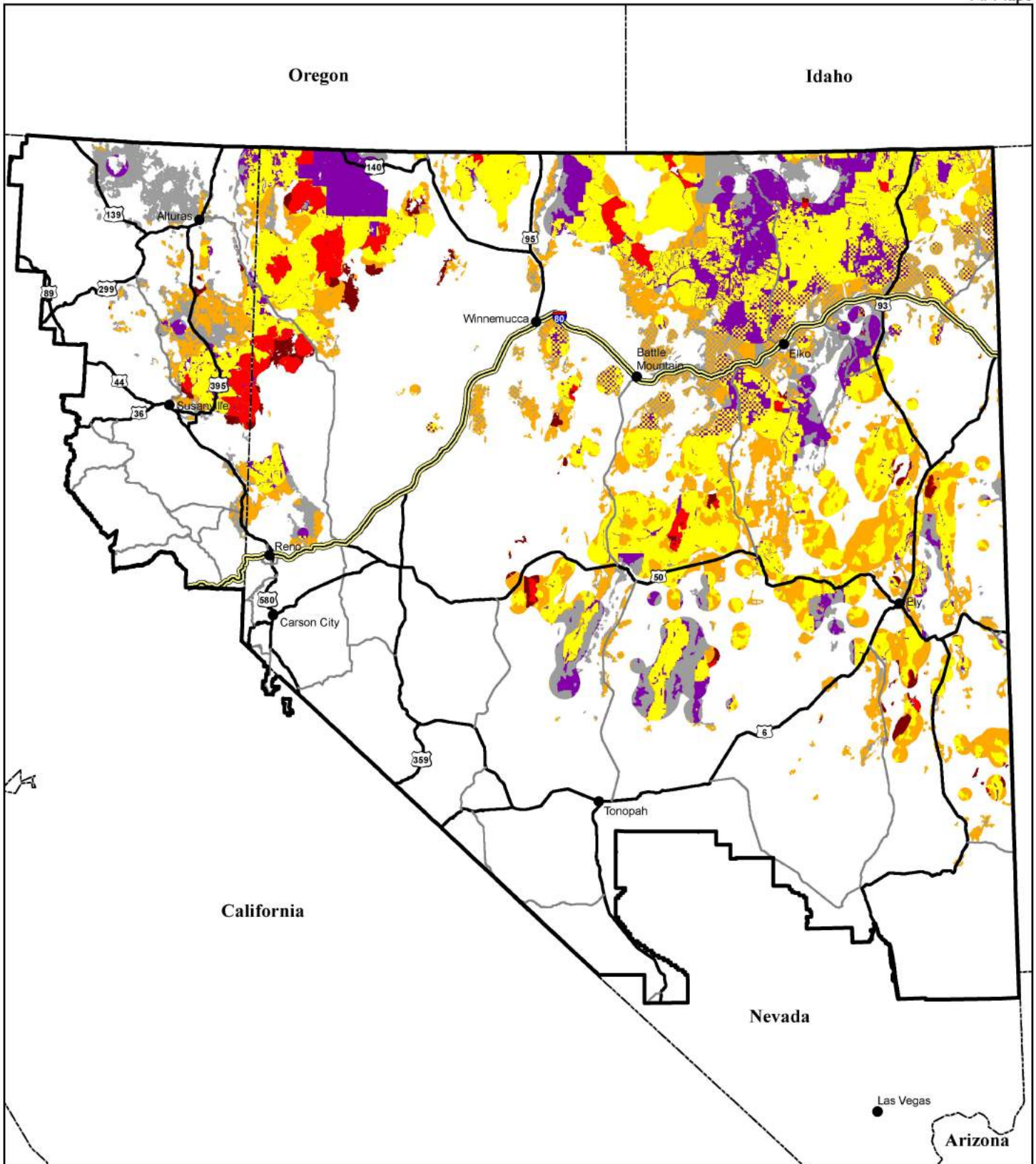


**Figure 2-10a: Nevada and Northeastern California Major Rights-of-Way (No Action)**



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

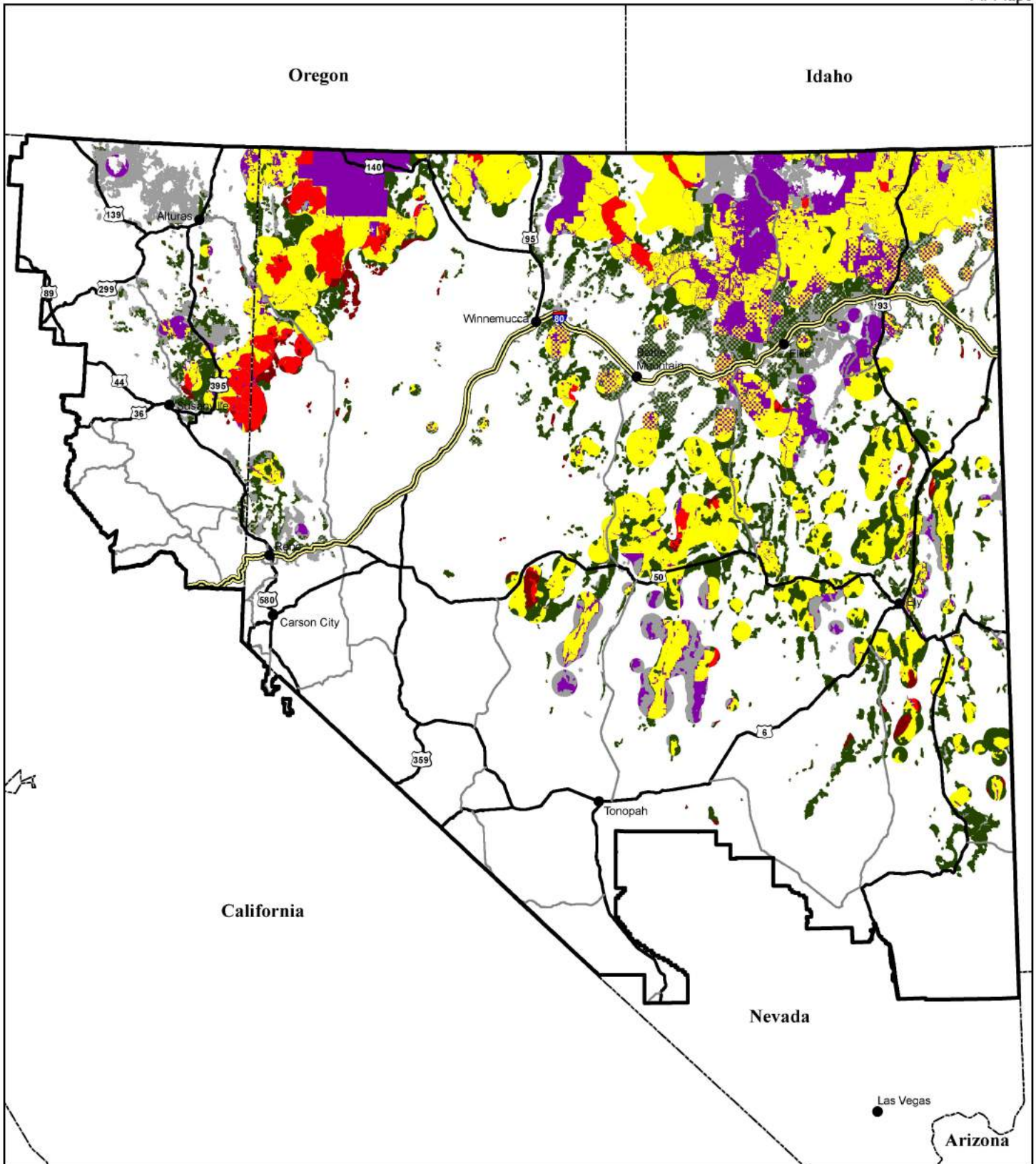




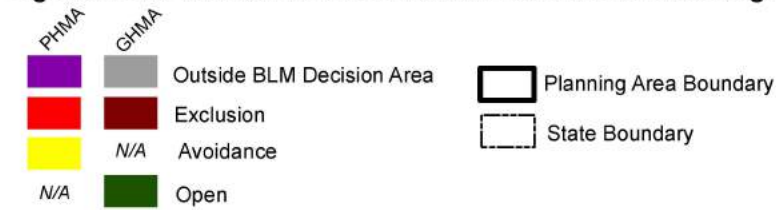
**Figure 2-10b: Nevada and Northeastern California Major Rights-of-Way (Management Alignment Alternative and Proposed Plan Amendment)**



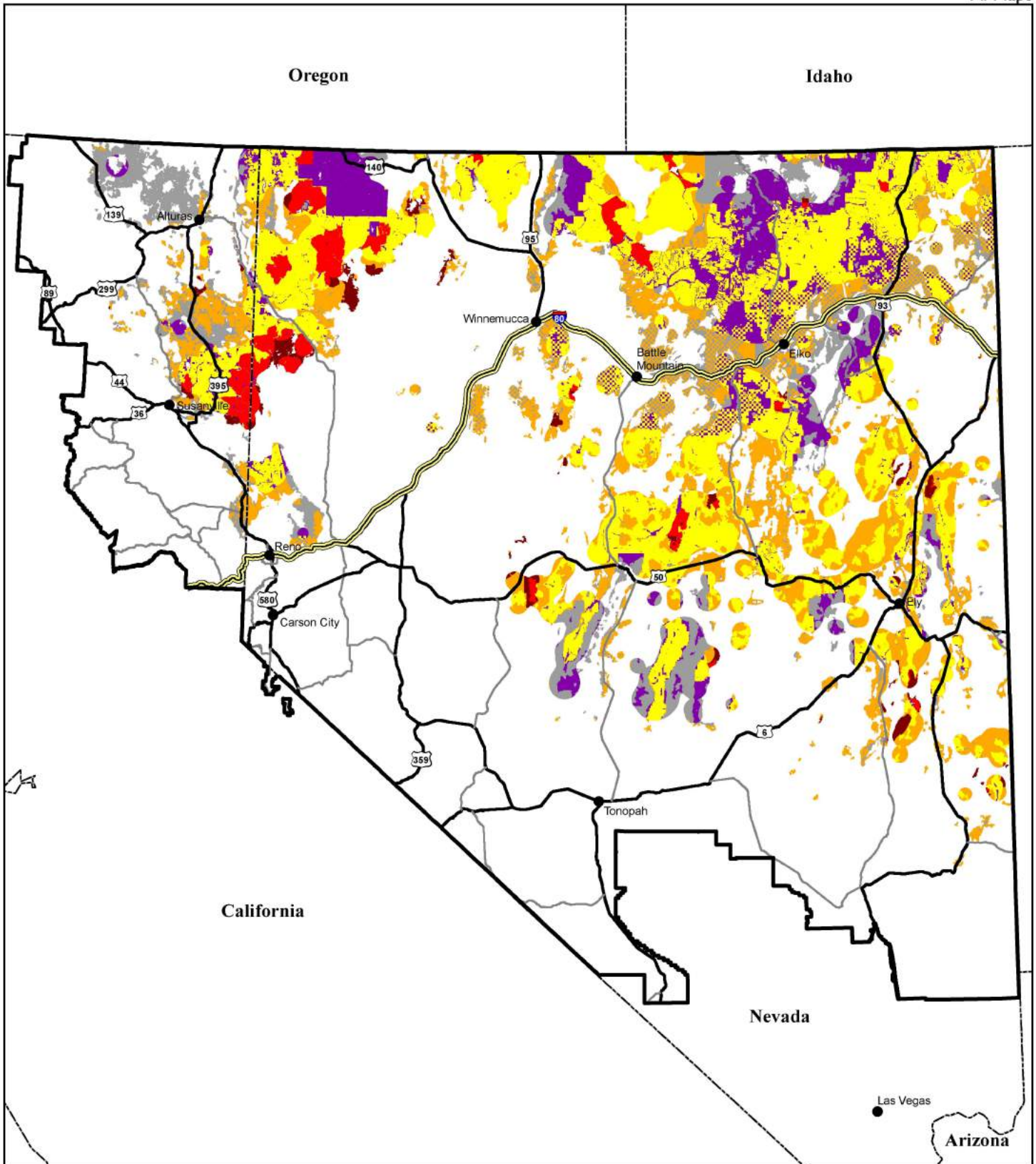
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



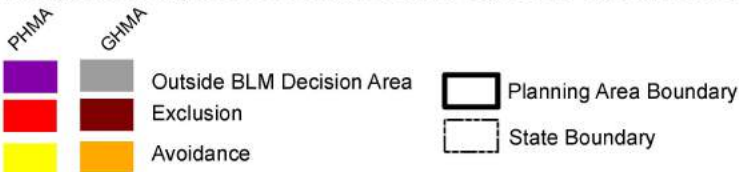
**Figure 2-11a: Nevada and Northeastern California Minor Rights-of-Way (No Action)**



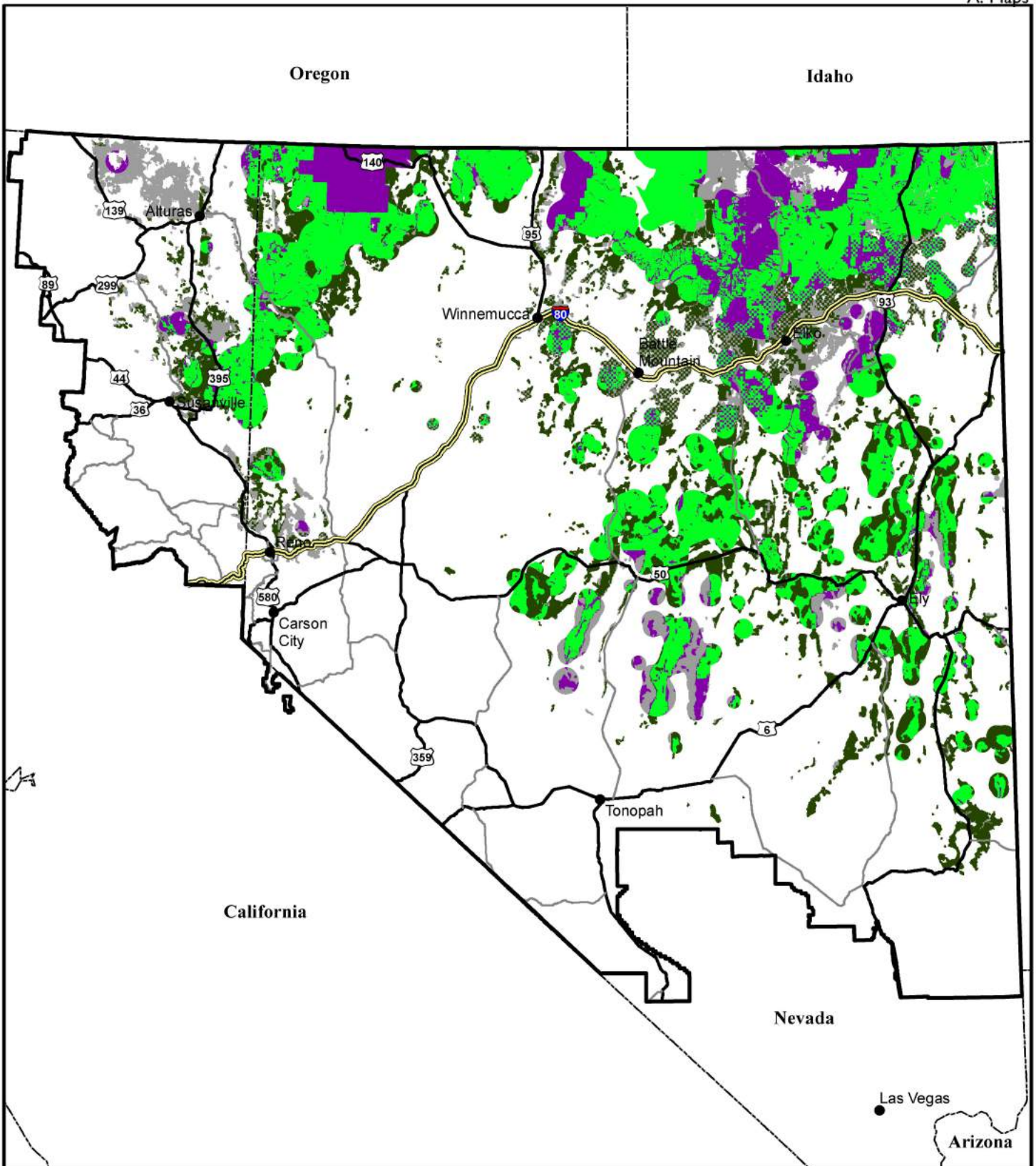
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



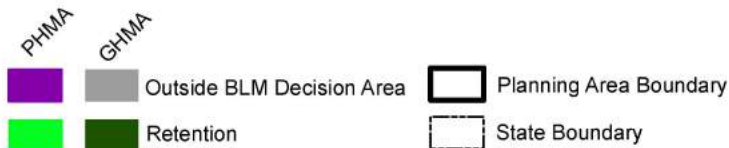
**Figure 2-11b: Nevada and Northeastern California Minor Rights-of-Way (Management Alignment Alternative and Proposed Plan Amendment)**



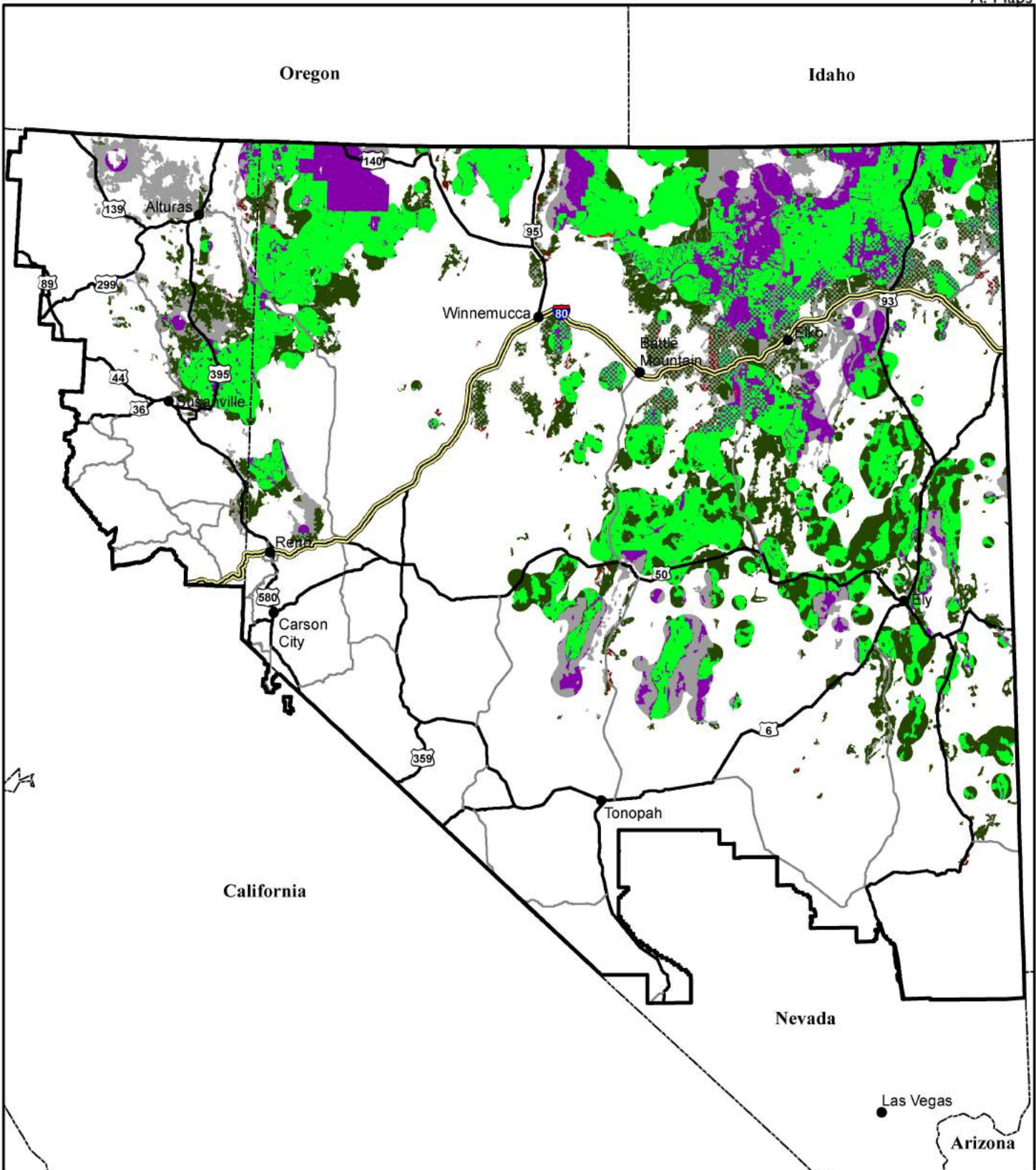
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



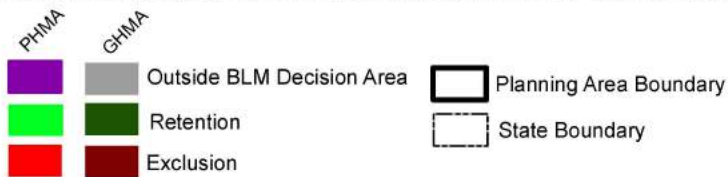
**Figure 2-12a: Nevada and Northeastern California Land Tenure (No Action)**



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



**Figure 2-12b: Nevada and Northeastern California Land Tenure (Management Alignment Alternative and Proposed Plan Amendment)**



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

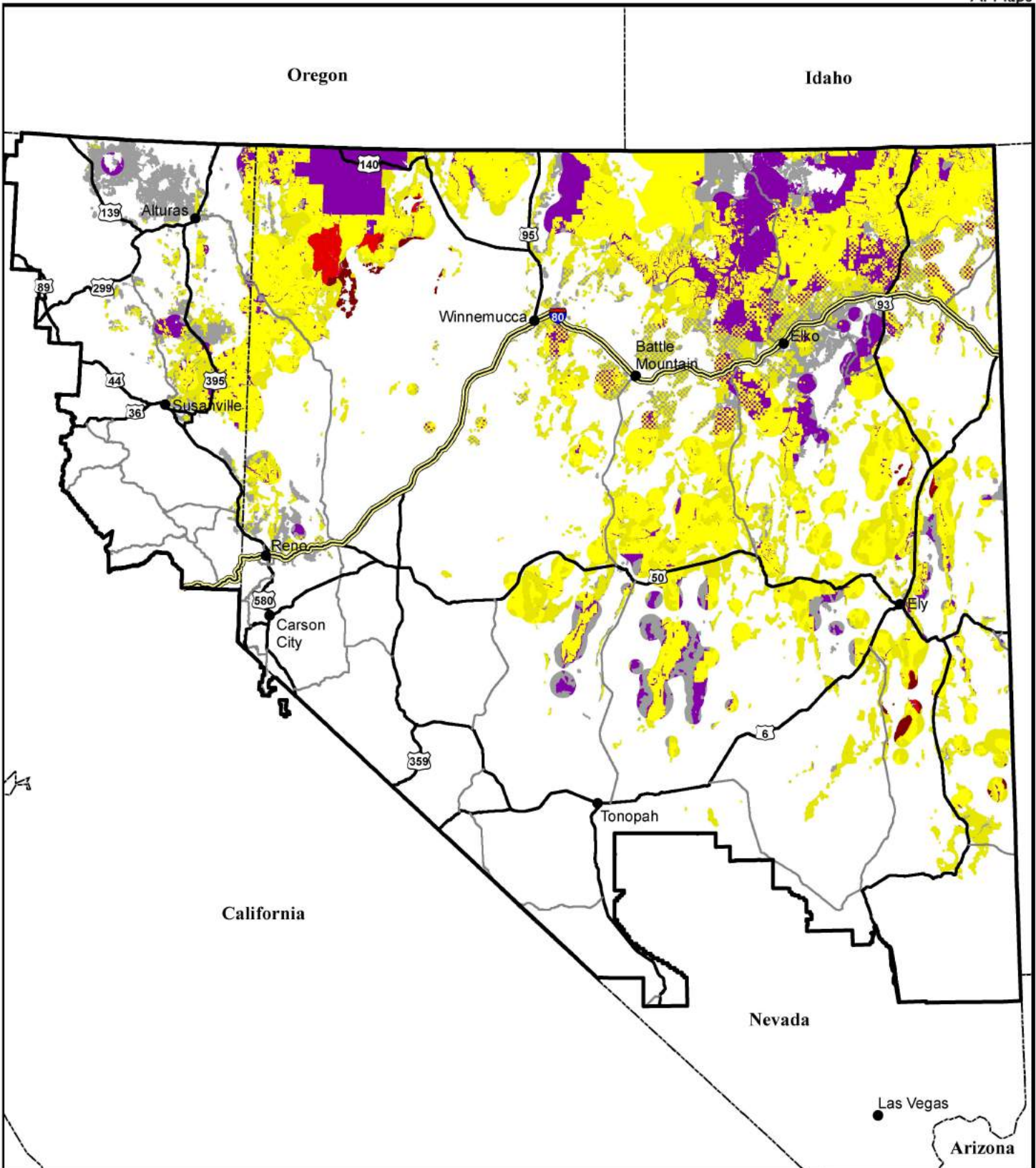


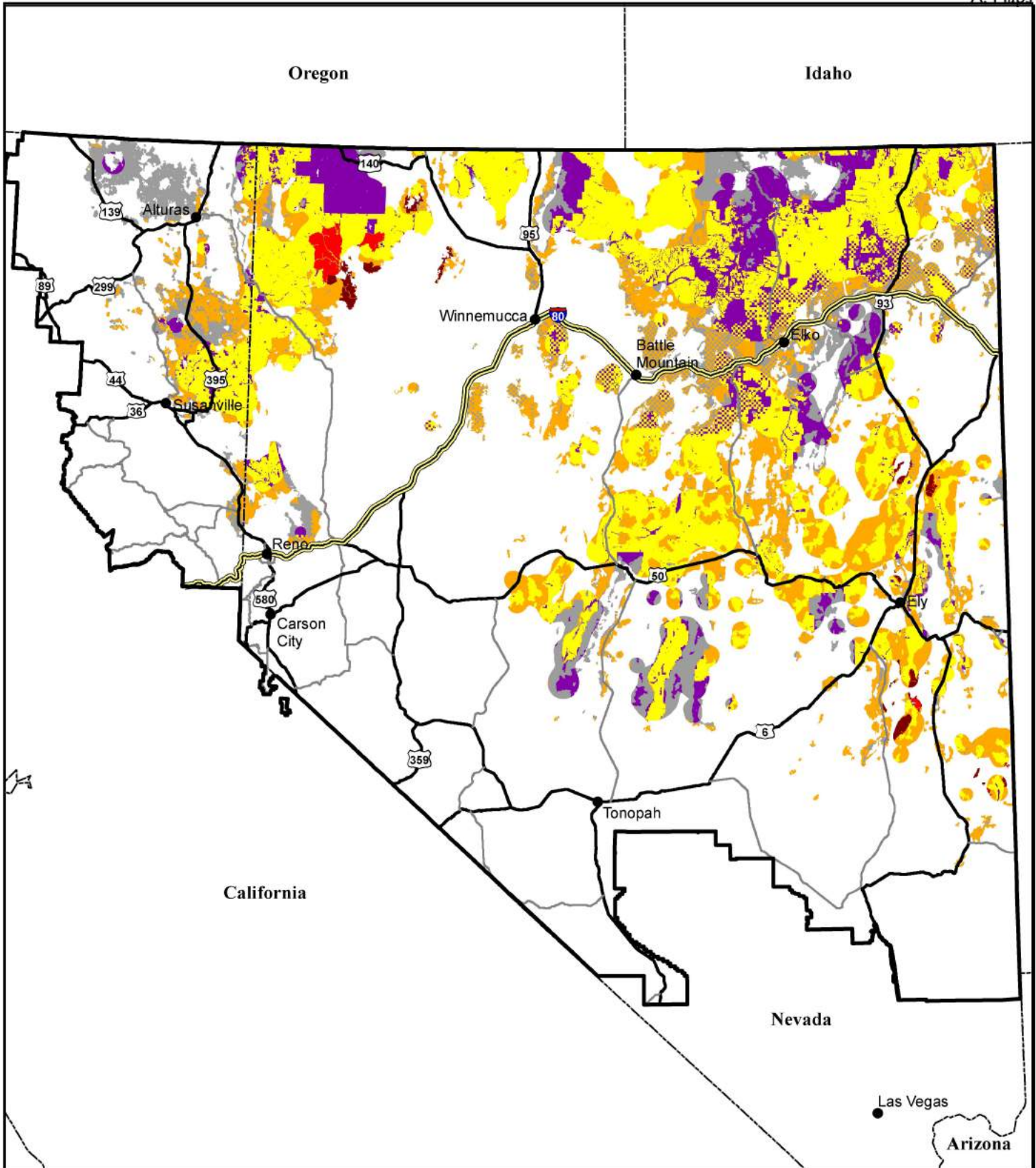
Figure 2-13a: Nevada and Northeastern California Trails and Travel Management (No Action)

PHMA	GHMA		
		Planning Area Boundary	State Boundary

October 2018



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



**Figure 2-13b: Nevada and Northeastern California Trails and Travel Management (Management Alignment Alternative and Proposed Plan Amendment)**



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





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# Appendix B

## Lek Buffer-Distances (Evaluating Impacts to Leks)



## Appendix B. Lek Buffer-Distances (Evaluating Impacts to Leks)

In addition to any other relevant information determined to be appropriate (e.g., state wildlife agency plans, local agency plans, and local information), the BLM, through project specific NEPA analysis, would assess and address impacts from the following activities using the lower end of the interpreted range of lek buffer-distances and guidance identified in the USGS Report, “*Conservation Buffer Distance Estimates for Greater Sage-Grouse – A Review*”, Open File Report 2014-1239 (Mainer et al. 2014). Project specific analysis should use the lower end of the interpreted range in the report as a guideline for effects determination unless justifiable departures are determined to be appropriate (see below). The lower end of the interpreted range of the lek<sup>1</sup> 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, transmission lines) within 2 miles of leks;
- low structures (e.g., fences, rangeland structures) within 1.2 miles of leks in flat or rolling terrain;
- surface disturbance (continuing human activities that alter or remove the natural vegetation, excluding livestock grazing) within 3.1 miles of leks; and
- noise and related disruptive activities including those that do not result in habitat loss (e.g., motorized recreational events) at least 0.25 miles from leks.

Justifiable departures to decrease or increase from these distances from the lek where impacts are anticipated, based on local information and data, best available science, landscape features (i.e., topography), and other existing protections (e.g., land use allocations, state regulations), or factors reducing visibility and audibility may be appropriate. 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, “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 departures from the lek buffer-distances identified above for impact assessments would require appropriate analysis and disclosure as part of the NEPA.

The BLM would use the most recent active and/or pending lek data available from the state wildlife agencies to assess project specific impacts.

---

<sup>1</sup>Applicable to Active and Pending leks as determined by NDOW and CDFW

### **FOR ACTIONS IN GHMA**

The BLM, through the NEPA analysis, should avoid or minimize actions in GHMA that are within the applicable lek buffer distance identified above. If it is not possible to avoid or minimize impacts by relocating the project outside of the identified lek buffer-distance(s), the BLM may approve the project if:

- Based on best available science, landscape features, and other existing protections, (e.g., land use allocations, state regulations), the BLM determines that a lek buffer-distance, other than the applicable distance identified above, offers the same or a greater level of protection to Greater Sage-Grouse and/or its habitat, including conservation of seasonal habitat outside of the analyzed buffer area;
- The BLM determines that impacts to Greater Sage-Grouse and/or its habitat are minimized such that the project would cause minor or no new disturbance (e.g., co-location with existing authorizations);
- If range improvements 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;
- Mitigation has been developed and implemented which have the ability (alone or in concert with others) to protect the seasonal habitats within the buffer area and any residual impacts within the lek buffer-distances have been addressed.

### **FOR ACTIONS IN PHMA**

The BLM, through NEPA analysis, should avoid actions in PHMA that are within the applicable lek buffer distance identified above. If it is not possible to avoid impacts by relocating the project outside of the identified lek buffer-distance(s), the BLM may approve the project, if in accordance with actions identified above for GHMA, and with input from the state fish and wildlife agencies (and local agencies when appropriate).

The BLM would explain its justification for the analysis of buffer distances in its project decision record.

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# Appendix C

## Required Design Features Worksheet



The worksheet below includes a list of design features that would be implemented for all authorized/permitted activities, consistent with applicable law ( and consistent with the 2015 BLM Nevada and Northeastern California's Approved Resource Management Plan Amendment, MD SSS 2(C), SSS 3(B), and SSS 4. At the site-specific scale, BLM will document when an RDF is or is not applied to a particular project. If an RDF is not applied, this worksheet provides the BLM an opportunity to consistently document its rationale as to why that RDF if not applicable. This document will be placed in the project record and/or referenced in the project's NEPA analysis.

**Project Name:** \_\_\_\_\_ **NEPA #:** \_\_\_\_\_

General RDFs	Applied	If RDF not applied, select reason:
<p><b>RDF Gen 1:</b> Locate new roads outside of GRSG habitat to the extent practical.</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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. <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____ <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		
<p><b>RDF Gen 2:</b> Avoid constructing roads within riparian areas and ephemeral drainages. Construct low water crossings at right angles to ephemeral drainages and stream crossings (note that such construction may require permitting under Sections 401 and 404 of the Clean Water Act).</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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. <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____ <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		
<p><b>RDF Gen 3:</b> Limit construction of new roads where roads are already in existence and could be used or upgraded to meet the needs of the project or operation. Design roads to an appropriate standard, no higher than necessary, to accommodate intended purpose and level of use.</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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. <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____ <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		
<p><b>RDF Gen 4:</b> Coordinate road construction and use with ROW holders to minimize disturbance to the extent possible.</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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. <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____ <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		
<p><b>RDF Gen 5:</b> During project construction and operation, establish and post speed limits in GRSG habitat to reduce vehicle/wildlife collisions or design roads to be driven at slower speeds.</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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. <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____ <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		

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<p><b>RDF Gen 6:</b> Newly constructed project roads that access valid existing rights would not be managed as public access roads. Proponents will restrict access by employing traffic control devices such as signage, gates, and fencing.</p>	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	
<p><b>RDF Gen 7:</b> Require dust abatement practices when authorizing use on roads.</p>	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	
<p><b>NO RDF 8 Identified</b></p>		
<p><b>RDF Gen 9:</b> Upon project completion, reclaim roads developed for project access on public lands unless, based on site-specific analysis, the route provides specific benefits for public access and does not contribute to resource conflicts.</p>	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	
<p><b>RDF Gen 10:</b> Design or site permanent structures that create movement (e.g., pump jack/ windmill) to minimize impacts on GRSG habitat.</p>	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	
<p><b>RDF Gen 11:</b> Equip temporary and permanent aboveground facilities with structures or devices that discourage nesting and perching of raptors, corvids, and other predators.</p>	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	



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<p><b>RDF Gen 12:</b> Control the spread and effects of nonnative, invasive plant species (e.g., by washing vehicles and equipment, minimize unnecessary surface disturbance; Evangelista et al. 2011). All projects would be required to have a noxious weed management plan in place prior to construction and operations.</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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.  <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____  <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		
<p><b>RDF Gen 13:</b> Implement project site-cleaning practices to preclude the accumulation of debris, solid waste, putrescible wastes, and other potential anthropogenic subsidies for predators of GRSG.</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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.  <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____  <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		
<p><b>RDF Gen 14:</b> Locate project related temporary housing sites outside of GRSG habitat.</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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.  <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____  <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		
<p><b>RDF Gen 15:</b> When interim reclamation is required, irrigate site, in accordance with state laws, to establish seedlings more quickly if the site requires it.</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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.  <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____  <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		
<p><b>RDF Gen 16:</b> Utilize mulching or other soil amendment techniques to expedite reclamation and to protect soils if the site requires it.</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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.  <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____  <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		

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<p><b>RDF Gen 17:</b> Restore disturbed areas at final reclamation to the pre-disturbance landforms and desired plant community.</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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.  <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____  <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		
<p><b>RDF Gen 18:</b> When authorizing ground-disturbing activities, require the use of vegetation and soil reclamation standards suitable for the site type prior to construction.</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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.  <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____  <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		
<p><b>RDF Gen 19:</b> Instruct all construction employees to avoid harassment and disturbance of wildlife, especially during the GRSG breeding (e.g., courtship and nesting) season. In addition, pets shall not be permitted on site during construction (BLM 2005b).</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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.  <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____  <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		
<p><b>RDF Gen 20:</b> To reduce predator perching in GRSG habitat, limit the construction of vertical facilities and fences to the minimum number and amount needed and install anti-perch devices where applicable.</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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.  <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____  <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		
<p><b>RDF Gen 21:</b> Outfit all reservoirs, pits, tanks, troughs or similar features with appropriate type and number of wildlife escape ramps (BLM 1990; Taylor and Tuttle 2007).</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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.  <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____  <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		

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<p><b>RDF Gen 22:</b> Load and unload all equipment on existing roads, pull outs, or disturbed areas to minimize disturbance to vegetation and soil.</p>	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<p><b>Rationale if RDF is not applied:</b></p>	

In addition to the General RDFs, apply Lands and Realty RDFs to PHMA, GHMA, and OHMA as appropriate and consistent with applicable law:

Project Name: \_\_\_\_\_

NEPA #: \_\_\_\_\_

Lands and Realty RDFs*	Applied	If RDF not applied, select reason:
<p><b>RDF LR-LUA 1:</b> Where new ROWs associated with valid existing rights are required, co-locate new ROWs within existing ROWs or where it best minimizes impacts in GRSG habitat. Use existing roads or realignments of existing roads to access valid existing rights that are not yet developed.</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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. <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____ <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat. Rationale if RDF is not applied:
<p><b>RDF LR-LUA 2:</b> Do not issue ROWs to counties on newly constructed energy/mining development roads, unless for a temporary use consistent with all other terms and conditions included in this document.</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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. <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____ <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat. Rationale if RDF is not applied:
<p><b>RDF GEN (LR-LUA) 3:</b> Where necessary, fit transmission towers with anti-perch devices (Lammers and Collopy 2007) in GRSG habitat.</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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. <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____ <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat. Rationale if RDF is not applied:
<p>*These RDFs also apply to other land use authorizations such as leases and permits</p>		

In addition to the General RDFs, apply Fuels and Fire Management RDFs to PHMA, GHMA, and OHMA as appropriate and consistent with applicable law:

Project Name: \_\_\_\_\_

NEPA #: \_\_\_\_\_

Fuels and Fire Management RDFs	Applied	If RDF not applied, select reason:
<p><b>RDF WFM 1:</b> Power-wash all firefighting vehicles, including engines, water tenders, personnel vehicles, and all-terrain vehicles (ATVs), prior to deploying in or near GRS habitat to minimize the introduction and spread of undesirable and invasive plant species. (This is not applicable to initial attack vehicles.)</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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. <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRS habitat. Alternative RDF # _____ <input type="checkbox"/> A specific RDF will provide no additional protection to GRS habitat. Rationale if RDF is not applied:
<p><b>RDF WFM 2:</b> Protect wildland areas from wildfire originating on private lands, infrastructure corridors, and recreational areas.</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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. <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRS habitat. Alternative RDF # _____ <input type="checkbox"/> A specific RDF will provide no additional protection to GRS habitat. Rationale if RDF is not applied:
<p><b>RDF WFM 3:</b> Reduce the risk of vehicle or human-caused wildfires and the spread of invasive species by planting and maintaining perennial vegetation (e.g., greenstrips) paralleling road rights-of-way.</p>	<input type="checkbox"/> Yes  <input type="checkbox"/> No	<input type="checkbox"/> 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. <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRS habitat. Alternative RDF # _____ <input type="checkbox"/> A specific RDF will provide no additional protection to GRS habitat. Rationale if RDF is not applied:

In addition to the General RDFs, apply Fluid Minerals RDFs to PHMA, GHMA, and OHMA as appropriate and consistent with applicable law:

Project Name: \_\_\_\_\_

NEPA #: \_\_\_\_\_

Fluid Minerals RDFs	Applied	If RDF not applied, select reason:
<b>RDF Lease FM 1:</b> Co-locate power lines, flow lines, and small pipelines under or immediately adjacent to existing roads (Bui et al. 2010) in order to minimize or avoid disturbance.	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	
<b>RDF Lease FM 2:</b> Cover, create barriers, or implement other effective deterrents (e.g., netting, fencing, birdballs, and sound cannons) for all ponds and tanks containing potentially toxic materials to reduce GRSG mortality.	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	
<b>RDF Lease FM 3:</b> Require installation of noise shields to comply with noise restrictions (see Action SSS 7) when drilling during the breeding, nesting, brood-rearing, and/or wintering season. Require applicable GRSG seasonal timing restrictions when noise restrictions cannot be met (see Action SSS 6).	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	
<b>RDF Lease FM 4:</b> Ensure habitat restoration meets GRSG habitat objectives (Table 2-2) for reclamation and restoration practices/sites (Pyke 2011).	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	

Project Name: \_\_\_\_\_

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<p><b>RDF Lease FM 5:</b> Maximize the area of interim reclamation on long-term access roads and well pads, including reshaping, topsoil management, and revegetating cut-and-fill slopes.</p>	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	
<p><b>RDF Lease FM 6:</b> Restore disturbed areas at final reclamation to the pre-disturbance landforms and meets the GRSG habitat objectives (Table 2-2).</p>	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	
<p><b>RDF Lease FM 7:</b> Use only closed-loop systems for drilling operations and no reserve pits within GRSG habitat.</p>	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	
<p><b>RDF Lease FM 8:</b> Place liquid gathering facilities outside of GRSG habitat. Have no tanks at well locations within GRSG habitat to minimize vehicle traffic and perching and nesting sites for aerial predators of GRSG.</p>	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	
<p><b>RDF Lease FM 9:</b> In GRSG habitat, use remote monitoring techniques for production facilities and develop a plan to reduce vehicular traffic frequency of vehicle use (Lyon and Anderson 2003).</p>	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	

**Project Name:** \_\_\_\_\_

**NEPA #:** \_\_\_\_\_

<p><b>RDF Lease FM 10:</b> Use dust abatement practices on well pads.</p>	<input type="checkbox"/> Yes          <input type="checkbox"/> No	<input type="checkbox"/> 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.  <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____  <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		
<p><b>RDF Lease FM 11:</b> Cluster disturbances associated with operations and facilities as close as possible, unless site-specific conditions indicate that disturbances to GRSG habitat would be reduced if operations and facilities locations would best fit a unique special arrangement.</p>	<input type="checkbox"/> Yes          <input type="checkbox"/> No	<input type="checkbox"/> 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.  <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____  <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		
<p><b>RDF Lease FM 12:</b> Apply a phased development approach with concurrent reclamation.</p>	<input type="checkbox"/> Yes          <input type="checkbox"/> No	<input type="checkbox"/> 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.  <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____  <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		
<p><b>RDF Lease FM 13:</b> Restrict pit and impoundment construction to reduce or eliminate augmenting threats from West Nile virus (Dougherty 2007).</p>	<input type="checkbox"/> Yes          <input type="checkbox"/> No	<input type="checkbox"/> 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.  <input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____  <input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
<p><b>Rationale if RDF is not applied:</b></p>		





In addition to the General RDFs, apply Locatable Minerals RDFs to PHMA, GHMA, and OHMA as appropriate and consistent with applicable law:

Project Name:

NEPA #:

Locatable Minerals RDFs	Applied	If RDF not applied, select reason:
<b>RDF LOC 1:</b> Install noise shields to comply with noise restrictions (see Action SSS 7) when drilling during the breeding, nesting, brood-rearing, and/or wintering season. Apply GRSG seasonal timing restrictions when noise restrictions cannot be met (see Action SSS 6).	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	
<b>RDF LOC 2:</b> Cluster disturbances associated with operations and facilities as close as possible, unless site-specific conditions indicate that disturbances to GRSG habitat would be reduced if operations and facilities locations would best fit a unique special arrangement.	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	
<b>RDF LOC 3:</b> Restrict pit and impoundment construction to reduce or eliminate augmenting threats from West Nile virus (Dougherty 2007).	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	



In addition to the General RDFs, apply Comprehensive Travel and Transportation Management RDFs to PHMA, GHMA, and OHMA as appropriate and consistent with applicable law:

Project Name:

NEPA #:

Comprehensive Travel and Transportation Management RDFs	Applied	If RDF not applied, select reason:
<b>RDF CTTM 1:</b> Rehabilitate roads, primitive roads, and trails not designated in approved travel management plans.	<input type="checkbox"/> Yes	<input type="checkbox"/> 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
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	
<b>RDF CTTM 2:</b> Reclaim closed duplicate roads by restoring original landform and establishing desired vegetation in GRSG habitat in accordance with GRSG habitat objectives (Table 2-2) as identified in travel management planning.	<input type="checkbox"/> Yes	<input type="checkbox"/> 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
	<input type="checkbox"/> No	<input type="checkbox"/> An alternative RDF is determined to provide equal or better protection for GRSG or its habitat. Alternative RDF # _____
		<input type="checkbox"/> A specific RDF will provide no additional protection to GRSG or its habitat.
	<b>Rationale if RDF is not applied:</b>	

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# Appendix D

## Adaptive Management Plan



# Appendix D. Adaptive Management Plan

## INTRODUCTION

Adaptive management is a decision process that promotes flexible resource management decision-making. These decisions can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood. Carefully monitoring these outcomes both advances scientific understanding and helps with adjusting resource management directions as part of an iterative learning process.

On February 1, 2008, the Department of the Interior published its Adaptive Management Implementation Policy (522 DM 1). The adaptive management strategy presented in this Proposed RMPA/FEIS complies with this policy and direction, as well as the Department of the Interior's Adaptive Management Technical Guide (DOI 2009).

Adaptive management would help identify if Greater Sage-Grouse (Greater Sage-Grouse) conservation measures presented in this Proposed RMPA/FEIS contain the needed level of certainty for effectiveness. Principles of adaptive management are incorporated into the conservation measures in the Proposed RMPA/FEIS to lessen threats to Greater Sage-Grouse and its habitat, thereby increasing the likelihood that the conservation measures and plan would be effective in reducing threats to them.

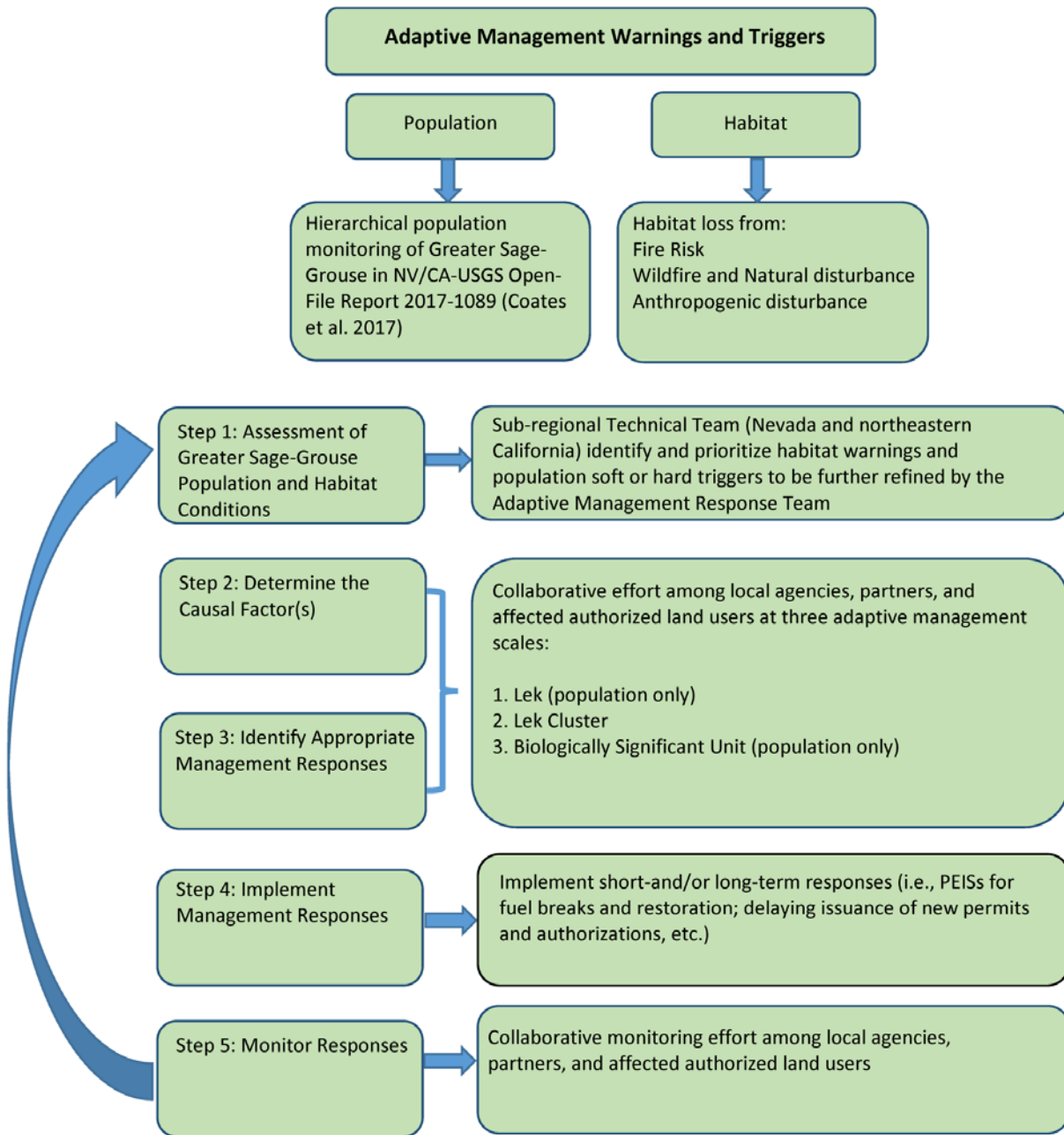
The following provides the BLM's adaptive management strategy for the Nevada and Northeastern California Greater Sage-Grouse Sub-region Proposed RMPA/FEIS.

This adaptive management strategy includes warnings, soft and hard triggers, and responses. Triggers are not specific to any particular project but instead identify Greater Sage-Grouse population and habitat thresholds outside of natural fluctuations or variations (with the exception of wildfires). Triggers are based on the two key metrics that are being monitored: population status and habitat loss.

Adaptive management, with specific triggers, provides additional certainty that the management actions in this Proposed RMPA/FEIS are robust and able to respond to a variety of conditions and circumstances quickly and effectively to conserve the Greater Sage-Grouse and its habitat. Reaching a trigger would initiate a local-state-federal interagency dialogue with affected authorized land users. This would be done to evaluate causal factors and recommend adjustments to implementation-level activities to reverse the trend. When a trigger has been identified, the BLM would strive to collaborate with stakeholders, appropriate state and local agencies, and affected authorized land users when developing and implementing management responses.

A Nevada and Northeastern California technical team would coordinate, prioritize, and implement specific habitat restoration efforts targeted at multiple spatial scales. The team would consist of the BLM, Forest Service, USFWS, NDOW, CDFW, SETT, USGS, University of Nevada-Reno, and other appropriate federal, state, and local agencies. This adaptive management strategy calls for a collaborative effort that would result in individual plans for recovering declining Greater Sage-Grouse populations.

**Figure D-I. Adaptive Management Process**





These plans would be focused on discussions of how threats affect Greater Sage-Grouse and its habitat and the relative importance of various conservation measures. The outcomes would be used to assist local efforts in identifying and prioritizing areas to enable efficiencies and pool resources. This would increase the likelihood that Greater Sage-Grouse population and habitat declines can be addressed effectively through collaboration, stewardship, and conservation. The principles of adaptive management would be incorporated into the conservation measures that lessen threats to Greater Sage-Grouse and its habitat.

### **ADAPTIVE MANAGEMENT ANALYSIS SCALES**

The scales used to analyze population triggers and apply management responses are at the individual lek, lek cluster, and biologically significant units (BSU) as defined below (**Figure D-2**). Adaptive management responses would apply to Habitat Management Areas (HMA) only, which includes Priority, General, and Other HMA within these scales. Habitat adaptive management warnings and triggers would be analyzed only at the lek cluster scale.

The boundaries of the BSU and lek clusters may be adjusted over time, based on Coates et al. 2016 as updated and modified due to the understanding of local Greater Sage-Grouse population interactions, genetic sampling, climate variation, and other relevant data and factors. Population and habitat analysis used to identify warnings and triggers may be updated based on new science and advances in technology, such as integrated population models.

The hierarchy of Greater Sage-Grouse population and habitat scales is as follows:

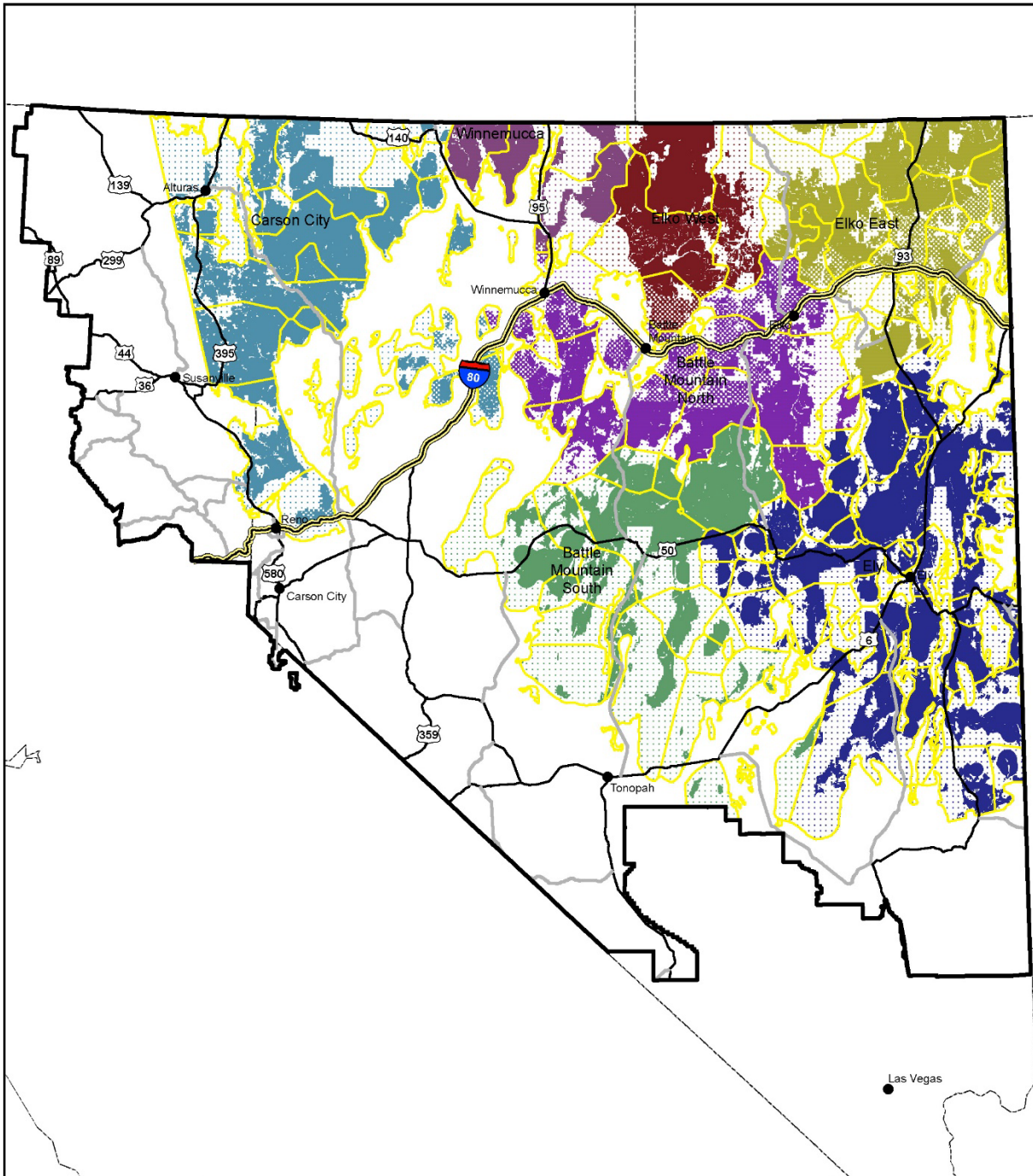
- Lek —Individual breeding display sites where male and female Greater Sage-Grouse congregate, with males performing courtship displays to gain mating opportunities with females
- Lek cluster<sup>1</sup> —A group of leks in the same vicinity, among which Greater Sage-Grouse may interchange over time and representing a group of closely related individuals
- BSU<sup>1,2</sup> —Represents nested lek clusters with similar climate and vegetation conditions

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<sup>1</sup> Lek clusters and BSU boundaries for the Adaptive Management Strategy in this Proposed RMPA/FEIS are based on Coates et al. 2017 (The Hierarchical Population Monitoring of Greater Sage-Grouse in Nevada and Northeastern California [USGS Open-File Report 2017-1089]) as modified or updated by USGS.

<sup>2</sup> BSU delineations for this Adaptive Management Strategy differ from those used to calculate the three percent disturbance cap referenced in the 2015 ARMPA/ROD. The three percent disturbance cap calculations would continue to apply to the BSU delineations in the 2015 ARMPA/ROD.

**Figure D-2. Biologically Significant Units and Lek Clusters for Greater Sage-Grouse in the Nevada and Northeastern California Sub-region**



**Figure 2-2b: Nevada and Northeastern California Biologically Significant Unit and Lek Clusters (Management Alignment Alternative and Proposed Plan Amendment)**

Biologically Significant Unit	HMA Within BSU	
Battle Mountain North	Battle Mountain North	Lek Cluster Boundary
Battle Mountain South	Battle Mountain South	Planning Area Boundary
Carson City	Carson City	States Boundary
Elko East	Elko East	
Elko West	Elko West	
Ely	Ely	
Winnemucca	Winnemucca	



Habitat management areas on this map were derived from modeling efforts (Coates et al., 2016, as amended by the State of Nevada through the Nevada Sagebrush Ecosystem Council in December 2015) and the model will be updated approximately every 3-5 years following a similar process for which these maps were approved. BSU and lek cluster boundaries were derived from Coates et al., 2017. No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

## DEFINITIONS OF ADAPTIVE MANAGEMENT WARNINGS, SOFT TRIGGERS, AND HARD TRIGGERS

### Population

#### Warnings

Adaptive management population warnings are identified in the Greater Sage-Grouse state-space model (Coates et al. 2017), described below; they could lead to reaching a population soft or hard trigger. Warnings are the result of cumulative factors that negatively affect the population growth rate. A warning could be identified when population rates of change ( $\lambda$ ) within any of the three analyzed spatial scales falls below an established threshold, as defined in Coates et al. (2017).

#### Soft Triggers

Soft triggers represent a threshold that indicates management actions should be considered at the project or implementation level to address Greater Sage-Grouse population declines.

#### Hard Triggers

Hard triggers represent a threshold that indicates that immediate action needs be considered to address significant deviations from Greater Sage-Grouse population declines.

### Habitat

#### Warnings

Adaptive management habitat warnings are fire risk, such as annual and perennial fine or woody fuel loads and fire risk models; the occurrence of wildfire or natural disturbance, such as sagebrush die-off, larger than 1,000 acres; or new anthropogenic disturbance that results in direct and indirect effects, as determined using the Habitat Quantification Tool (DCNR 2018) in a lek cluster.

Fire risk would be analyzed using various applicable data sources and support tools, including current vegetation composition and biomass, precipitation, fire regime condition class, fire risk or predictive models, and other applicable resources. The purpose would be to identify areas that have the potential for high fine or woody fuel loads or have a high probability for wildfire risk. The Great Basin Coordination Center and appropriate fuels management specialists would also be consulted to refine areas of high fire potential.

Disturbances of any size could have significant impacts on Greater Sage-Grouse habitat. Due to the complexity of identifying the extent and severity of habitat disturbances in a consistent process, this effort would focus on disturbances, such as wildfires greater than 1,000 acres, to Greater Sage-Grouse habitat, as reported by state and federal agencies. Such disturbances would be considered warnings in order to assess the magnitude of each, as identified below in *Triggers*.

#### Triggers

Habitat triggers are warnings evaluated by a statewide technical team of specialists (as defined in the Adaptive Management Analysis section) that are determined to warrant significant management responses to address Greater Sage-Grouse habitat declines. Generally, a management response would be warranted if an action could be taken to effectively improve conditions for Greater Sage-Grouse.

### **Management Responses**

If a trigger is reached, the appropriate land management agency or agencies would evaluate the appropriate management responses to address the known or probable causes of the decline in Greater Sage-Grouse habitats or populations. The agencies would take into consideration local knowledge and conditions, in coordination with appropriate federal, state, and local agencies, and affected authorized land users. See Step 3 below for examples of potential management responses.

## **ADAPTIVE MANAGEMENT POPULATION ANALYSIS**

### **Population Rate of Change Calculation for Triggers**

The most current version of the Hierarchical Population Monitoring of Greater Sage-Grouse in Nevada and Northeastern California (USGS Open-File Report 2017-1089; Coates et al. 2017) state-space model would be used to estimate the rate of Greater Sage-Grouse population change ( $\lambda$ ) and the number of males at three hierarchically nested spatial scales: individual lek, lek cluster, and BSU. Lek count data provided by NDOW and CDFW would inform the state-space model and be used to determine thresholds for population stability and decoupling from higher-order scales. Some lek clusters may need additional monitoring of leks to gain adequate sampling data in order to be modeled (Coates et al. 2017).

In addition to analyzing annual lek trend data, the benefit of using the USGS state-space model is that it differentiates whether a population decline is likely, due to localized disturbances that may be more manageable, or if it is connected to a larger scale, regional environmental, or climactic conditions that are typically less manageable. A trigger is less likely to be reached at smaller spatial scales, such as leks or lek clusters, if regional environmental (e.g., BSU) conditions are influencing population decline (**Figure D-3**). The framework also accounts for natural variations in populations, which would allow managers to target populations that can be most affected by adaptive management responses.

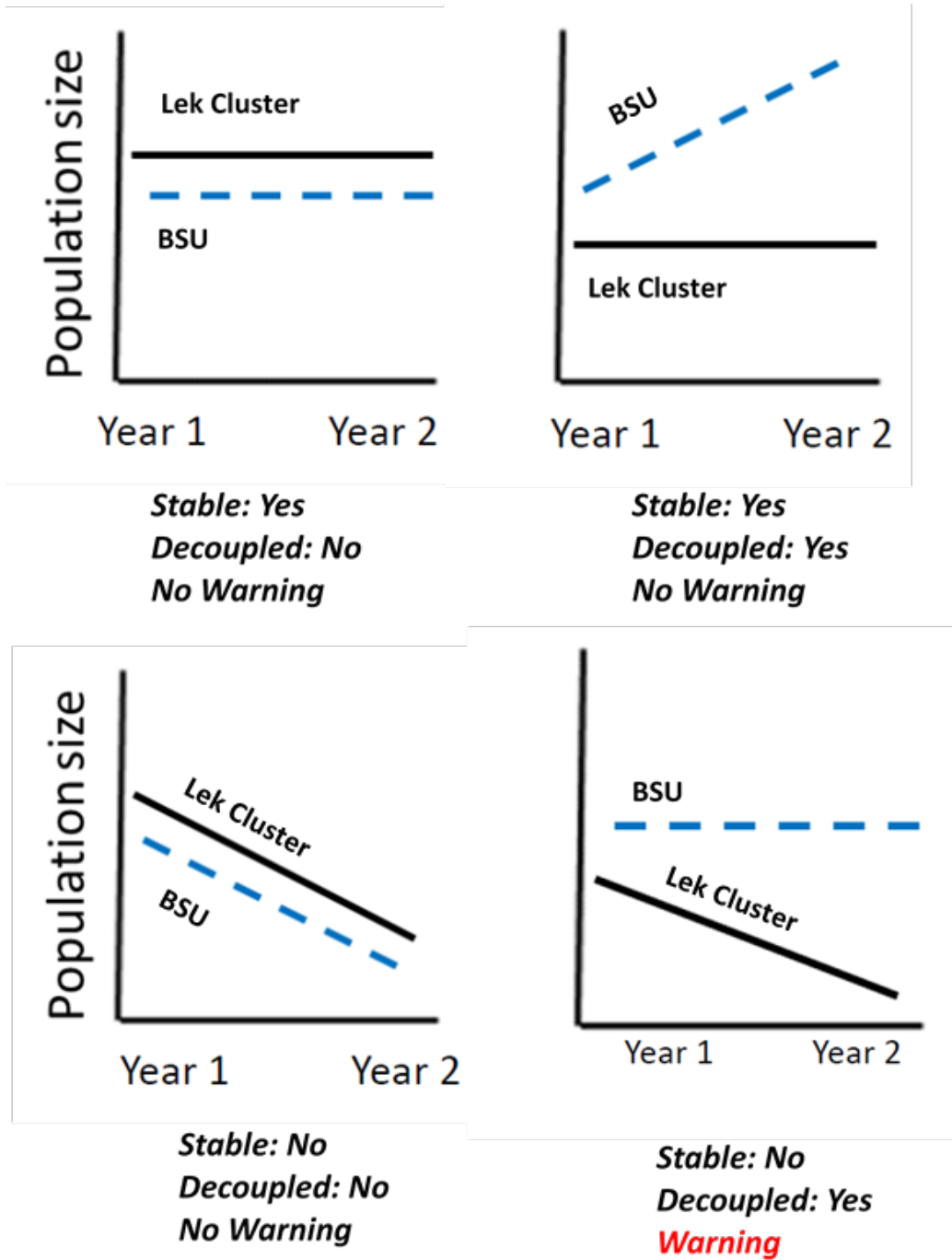
### **Population Soft and Hard Triggers**

As the state wildlife management agencies finalize annual lek data, they would use the USGS state-space model to establish population rates of change at the lek, lek cluster, and BSU levels. The rate at which a population trend destabilizes (population decline) and decouples from the trend at the associated higher-order scale would dictate whether or not a soft or hard trigger is reached. Thresholds for stability and decoupling for soft and hard triggers were initially determined from simulation analyses that used 17 years of lek data (2000–2016). These simulations estimated the range of values where management actions would have an effect on stabilizing population change or synchronizing decoupled scales. The threshold value for each criteria represents the most likely threshold value (from a range of values), that if crossed, would associate most strongly with continued decline or decoupling if management action is not taken (Coates et al. 2017).

Information on the methods used to determine if a soft or hard trigger for Greater Sage-Grouse populations has been reached at the lek, lek cluster, or BSU can be found in Coates et al. (2017b) in the Evaluation Process Section.

**Figure D-3. Scenarios Depicting Population Stability (Trend) and Decoupling from the Higher Order Spatial Scales**

A population that is destabilized and decoupled is considered a warning at that spatial scale. Multiple annual warnings are required to reach a soft or hard population trigger.



Source: Coates et al. 2017

## ADAPTIVE MANAGEMENT HABITAT ANALYSIS

### Habitat Trends for Warnings and Triggers

Warnings for habitat would be evaluated at the lek cluster scale based on annual habitat loss within HMAs. Habitat warnings and triggers would be evaluated using the process described below and would not apply to the BSU scale.

### Habitat Warnings and Triggers

- I. At the lek cluster scale:
  - a. Habitat warnings would be evaluated annually by a sub-regional technical team of specialists (similar to a science work group) from the BLM, Forest Service, NDOW, CDFW, SETT, USGS, USFWS, and UNR and other appropriate local, state, or federal partners. This would determine the ecological impact and magnitude of the habitat warnings. The statewide technical team would determine which habitat warnings warrant a management response. In a lek cluster, habitat warnings that warrant a significant Greater Sage-Grouse focused management response can be considered triggers and prioritized based on available science, site-specific conditions, and ecological criteria, such as ecological site description, resistance and resilience, state and transition models, disturbance response group, and invasive plant species dominance. The statewide technical team would make a recommendation to the appropriate agency's authorizing official responsible for addressing the triggers. More information on prioritization is included under *Step 2*, below.
  - b. Habitat warnings that had insufficient funds and resources available to implement significant Greater Sage-Grouse-focused projects would remain on the habitat warning list and could be reprioritized as a trigger, if warranted in the next annual evaluation by the sub-regional technical team. The sub-regional technical team would also review the trigger list annually and determine whether a habitat trigger remains on the list or should be removed.
  - c. If a population soft trigger is reached in a lek cluster that has also reached a habitat soft trigger, this may result in a population hard trigger response for that lek cluster, as determined by the sub-regional technical team.

## CAUSAL FACTOR ANALYSIS AND MANAGEMENT RESPONSE PROCESS

**Step 1—Assessment of Greater Sage-Grouse Population and Habitat Conditions:** The sub-regional technical team and other appropriate state and local agency partners would use the processes outlined above to evaluate population and habitat data to identify population and habitat warnings and triggers that have been reached. The sub-regional technical team would meet semiannually in spring and late summer or fall of each year to evaluate population data, using the results of the USGS state-space model (Coates et al. 2017, most recent version), habitat data from the land and resource management agencies (BLM, Forest Service, and other state and local agencies), and data sources. This would be done to identify the potential for high fine or woody fuel loads that indicate a high probability for wildfire risk. The data sources may be adapted as new information becomes available from appropriate partners. Some applicable data sources are outlined in the habitat warnings definitions section.

Habitat warnings that warrant a management response would be elevated to the level of a trigger. Following the identification of habitat triggers, a list of criteria and a ranking system that considers available science, site-specific conditions, ecological criteria (e.g., ecological site descriptions, resistance

and resilience, invasive plant species dominance, etc.), and available resources would be used to consistently prioritize and rank habitat triggers among lek clusters. This prioritization is only an initial evaluation, as the adaptive management process progresses, local information and expertise would be used to further refine the priority list for habitat triggers. Once the annual population and habitat information has been assessed and hard or soft triggers have been identified, the appropriate land management agency would notify the appropriate local districts and field offices.

**Step 2—Determine the Causal Factors:** Within 4 weeks (or sooner if possible) after Step 1 is completed and population and habitat triggers have been identified, the appropriate land management agency, in coordination with the sub-regional technical team, would organize and invite federal, state, and local agencies and partners (including local area conservation groups, grazing permittees, and other affected authorized land users) to participate, comment, and provide input during the causal factor analysis. This group would be referred to as the Adaptive Management Response Team (AMRT). The causal factor analysis would be completed as soon as practicable, given available resources.

The casual factor analysis area at each scale is as follows:

- a. Lek (population only)—Greater Sage-Grouse seasonal habitats associated with the lek. An individual lek boundary is defined as a minimum of a 4-mile buffer around a lek.
- b. Lek cluster—Greater Sage-Grouse seasonal habitats associated with the lek cluster. A lek cluster boundary is defined by minimal Greater Sage-Grouse movement between clusters so demographic rates are influenced by birth/death rates rather than immigration/emigration (as delineated by Coates et al. 2017, most recent version).
- c. BSU (population only)—Greater Sage-Grouse seasonal habitats associated with the BSU. A BSU boundary is defined by similar environmental conditions where Greater Sage-Grouse population dynamics are likely more driven by larger scale variations, such as climate, as delineated by Coates et al. 2017, most recent version.

The causal factors for habitat triggers could be fire risk, wildfire, natural causes, or anthropogenic disturbances, based on the analysis conducted in *Step 1*. To identify the causal factors of a population trigger, the AMRT would consider all available information and examine the causal factors. Questions to be answered may include the following:

- Did factors and events outside the triggered scale contribute to population or habitat decline, such as from previously burned areas in the lek cluster or BSU that have not recovered?
- Did the event or outcome arise from the interaction of more than one potential causal factors?
- What natural and human-caused events have occurred in the causal factor analysis area?
- What is the magnitude of the impact on Greater Sage-Grouse populations or habitat, such as what is the current anthropogenic disturbance in the area and how would these changes affect Greater Sage-Grouse populations or habitat?
- Can Greater Sage-Grouse populations and/or habitat recover on its own without intervention?
- What is the expected length of the recovery period?
- Can the management actions already included in the 2015 Final FEIS and the 2018 Proposed RMPA/FEIS accelerate recovery, or are different actions necessary?

Findings from the causal factor analysis process would be documented in a report, which would be prepared by the AMRT. The AMRT report would also include recommendations for additional analyses or data collection if applicable. If the causal factor(s) cannot be determined, the AMRT would address threats that were identified and continue to explore opportunities for conservation in areas where impacts have occurred, when warranted.

**Step 3—Identify Appropriate Trigger Responses:** The AMRT would identify appropriate trigger responses to be applied to the individual lek (population only), lek cluster, and/or BSU (population only) that reach a trigger. Appropriate management responses would be included in the AMRT report.

Management responses would be applied only in HMAs. Both reactive and proactive management responses may be applied to address existing or anticipated threats in areas where warnings or triggers have been reached. In either case they should be strategically targeted to address the causal factors of the existing disturbance or to address similar threats that have led to a warning or trigger within a lek, lek cluster, or BSU.

This plan identifies two main response groups to address fine and woody fuel loads that may require different management responses with varying spatial and temporal scales associated with the response, as follows:

1. Short-term management—Identify areas of high fine fuel loads that would benefit from fuels management treatments, such as targeted grazing, season-specific fall grazing, and fuel breaks, of annual grasses.
2. Long-term management—Identify areas of high woody fuel loads to strategically target areas for appropriate fuel breaks and vegetation treatments to better manage wildfires when they do occur

To address triggers, the appropriate land management agency would evaluate or consider applying the following types of short- and long-term management or implementation actions in an individual lek (population only), lek cluster, or BSU (population only):

- Delaying issuance of new permits and authorizations, such as geothermal, solar, wind, and oil and gas
- Delaying issuance of new or pending rights-of-way outside of existing designated corridors
- Using tools and techniques that are included in the programmatic environmental assessments for targeted grazing, which are under development
- Proactively applying targeted grazing to reduce fine fuels, such as using free use permits and temporary nonrenewable grazing permits
- Using full force and effect decisions, when appropriate, to address fire risk from fine or woody fuels
- Requiring new permits and authorizations to include an adaptive management process if additional impacts on Greater Sage-Grouse populations or habitats are identified
- Strategically placing fuel breaks, depending on landscape/habitat continuity, vegetation composition, fuel loads, accessibility, and use of programmatic EISs for fuel breaks and restoration management



- Using existing or developing new predictive tools to forecast and plan for anticipated plant growth, based on annual and seasonal precipitation in unison with previous growing seasons' fire and woody fuels
- Halting or delaying planned prescribed fire
- Increasing fire prevention patrols
- Increasing fire prevention inspections of motorized equipment
- Prohibiting open campfires outside of established fire pits and outside of stoves in designated recreation areas during high fire seasons
- Increasing inspections to ensure Required Design Features for limiting the spread of invasive plants are being implemented
- Increasing surveys to detect and treat new infestations of invasive plants, especially invasive annual grasses
- Delaying certain planned vegetation treatments until after the breeding and brood-rearing season
- Halting, delaying, accelerating, or stimulating planned fuels treatments in Greater Sage-Grouse winter habitat, depending on conditions and needs
- Installing anti-perching devices on tall structures
- Installing bird flight diverters on guy wires and fences
- Delaying planned construction of new recreation facilities, such as kiosks, toilets, and signs
- Increasing litter patrols in and around heavily used recreation areas
- Increasing education for visitors in the role of litter and garbage in attracting Greater Sage-Grouse predators
- Increasing enforcement on travel restrictions
- Limiting noise and light pollution
- Obtaining voluntary written agreements for items outside BLM jurisdiction, such as activities on adjacent non-BLM-administered land
- Habitat improvement projects, including pinyon and/or juniper removal
- Developing allotment management plans
- Conducting emergency wild horse and burro gathers
- Developing off-site water sources by the water rights holder
- Voluntarily establishing livestock herding and stockmanship

Some of the actions listed may require further NEPA analysis, which would delay immediate implementation and response.

The appropriate land management agency local district or field offices would consider whether approval of pending authorizations in the affected adaptive management response area (lek, lek cluster, and/or BSU) would exacerbate the decline of the population or habitat or would otherwise be inconsistent with the trigger responses. The land management agency would coordinate with appropriate federal, state, and local agencies and affected authorized land users for any action completed under this step.

In addition, the AMRT report would identify an emergency/contingency plan that would outline immediate management actions that would take place, in the event that the trigger is exacerbated. Such a plan should include goals, objectives, management actions, and monitoring requirements developed specifically for the appropriate geographic area and/or populations being affected, such as lek, lek cluster, and/or BSU.

If a hard trigger is reached, district or field offices, or both, would implement the site-specific actions outlined in the emergency/contingency response plan developed as part of the soft trigger response. If the hard trigger was reached, but not preceded by a soft trigger or the emergency/contingency response was not developed, the BLM (in coordination with federal, state, and local partners) may implement temporary closures (in accordance with 43 CFR Part 8364.1, and as directed under BLM Instruction Memorandum No. 2013-035) to respond to a causal factor(s) that have resulted in a catastrophic event (i.e., wildfire). In addition, the BLM would no longer permit exceptions to allocation decisions in areas (e.g., lek, lek cluster, and/or BSU) that have reached a hard trigger and may delay issuance of new permits and authorizations until populations and/or habitat levels fall below the trigger threshold and the trigger has been determined to be reversed by the process outlined below (Longevity of Trigger Responses).

Management objectives in response to triggers would be specific, measurable, achievable/attainable, relevant/realistic, and trackable/timely or time specified.

**Step 4—Implement Trigger Responses:** The AMRT would submit the report to the appropriate land management agency's local district or field offices, or both, to implement specific management responses at the scale at which the trigger was reached, such as lek, lek cluster, and/or BSU, and as contained in the report referenced in Steps 2 and 3, above.

**Step 5—Monitor Responses:** The AMRT and the appropriate land management agency's local district or field offices, or both, would continue to monitor guidance in the Nevada Rangeland Monitoring Handbook (Stiver et al. 2015, etc.) the lek(s), lek cluster(s) and/or BSU(s) in which a trigger response is being applied to determine if the responses are adequately addressing the reason for the population and/or habitat decline. This information would be used in Step 1 above, "Assessment of GRSG Population and Habitat Conditions" the following year.

#### **LONGEVITY OF TRIGGER RESPONSES (REMOVING THE TRIGGER RESPONSE)**

The sub-regional technical team would work with the appropriate land management agency to develop criteria to evaluate whether a lek, lek cluster, and/or BSU that reaches a trigger has recovered sufficiently or is trending in a positive direction. Longevity of a trigger response would be applied to the type of management action being implemented.

Population or habitat triggers that result in management responses would be evaluated annually to determine their effectiveness. If implementation activities are successful or are improving populations or habitat conditions, these actions would be continued or reprioritized by the AMRT, using information from annual evaluation and monitoring. For population or habitat trigger management responses that result in an allocation restriction, the federal land management agency would work with the AMRT to determine when a population or habitat trigger has been adequately addressed to remove the trigger response.

The process for evaluating population and habitat trigger responses may include the following:

- Identification of upward population trends, based on an annual analysis of the Greater Sage-Grouse state-spaced model (Coates et al. 2017, as updated)
- Response of vegetation communities and habitat following fire or other disturbance
- Changes in Greater Sage-Grouse HMAs, based on periodic mapping updates
- Evaluation of habitat or population responses, based on an adaptive management process, to determine what management actions are successful, what actions are unlikely to be successful and should be discontinued, what objectives should be modified to better reflect an achievable goal, and what actions should be changed to achieve the desired outcome
- Evaluation of assessments completed following the Sage-Grouse Habitat Assessment Framework: A Multiscale Assessment Tool, Technical Reference 6710-1 (Stiver et al. 2015)
- In cases where efforts to improve habitat become infeasible, such as when the area has passed an ecological threshold, the AMRT may recommend removing triggers.

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# Appendix E

Fluid Mineral Stipulations, Waivers, Modifications,  
and Exceptions



# Appendix E. Fluid Mineral Stipulations, Waivers, Modifications, and Exceptions

This appendix lists surface use stipulations for new fluid mineral (oil and gas and geothermal) leases referred to throughout the 2015 Final EIS that would be updated under the 2018 Proposed Plan Amendment. In addition to fluid mineral leases, these surface use stipulations would also apply, where appropriate and practical, to other surface-disturbing activities (and occupancy) associated with land use authorizations, permits, and leases issued on BLM-administered lands. Subject to valid existing rights and applicable law and policy, the stipulations would apply to uses and activities other than fluid mineral leasing. The intent is to manage other activities and uses in the same manner as fluid mineral leasing.

Surface-disturbing activities are those that normally result in more than negligible disturbance to public lands. These activities normally involve disturbance to soils and vegetation to the extent that reclamation is required. They include the following:

- The use of mechanized earth-moving and truck-mounted drilling equipment
- Certain geophysical exploration activities
- Off-road vehicle travel in areas designated as limited or closed to off-highway vehicle use
- Placement of surface facilities, such as utilities, pipelines, structures, and geothermal and oil and gas wells
- New road construction
- Use of pyrotechnics, explosives, and hazardous chemicals

Surface-disturbing activities do not include livestock grazing, cross-country hiking, driving on designated routes, and minimum-impact filming.

## DESCRIPTION OF SURFACE STIPULATIONS

**Table E-1** shows the stipulations that would be carried forward or amended under the 2018 Proposed Plan Amendment, including exceptions, modifications, and waivers. All stipulations for other resources, besides Greater Sage-Grouse, included in the existing land use plans would still be applicable.

Areas identified as no surface occupancy (NSO) would not allow surface-disturbing activities.

Areas identified as controlled surface use (CSU) would require proposed actions to be authorized in accordance with the controls or constraints specified. The controls would be applicable to all surface-disturbing activities.

Areas identified as timing limitation (TL) would not allow surface-disturbing activities during identified time frames. TL areas would remain open to operations and maintenance, including associated vehicle travel, during the restricted period, unless otherwise specified in the stipulation.

## RELIEF FROM STIPULATIONS

With regard to fluid minerals, surface use stipulations could have exceptions, modifications, or waivers applied with approval by the BLM Authorized Officer, for example, the BLM State Director. **Table E-1** specifies the types of habitats where these stipulations would or would not apply.

### Exception

An exception to stipulations associated with Habitat Management Areas (HMA) may be granted by the BLM Authorized Officer (State Director), in coordination with NDOW, CDFW, or both, if one the following conditions are met:

- The location of the proposed authorization is determined to be unsuitable (by a biologist with Greater Sage-Grouse experience using methods such as Stiver et al 2015)
- It lacks the ecological potential to become marginal or suitable habitat
- It would not result in direct, indirect, or cumulative impacts on Greater Sage-Grouse and its habitat
- The proposed activity's impacts could be offset to result in no adverse impacts on Greater Sage-Grouse or its habitat, through use of the mitigation hierarchy consistent with Federal law and the state's mitigation policies and programs. In cases where exceptions may be granted for projects with a residual impact, voluntary compensatory mitigation consistent with the State's management goals could be one mechanism by which a proponent achieves the RMPA goals, objectives, and exception 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 an exception. 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.

### Modification

The BLM Authorized Officer, in coordination with NDOW, CDFW, or both, can modify or waive dates for seasonal timing restrictions, based on the criteria described below and on site-specific information that indicates the following:

- i. A project proposal's NEPA analysis or project record and correspondence from NDOW or CDFW demonstrates that any modification (shortening/extending seasonal time frames or waiving the seasonal timing restrictions altogether) is justified on the basis that it serves to better protect or enhance Greater Sage-Grouse and its habitat than if the strict application of seasonal timing restrictions are implemented. Under this scenario modifications can occur if:
  - a) A proposed authorization would have beneficial or neutral impacts on Greater Sage-Grouse
  - b) Topography or other factors eliminate direct and indirect impacts from visibility and audibility to Greater Sage-Grouse and its habitat
  - c) There are documented local variations (e.g., higher/lower elevations) or annual climatic fluctuations (e.g., early/late spring, long/heavy winter) that indicate the seasonal life cycle periods are different than presented, or that Greater Sage-Grouse are not using the area during a given seasonal life cycle period



- ii. Modifications are needed to address an immediate public health and safety concern in a timely manner (e.g., maintaining a road affected by flooding).

**Waiver**

The stipulation may be waived if the BLM Authorized Officer, in consultation with NDOW, CDFW, or both, determines that the entire leasehold is within unsuitable habitat (see exceptions above) and would not result in direct, indirect, or cumulative impacts on Greater Sage-Grouse or its habitat.

**Inclusion in Environmental Analysis**

The environmental analysis document prepared for site-specific proposals, such as for fluid minerals (oil and gas and geothermal) development (i.e., operations plans for geothermal drilling permit or master development plans for applications for permit to drill or sundry notices) would need to address proposals to exempt, modify, or waive a surface use stipulation.

In order to exempt, modify, or waive a stipulation on BLM-administered lands, the environmental analysis would have to demonstrate that criteria from above apply, such that: (1) the circumstances or relative resource values in the area had changed following issuance of the lease, (2) less restrictive requirements could be developed to protect the resource of concern, and (3) operations could be conducted without causing direct, indirect, or cumulative impacts.

With respect to granting relief from stipulations on other types of authorizations, such as solid mineral leases and land use authorizations, any changes to the contractual nature of these instruments would require environmental review and coordination with the lessee, permittee, or authorization holder. This would be the case when specific surface-disturbing activities are proposed via an operation plan, permitting action, or similar instrument.

**STANDARD TERMS AND CONDITIONS**

All surface-disturbing activities are subject to standard terms and conditions. These include the stipulations that are required for proposed actions in order to comply with the Endangered Species Act. Standard terms and conditions for fluid mineral leasing provide for relocating proposed operations up to 200 meters and for prohibiting surface-disturbing operations for a period not to exceed 60 days. The stipulations addressed in **Table E-1** that are within the parameters of 200 meters and 60 days are considered open to fluid mineral leasing, subject to standard terms and conditions.

**Table E-1**  
**Fluid Mineral Stipulations for Greater Sage-Grouse Habitat**

<b>Language from Proposed Plan Amendment</b>	<b>Stipulation SG-01-NV-OG-NSO:</b> This stipulation is herein rescinded because sagebrush focal areas (SFAs) are not included in the Proposed Plan Amendment.  SFAs—Managed as NSO, without waiver, exception, or modification, for fluid mineral leasing (oil, gas, and geothermal)
<b>Objective</b>	To protect Greater Sage-Grouse habitat within the SFA
<b>Stipulation type</b>	Major constraint
<b>Stipulation</b>	NSO
<b>Exception</b>	
<b>Modification</b>	
<b>Waiver</b>	

**Table E-1**  
**Fluid Mineral Stipulations for Greater Sage-Grouse Habitat**

<b>Language from Proposed Plan Amendment</b>	<b>Stipulation SG-02-NV-OG-NSO:</b> Priority habitat management areas (PHMA)—Manage oil and gas resources in Nevada as NSO, with the following exceptions.
<b>Objective</b>	To protect Greater Sage-Grouse in PHMA
<b>Stipulation Type</b>	Major constraint
<b>Stipulation</b>	NSO
<b>Exception</b>	<p>The BLM State Director may grant an exception to the allocations and stipulations if one of the following applies (in coordination with NDOW, SETT, and/or CDFW):</p> <ul style="list-style-type: none"> <li>• The location of the proposed authorization is determined to be unsuitable (by a biologist with Greater Sage-Grouse experience using methods such as Stiver et al. 2015);</li> <li>• It lacks the ecological potential to become marginal or suitable habitat</li> <li>• It would not result in direct, indirect, or cumulative impacts on Greater Sage-Grouse and its habitat.</li> <li>• The proposed activity's impacts could be offset to result in no adverse impacts on Greater Sage-Grouse or its habitat, through use of the mitigation hierarchy (including voluntary mitigation as offered by a project proponent or required by a state authority) consistent with Federal law and the state's mitigation policies and programs. In cases where exceptions may be granted for projects with a residual impact, voluntary compensatory mitigation consistent with the State's management goals could be one mechanism by which a proponent achieves the RMPA goals, objectives, and exception 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 an exception. 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.</li> </ul>
<b>Modification</b>	<p>A project proposal's NEPA analysis and/or project record, and correspondence from NDOW and/or CDFW, demonstrates that any modification (shortening/extending seasonal timeframes or waiving the seasonal timing restrictions all together) is justified on the basis that it serves to better protect or enhance Greater Sage-Grouse and its habitat than if the strict application of seasonal timing restrictions are implemented. Under this scenario modifications can occur if:</p> <ul style="list-style-type: none"> <li>• A proposed authorization would have beneficial or neutral impacts on Greater Sage-Grouse.</li> <li>• Topography or other factors eliminate direct and indirect impacts from visibility and audibility to Greater Sage-Grouse and its habitat.</li> <li>• There are documented local variations (e.g., higher/lower elevations) and/or annual climatic fluctuations (e.g., early/late spring, long/heavy winter) that indicate the seasonal life cycle periods are different than presented, or that Greater Sage-Grouse are not using the area during a given seasonal life cycle period.</li> </ul> <p>Modifications are needed to address an immediate public health and safety concern in a timely manner (e.g., maintaining a road impacted by flooding).</p>
<b>Waiver</b>	The stipulation may be waived if the BLM Authorized Officer, in consultation with the NDOW or CDFW, determines that the entire leasehold is within unsuitable habitat (see exceptions above) and would not result in direct, indirect, or cumulative impacts on Greater Sage-Grouse and/or its habitat.

**Table E-1**  
**Fluid Mineral Stipulations for Greater Sage-Grouse Habitat**

<b>Language from Proposed Plan Amendment</b>	<b>Stipulation SG-02-CA-NSO:</b> PHMA—Manage fluid mineral resources (oil, gas, and geothermal) in California as NSO, with the following exceptions:
<b>Objective</b>	To protect Greater Sage-Grouse in PHMA
<b>Stipulation Type</b>	Major constraint
<b>Stipulation</b>	NSO
<b>Exception</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Modification</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Waiver</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Language from Proposed Plan Amendment</b>	<b>Stipulation SG-02-NV-GEOT-NSO:</b> PHMA—Manage Nevada geothermal resources as NSO, with the following exceptions.
<b>Objective</b>	To protect Greater Sage-Grouse habitat in PHMA
<b>Stipulation type</b>	Major constraint
<b>Stipulation</b>	NSO
<b>Exception</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Modification</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Waiver</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Language from Proposed Plan Amendment</b>	In PHMA in California only, limit the density of energy and mining facilities during project authorization to an average of one type of energy per mineral facility per 640 acres.
<b>Objective</b>	To protect PHMA and the life history needs of Greater Sage-Grouse from habitat loss and Greater Sage-Grouse populations from disturbance and limit fragmentation in PHMA. This would be implemented as a lease notice associated with new leases, in addition to the NSO stipulations. This would be applicable only to new oil and gas leases if the exception criteria identified for the NSO stipulation above were granted.
<b>Stipulation type</b>	Lease notice
<b>Stipulation</b>	Lease notice
<b>Exception</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Modification</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Waiver</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Language from Proposed Plan Amendment</b>	<b>Stipulation SG-03-TL:</b> Seasonal protection within 4.0 miles of active or pending Greater Sage-Grouse leks in general habitat management areas (GHMA)—Manage fluid mineral resources with timing limitations.
<b>Objective</b>	To protect Greater Sage-Grouse lekking habitat
<b>Stipulation Type</b>	TL
<b>Stipulation</b>	NSO would be allowed within 4.0 miles of active or pending Greater Sage-Grouse leks from March 1 through May 15.
<b>Exception</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Modification</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Waiver</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>

**Table E-1**  
**Fluid Mineral Stipulations for Greater Sage-Grouse Habitat**

<b>Language from Proposed Plan Amendment</b>	<b>Stipulation SG-04-TL:</b> Seasonal protection of Greater Sage-Grouse winter habitat from November 1 through February 28 in GHMA.
<b>Objective</b>	To protect Greater Sage-Grouse winter habitat
<b>Stipulation Type</b>	TL
<b>Stipulation</b>	NSO would be allowed in Greater Sage-Grouse winter habitat from November 1 through February 28.
<b>Exception</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Modification</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Waiver</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Language from Proposed Plan Amendment</b>	<b>Stipulation SG-05-TL:</b> Seasonal protection of Greater Sage-Grouse early brood-rearing habitat from May 15 through June 15 in GHMA.
<b>Objective</b>	To protect Greater Sage-Grouse early brood-rearing habitat
<b>Stipulation type</b>	TL
<b>Stipulation</b>	NSO would be allowed in Greater Sage-Grouse early brood-rearing habitat from May 15 through June 15.
<b>Exception</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Modification</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Waiver</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Language from Proposed Plan Amendment</b>	<b>Stipulation SG-06-TL:</b> Seasonal protection of Greater Sage-Grouse late brood-rearing habitat from June 15 through September 15 in GHMA.
<b>Objective</b>	To protect Greater Sage-Grouse late brood-rearing habitat
<b>Stipulation type</b>	TL
<b>Stipulation</b>	NSO would be allowed in Greater Sage-Grouse late brood-rearing habitat from June 15 through September 15.
<b>Exception</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Modification</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Waiver</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Language from Proposed Plan Amendment</b>	<b>Stipulation SG-08-CSU:</b> Authorizations/permits would limit noise from discretionary activities during construction, operation, or maintenance to not exceed 10 decibels above ambient sound levels at least 0.25 miles from active and/or pending leks from 2 hours before to 2 hours after sunrise and sunset during the breeding season from March 1 through May 15.
<b>Objective</b>	To protect Greater Sage-Grouse lek sites
<b>Stipulation type</b>	CSU
<b>Stipulation</b>	Authorizations/permits would limit noise from discretionary activities during construction, operation, or maintenance to not exceed 10 decibels above ambient sound levels at least 0.25 miles from active and pending leks from 2 hours before to 2 hours after sunrise and sunset during the breeding season from March 1 through May 15.
<b>Exception</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Modification</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Waiver</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>

**Table E-1**  
**Fluid Mineral Stipulations for Greater Sage-Grouse Habitat**

<b>Language from Proposed Plan Amendment</b>	<b>Stipulation SG-9-CSU:</b> In all Greater Sage-Grouse HMA, the BLM would apply lek buffer distances, as recommended in the United States Geological Service Report Conservation Buffer Distance estimates for Greater Sage Grouse—A Review Open File- Report 2014-1239 (Manier et al. 2014; see <b>Appendix B</b> ).
<b>Objective</b>	To protect Greater Sage-Grouse seasonal habitats
<b>Stipulation type</b>	CSU
<b>Stipulation</b>	The BLM, through project-specific NEPA analysis, would assess and address impacts from the following activities using the lower end of the interpreted range of lek buffer-distances and guidance identified in the USGS Report, <i>Conservation Buffer Distance Estimates for Greater Sage-Grouse—A Review</i> , Open File Report 2014-1239 (Mainer et al. 2014). Project-specific analysis should use the lower end of the interpreted range in the report as a guideline for effects determination, unless justifiable departures are determined to be appropriate (see below). The lower end of the interpreted range of the lek <sup>1</sup> buffer-distances is as follows: <ul style="list-style-type: none"> <li>• Linear features (roads) within 3.1 miles of leks</li> <li>• Infrastructure related to energy development within 3.1 miles of leks</li> <li>• Tall structures (e.g., communication or transmission towers and transmission lines) within 2 miles of leks</li> <li>• Low structures (e.g., fences and rangeland structures) within 1.2 miles of leks in flat or rolling terrain</li> <li>• Surface disturbance (continuing human activities that alter or remove the natural vegetation, excluding livestock grazing) within 3.1 miles of leks</li> <li>• Noise and related disruptive activities, including those that do not result in habitat loss (e.g., motorized recreation events) at least 0.25 miles from leks</li> </ul>
<b>Exception</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Modification</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Waiver</b>	Same as described above in <a href="#">Stipulation SG-02-NV-OG-NSO</a>
<b>Language from Proposed Plan Amendment</b>	<b>Stipulation SG-NV-10-CSU:</b> Nevada 3% disturbance cap protocol—New development/activity would not exceed the 3% disturbance cap protocol at either the biologically significant unit (BSU) or project scale in PHMA, unless a technical team (described under the exception) determines that new or site-specific information indicates the project could be modified to result in a net conservation gain at the BSU level.
<b>Objective</b>	To create a net conservation gain at the project and BSU level
<b>Stipulation type</b>	CSU
<b>Stipulation</b>	New development/activity would not exceed the 3% disturbance cap protocol at either the BSU or project scale, unless a technical team (described under the exception) determines that new or site-specific information indicates the project could be modified to result in a net conservation gain at the BSU level.
<b>Exception</b>	Nevada lands only—Any exceptions to the disturbance cap would be approved by the BLM Authorized Officer only with the concurrence of the BLM State Director. The BLM Authorized Officer may not grant an exception unless the NDOW, the USFWS, and the BLM unanimously find that the proposed action satisfies the conditions stated in the stipulation. Initially, the technical team would make such a finding; the team consists of a field biologist or other Greater Sage-Grouse expert from each agency. In the event the initial finding were not unanimous, the finding may be elevated to the BLM State Director, USFWS State Ecological Services Director, and NDOW Director for final resolution. In the event their recommendation is not unanimous to grant the exception, the exception would not be granted.

<sup>1</sup> Applicable to active and pending leks, as defined by NDOW and CDFW

**Table E-1**  
**Fluid Mineral Stipulations for Greater Sage-Grouse Habitat**

<b>Modification</b>	None
<b>Waiver</b>	None
<b>Language from Proposed Plan Amendment</b>	<b>Stipulation SG-CA-11-CSU:</b> California 3% Disturbance Cap—New development/activity would not exceed the 3% disturbance cap at either the BSU or project scale in PHMA.
<b>Objective</b>	To create a net conservation gain at the project and BSU level
<b>Stipulation type</b>	CSU
<b>Stipulation</b>	New development/activity would not exceed the 3% disturbance cap at either the BSU or project scale.
<b>Exception</b>	None
<b>Modification</b>	None
<b>Waiver</b>	None

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# Appendix F

*Has been removed from the Proposed RMPA/Final EIS*





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# Appendix G

Responses to Substantive Public Comments on the  
Draft EIS



# Appendix G. Responses to Substantive Public Comments on the Draft EIS

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

## G.1 RANGEWIDE COMMENT RESPONSES

### G.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 GRSG. 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.

### G.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.

### **G.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 GRSG 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 GRSG 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 [here](#) and referenced throughout the EIS. Please review the Data and Science response in this section for more information.

### **G.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.

### **G.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 [here](#) 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.

Juliussen, 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

**G.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 GRSG.

**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 GRSG.

**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 GRSG, including fragmentation. Those measures include, but are not limited to, disturbance and density caps.

### **G.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.

### **G.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.

### **G.I.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.

### **G.I.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

### **G.I.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.

### **G.I.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.

### **G.I.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.

#### **G.I.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.

#### **G.I.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 GRSG management is the implementation of mitigation actions to ameliorate the threats and impacts to 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 GRSG management is the implementation of mitigation actions to ameliorate the threats and impacts to 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.

### **G.I.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.

#### **G.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.

#### **G.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.

#### **G.1.19 Prioritization of Mineral Leasing**

**Summary:** No summary—implementation-level decision

### **G.I.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.

### **G.I.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.

### **G.I.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.

### **G.I.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 GRSG.

### **G.I.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.

### **G.I.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:** . 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 GRSG 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.

### **G.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 GRSG habitat would also conform with the goals and objectives, and planning decisions in these amendments.

### **G.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.

## **G.2 NEVADA-CALIFORNIA-SPECIFIC COMMENT RESPONSES**

### **G.2.1 Issue: Purpose and Need**

**Summary:** The purpose and need violates NEPA by attempting to align with state plans and neglecting federal consistency, resulting in a narrow scope and restricting the possible range of alternatives.

**Response:** The agency's purpose and need was carefully drawn to improve alignment with the State of Nevada's Sage Grouse Conservation Plan and California Department of Fish and Wildlife's conservation strategies, while complying with the BLM's responsibilities under FLPMA and other applicable laws and BLM policy.

**Summary:** The purpose and need differs from the 2015 EIS and should consider a new range of alternatives.

**Response:** The purpose and need for this RMPA/EIS does differ from the 2015 EIS' purpose and need. In this 2018 Final EIS, the BLM has analyzed the Management Alignment Alternative and the Proposed Plan Amendment to respond to the 2018 purpose and need.

**Summary:** A commenter expressed concern regarding credible science for the purpose and need and the lack of focus on the major threats to Greater Sage-Grouse such as habitat loss and fragmentation, wildfires, and invasive weeds.

**Response:** The major threats posed to the Greater Sage-Grouse population in Nevada and Northeastern California (wildfire and invasives) were addressed in the 2015 ARMPA, would not be affected by this plan amendment, and therefore were not further analyzed in this 2018 planning process.

**Summary:** BLM should revert to the original land use plan purpose, avoidance of an ESA listing. Any changes to the management plan should be done via minor plan amendments or plan maintenance.

**Response:** The original land use plan's purpose would not allow BLM to respond to SO 3353 or new best available science. As specified in the Draft EIS Chapter 3: Affected Environment, in certain instances (i.e. Adaptive Management for GRSG populations and updates to habitat modeling), there is now best available science that warrants the agency to re-evaluate certain decisions within the existing ARMPA via amendment not maintenance actions.



### **G.2.2 Issues Dismissed from Detailed Analysis**

**Summary:** The majority of commenters expressed concern about dismissing the issue of predators from detailed analysis. Raven protection under the Migratory Bird Treaty Act hinders predator control and GSGR conservation measures.

**Response:** The BLM will comply with all applicable laws, including the Migratory Bird Treaty Act. As such, and as stated in the Draft EIS, removing predators is outside the scope of this amendment. The BLM has authority to manage the habitat and has provided management actions (within the existing ARMPA that are not being amended in this effort) to address predation risk.

**Summary:** Where BLM lacks the authority to implement mitigation measures for hunting and predation, BLM should employ the help of other agencies and disclose the agencies and mitigation measures in the EIS and ROD.

**Response:** A footnote in the Executive Summary and Chapter 1 has been added to stress that BLM will work with agencies with predator removal and hunting authorities.

**Summary:** BLM should not dismiss the issues of Wildland Fire and Fire Management and Wild Horse and Burros and focus on management that extends beyond controlling numbers of WHB.

**Response:** The existing ARMPA already contains robust wildland fire and wild horse and burro management actions that would not be modified by the plan amendments, which is why these issues were not carried forward for additional analysis.

**Summary:** A company requested that the three percent density disturbance cap be more flexible for proposed projects in areas of anthropogenic disturbance already above the cap.

**Response:** The three percent disturbance cap was not proposed for modification, as this cap was not an alignment concern elevated by the States, and therefore does not address the purpose and need of better aligning with the State plans.

**Summary:** Few of the references in the Noise section include hypotheses or field studies relating noise impacts on GSGR; the references utilized are based on assumptions rather than data and are not easily obtainable.

**Response:** The best available science regarding noise impacts on GRSR were included in Appendix M of the 2015 ARMPA and are incorporated by reference for this DRMPA/EIS. In addition, several management actions pertaining to noise impacts were included in the 2015 ARMPA based on the best available science.

### **G.2.3 Habitat Boundary/Habitat Management Area Designations**

**Summary:** Coates et al. 2014 is not "best available science," BLM needs to use the most recent edition of this reference (2016) and field-verified data to update the Habitat Management Area boundaries. In addition, BLM should not restrict ground-truthing analysis to Stiver et al.

**Response:** The Management Alignment Alternative includes the adoption of the modeled habitat management categories based on 2016 Coates et al., and as modified by the State of Nevada, which was the basis for HMA mapping changes between the No Action and Management Alignment Alternative.

**Summary:** BLM states that maps will be updated every 3-5 years. Updates to maps should incorporate the most recent on-the-ground data and local government input. Invalid and outdated data impedes Sage-Grouse conservation.

**Response:** BLM has included local agencies (as appropriate) to the list of partners that will engage in the mapping refinement process.

**Summary:** Site-specific land use decisions should require habitat assessments by a qualified biologist and not depend on project-specific maps.

**Response:** The BLM has adopted methods in Stiver regarding site specific assessments in order to have a consistent method of assessing GRSG habitats through the use of best available science.

**Summary:** Plan amendments may be required to habitat boundary maps as new data becomes available; one commenter recommended involving the public before making any changes to maps.

**Response:** BLM has added the term “or amendment, as appropriate” to the Modifying Habitat Management Area Designations Issue within Chapter 2 for the Proposed Plan Amendment.

**Summary:** Commenters were concerned about SGMA boundary adjustments in relation to other habitat classifications, biologically significant units, and Lek Clusters as well as reliance on Coates et al. rather than State of Nevada's SGMA boundaries.

**Response:** A footnote regarding the relationship between the State of Nevada's Sage Grouse Management Areas (SGMA) and HMAs have been incorporated in Chapter 2. In addition, Figures 2-2a and 2-2b (figures depicting BSUs and lek clusters) have been updated to depict what HMAs lie within these areas.

**Summary:** One commenter requested a map of the overall Habitat Management Area.

**Response:** Maps depicting the entirety of HMAs across all land jurisdictions within the planning area can be found in Figures 1-1a and 1-1b.

**Summary:** BLM needs to acknowledge that the maps are derived from a modeling exercise, habitat classifications mapped as priority, general or other, may include areas of non-habitat by Sage-Grouse and SFA lands must not be automatically reclassified as PHMA as in the 2015 plan.

**Response:** The issue statement for Modifying Habitat Management Area Designations has been updated to include the following statement: “Need for adjusting habitat management areas so that they reflect the best available science based on continually evolving updates to habitat and use modeling (Coates et al. 2016) and are consistent with habitat management areas identified by the State of Nevada and recommended by CDFW.” Within the Management Alignment Alternative and Proposed Plan Amendment, areas previously identified as SFA would not be automatically mapped as PHMA, but would be mapped as PHMA, GHMA, and OHMA based on the habitat modeling conducted by USGS in 2016.

**Summary:** Commenters expressed concern about erroneous PHMA boundaries conflicting with county uses such as transportation and administrative access, as well as mineral exploration, property rights, livestock grazing, and recreation uses.

**Response:** Several commenters highlighted specific on-the-ground inconsistencies between local field surveys and how HMA mapping was derived (based on the modeling exercises conducted by USGS to delineate habitat management area categories, as modified by the State of Nevada). Commenters also commented on how erroneous mapping may impact certain uses that are important to counties. The Management Alignment Alternative and Proposed Plan Amendment have accounted for these inconsistencies and concerns by incorporating proposed exceptions to land use plan allocation decisions tied to PHMA, GHMA, and OHMA (see Chapter 2 – Allocation Exception Process).

**Summary:** A commenter requested that BLM consider area north of the Thacker Pass project for priority habitat classification, claiming site surveys show no Sage-Grouse in the Thacker Pass Project area.

**Response:** Several commenters highlighted specific on-the-ground inconsistencies between local field surveys and how HMA mapping was derived (based on the modeling exercises conducted by USGS to delineate habitat management area categories, as modified by the State of Nevada). Commenters also commented on how erroneous mapping may impact certain uses that are important to counties. The Management Alignment Alternative and Proposed Plan Amendment have accounted for these inconsistencies and concerns by incorporating proposed exceptions to land use plan allocation decisions tied to PHMA, GHMA, and OHMA (see Chapter 2 – Allocation Exception Process).

**Summary:** Commenters requested that BLM re-designate OHMA and GHMA acres conflicting with transportation corridors within the Clark Project site through plan maintenance.

**Response:** Several commenters highlighted specific on-the-ground inconsistencies between local field surveys and how HMA mapping was derived (based on the modeling exercises conducted by USGS to delineate habitat management area categories, as modified by the State of Nevada). Commenters also commented on how erroneous mapping may impact certain uses that are important to counties. The Management Alignment Alternative and Proposed Plan Amendment have accounted for these inconsistencies and concerns by incorporating proposed exceptions to land use plan allocation decisions tied to PHMA, GHMA, and OHMA (see Chapter 2 – Allocation Exception Process).

**Summary:** Commenters requested further explanation in the preferred alternative as to the habitat management area designations not constituting a land use plan decision.

**Response:** Several commenters highlighted specific on-the-ground inconsistencies between local field surveys and how HMA mapping was derived (based on the modeling exercises conducted by USGS to delineate habitat management area categories, as modified by the State of Nevada). Commenters also commented on how erroneous mapping may impact certain uses that are important to counties. The Management Alignment Alternative and Proposed Plan Amendment have accounted for these inconsistencies and concerns by incorporating proposed exceptions to land use plan allocation decisions tied to PHMA, GHMA, and OHMA (see Chapter 2 – Allocation Exception Process).

**Summary:** BLM should grant allocation exceptions when the agency is provided with field-verified data that conflicts with Figure 2-1b and allocation exceptions should include OHMAs in addition to PHMA and GHMA classifications.

**Response:** Several commenters highlighted specific on-the-ground inconsistencies between local field surveys and how HMA mapping was derived (based on the modeling exercises conducted by USGS to delineate habitat management area categories, as modified by the State of Nevada). Commenters also commented on how erroneous mapping may impact certain uses that are important to counties. The Management Alignment Alternative and Proposed Plan Amendment have accounted for these inconsistencies and concerns by incorporating proposed exceptions to land use plan allocation decisions tied to PHMA, GHMA, and OHMA (see Chapter 2 – Allocation Exception Process).

**Summary:** BLM must clarify connectivity of PHMA and GHMA populations.

**Response:** Connectivity was a criteria that USGS considered during its modeling efforts of HMAs.

**Summary:** Describing the loss of one million acres of PHMA as a minor action in impacts of the Management Alignment Alternative section is subjective.

**Response:** Given the magnitude of overall acres designated as PHMA, GHMA, and OHMA in the planning area, the decreases (and increases) in acres between the two alternatives is considered minor.

#### **G.2.4 Sagebrush Focal Area Designations**

**Summary:** Include new language regarding the District's Court Order about SFAs.

**Response:** Language regarding the District's Court Order about SFAs has been added to the summary statements contained in the executive summary, Chapter 1, and Chapter 2.

**Summary:** The Draft EIS needs to clarify that the SFA would be managed according to actual habitat characteristics based on site-specific, on-the-ground habitat data and not be automatically designated as a PHMA.

**Response:** Within the Management Alignment Alternative and Proposed Plan Amendment, areas identified as SFA in the No Action Alternative will be managed based on their underlying HMA designations as identified in the USGS 2016 map (as modified by the State of Nevada). They will not be automatically designated as PHMA.

**Summary:** The BLM should reconsider withdrawal of SFAs as these areas included 2.7 percent of leks, which is significant for a species on the decline.

**Response:** On October 11, 2017, the proposed withdrawal for SFAs was cancelled (82 *Federal Register* 47248) as explained in [Section 1.1 and 2.3.2 of the EIS]. The recommendation to withdraw SFAs would now inconsistent with the rationale for canceling the proposed withdrawal. The No Action Alternative did analyze the recommendation to withdraw these areas as captured in Chapter 4 of the Draft EIS, which incorporated by reference analysis from the 2015 Final EIS and 2016 SFA Withdrawal Draft EIS.

**Summary:** Withdrawing the SFAs and allowing mining uses will increase the risk of invasive plant colonization.

**Response:** Direct, indirect, and cumulative effects (such as those related to the increased risk from invasive plants) associated with the action to withdraw or not to withdraw SFAs was included in the proposed SFA Withdrawal Draft EIS, which was incorporated by reference in the Draft EIS.

**Summary:** BLM must remove all reference to SFAs. SFAs are an overreach and unnecessary as priority habitat designations provide adequate habitat protection.

**Response:** The Management Alignment Alternative, as well as the Proposed Plan Amendment would remove the SFA designation (see page 2-8 of the Draft EIS) and manage those lands based on their underlying HMA designations.

**Summary:** SFAs are inconsistent with County management plans and violate the multiple use mandate of FLPMA by conflicting with County land uses.

**Response:** On March 31, 2017, the United States District Court for the District of Nevada held that the BLM violated the National Environmental Policy Act (NEPA) by failing to prepare a supplemental EIS for the designation of SFA in the Nevada and Northeastern California Greater Sage-Grouse Resource Management Plan Amendment in Nevada. This RMPA/EIS responds to the Court's order by evaluating the SFA designation in the No-Action Alternative and providing the public with an opportunity to review and comment on that evaluation.

**Summary:** SFA removal should be considered in the No Action Alternative in addition to the Preferred Alternative.

**Response:** On March 31, 2017, the United States District Court for the District of Nevada held that the BLM violated the National Environmental Policy Act (NEPA) by failing to prepare a supplemental EIS for the designation of SFAs in the Nevada and Northeastern California Greater Sage-Grouse Resource Management Plan Amendment in Nevada. This RMPA/EIS responds to the Court's order by evaluating the SFA designation in the No-Action Alternative and providing the public with an opportunity to review and comment on that evaluation.

### **G.2.5 Habitat Objectives**

**Summary:** Objectives and goals need to be more explicit.

**Response:** The purpose of the DRMPA/EIS is to adhere to SO orders 3353 & 3355 while ensuring protections for the GRSG. The majority of the goals and objectives outlined in the 2015 ARMPA would not be modified through the Management Alignment Alternative or Proposed Plan Amendment, as these alternatives specifically address the seven planning issues within the Draft RMPA/EIS.

**Summary:** Habitat objectives restricting livestock grazing need to be more flexible. One commenter requested removal or modification of MG LD 5, 6, 8, and 10 from Objective SSS I in relation to permitted livestock grazing.

**Response:** The habitat objectives do not restrict livestock grazing. Land Health Standards remain the primary tool for managing livestock grazing. All habitat objectives are based on ecological site potential and descriptions. Through plan clarification (as specified in the Draft EIS, Chapter 1), Management Decision LG 5 (and references to this management decision in Management Decisions LG 6 and 10 would be removed), as Management Decision LG 5 is not consistent with existing BLM grazing regulations (43 CFR 4160.1).

**Summary:** Indicators for grass height should be re-evaluated to ensure the heights analyzed in the referenced studies are accurately correlated with nest success.

**Response:** BLM used the best available local science and worked in coordination with State agencies, USFWS, FS and USGS to develop the most appropriate indicators and metrics. All citations are referenced in Table 2-2 of the ARMPA. Within the Management Alignment Alternative and Proposed Plan Amendment, the habitat objectives table (Table 2-2) would be revised to incorporate best available science in coordination with representatives from the SETT, USFWS, NDOW, CDFW, USFS, USGS, University of Nevada, Reno (UNR), University of California, appropriate local agencies, and BLM. The team would review and incorporate the best available science and would recommend adjustments based on regionally and locally derived data.

**Summary:** Add a bullet to read "Clarify that Habitat Objectives are actually desired outcomes expressed as goals (not truly objectives) consistent with BLM Planning Handbook (H- 1601-1) p. 12."

**Response:** Within the Management Alignment Alternative and Proposed Plan Amendment, the Habitat Objectives table in the 2015 Final EIS would be implemented following this guidance: "The Habitat Objectives table in the 2015 Final EIS are desired habitat conditions that are broad goals based on habitat selection that may not be achievable in all areas. Objectives should be based on sources such as ecological site descriptions, associated state-and-transition models."

### **G.2.6 Issue: Adaptive Management**

**Summary:** BLM's adaptive management procedures are not effective at preventing or minimizing wildfire risks; procedures should focus on pre-fire measures to reduce risks, such as reducing fuel loads.

**Response:** Within the Proposed Plan Amendment, BLM has incorporated changes to the Adaptive Management Strategy (Appendix D) presented in the Draft EIS to align with the State of Nevada's Adaptive Management Strategy that was adopted by the State's Sagebrush Ecosystem Council on July 17 and August 30, 2018. The revised strategy now includes "fire risk" as one of the habitat warnings that will be assessed twice a year through this adaptive management strategy.

**Summary:** Provisions in the adaptive management protocols in Appendix D cannot be applied to mineral projects because they are not consistent with claimants' rights per FLPMA and the U.S. Mining Law.

**Response:** BLM will address valid existing rights under FLPMA and the 1872 Mining Law during site specific NEPA and project analysis.

**Summary:** The Draft EIS lacks a list of specific actions BLM would take when hard triggers are reached. The EIS should contain metrics by which conservation success can be measured.

**Response:** The No Action Alternative’s adaptive management strategy included a list of hard trigger responses in the form of new land use plan allocation decisions, found in Table J-1 and J-2 of the ARMPA. The Management Alignment Alternative and Proposed Plan Amendment would replace these immediate hard trigger responses with a collaborative process (which would include federal, state, and local agencies) to identify population triggers and habitat warnings, identify causal factors, recommend appropriate management responses, and monitor those responses to see if they are effective in responding to the causal factors associated with the population or habitat decline.

**Summary:** There are inconsistencies between Appendix J from the 2015 Final EIS and Appendix D in the 2018 Draft EIS, which appears to be a re-write of Appendix J.

**Response:** Changes to the Adaptive Management Strategy (Appendix D) as presented in the ARMPA would be made to align with the State of Nevada’s Adaptive Management Strategy that was adopted by the State’s Sagebrush Ecosystem Council on July 17 and August 30, 2018. This alignment corresponds with the planning effort’s overall purpose and need, which 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 conservation measures and with DOI and BLM policy.”

**Summary:** The No Action Alternative is inexplicit regarding removing “triggered” allocation decisions and the preferred alternative does not contain a strong threshold to gauge success of GRSG in the area.

**Response:** Appendix D (Adaptive Management Strategy) as presented in the Management Alignment Alternative in the Draft EIS and as presented in the Proposed Plan Amendment includes a section titled “*Longevity of Trigger Responses (Removing the Trigger Response)*,” which outlines a collaborative process (which would include federal, state, and local agencies) to evaluate when it is appropriate to remove a trigger response. Within the Management Alignment Alternative and Proposed Plan Amendment, the use of immediate “land use plan allocation” responses to a hard trigger would be removed.

**Summary:** BLM should involve appropriate Federal, State and local agencies, stakeholders and local universities in the Adaptive Management planning process, including monitoring and causal factor analysis.

**Response:** As specified in the updated Management Alignment Alternative and Proposed Plan Amendment’s Adaptive Management Strategy (Appendix D), an “Adaptive Management Response Team (AMRT)” would be established to assist with identifying causal factors, recommending appropriate management responses, implementing those responses, and monitoring them for effectiveness. The AMRT would include federal, state and local agencies and partners (including but not limited to local area conservation groups, grazing permittees, and other affected authorized land users).

**Summary:** An organization requests that the Adaptive Management strategy of the State be fully implemented, whereas a commenter believes use of the State’s strategy lacks detailed analysis and public input.

**Response:** Within the Proposed Plan Amendment, BLM has incorporated changes to the Adaptive Management Strategy (Appendix D) presented in the Draft EIS to align with the State of Nevada’s Adaptive Management Strategy that was adopted by the State’s Sagebrush Ecosystem Council on July 17

and August 30, 2018. Any implementation action taken on behalf of this strategy would require some level of site-specific NEPA, which will include a public participation component.

**Summary:** A County suggests removal of hard and soft triggers unless a more robust, scientific justification can be provided for their use.

**Response:** The recommendation to remove all soft and hard triggers would be outside the scope of this planning effort.

**Summary:** In Appendix D, page 4, what are the implications if triggers are not identified within the stated time frame?

**Response:** Appendix D includes a set of timelines as to when BLM (in collaboration with federal, state, and local agencies and partners) would conclude various steps outlined in the adaptive management strategy. Not abiding by these deadlines may result in continued population and/or habitat declines if baseline conditions continue without implementing appropriate management responses to respond to those conditions.

**Summary:** The following questions should be added to Appendix D: What is the appropriate causal factor analysis area and response area? Is recovery of the habitat and/or population(s) achievable? What are the appropriate (implementable at an appropriate scale and on an appropriate timeframe) responses (management actions) and the anticipated results of such responses? What is the monitoring protocol, responsibilities and reporting requirement associated with each response? What are the anticipated adaptive management changes to the initial responses if they don't achieve desired outcomes?

**Response:** As specified in Appendix D of the Proposed Plan Amendment, the appropriate scales used to analyze population triggers and apply management responses are at the individual lek, lek cluster, and biologically significant units (BSU). Adaptive management responses would only apply to habitat management areas (HMAs), which includes Priority, General and Other HMAs within these scales. Habitat adaptive management warnings and triggers would be analyzed only at the lek cluster scale. The assessment of GRSG population and habitat conditions, determination of causal factors, identification of appropriate management responses, implementation of those responses, and monitoring the effectiveness of those responses are captured in steps 1-5 of Appendix D.

**Summary:** The best adaptive management BLM can use is to abandon amendments and fully implement the 2015 plans.

**Response:** Abandoning this planning effort and not incorporating modification to the existing adaptive management strategy (Appendix D) would not be consistent with the effort's purpose and need, which 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 conservation measures and with DOI and BLM policy."

**Summary:** There must be a focus on individual allotments through Allotment Management Plans (AMPs) to complete ecological inventories.



**Response:** If developing an allotment management plan is a recommended management response to respond to a causal factor, individual allotment ecological inventories would be considered during this process.

### G.2.7 Mitigation

**Summary:** Compensatory mitigation on public lands is not consistent with FLPMA and specifically prohibits impairment of a claimant's rights under the Mining Law of 1872. The "net conservation gain" standard should be removed in the Final EIS.

**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 GRSG management is the implementation of mitigation actions to ameliorate the threats and impacts to 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:** How will net conservation gain be accomplished if projects with valid existing rights move forward with mitigation efforts that are not commensurate with direct, indirect, cumulative, and permanent impacts?

**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 net gain 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:** A company requested that the Sage-Grouse Bank Enabling Agreement (March 2015) be referenced and utilized to calculate impacts and 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.

**Summary:** The BLM needs to better define “net conservation gain” and how it will base measures on a consistent basis. If BLM doesn’t have the authority to require mitigation for certain land uses, then it must disclose that.

**Response:** The BLM remains committed to achieving the planning-level management goals and objectives identified in this RMPA, including achieving a net gain in conservation (consistent with the State of Nevada’s sage-grouse management plan) at the landscape-level by ensuring sage-grouse habitat impacts are addressed through implementing mitigating actions (avoid, minimize, reduce, replace or compensate) in combination with other management actions across all lands. The BLM also recognizes that Greater Sage-Grouse is a state-managed species. Accordingly, the agency is coordinated with the State of Nevada 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 public lands. The MOA will likely incorporate the State’s policies, authorities and programs for Greater Sage-Grouse conservation and describes how BLM will include the avoidance, minimization, and other recommendations from the State, being 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.

**Summary:** Change “net conservation gain” to “equivalent number of functional habitat acres” or “no net loss of habitat.”

**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 net gain 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:** The BLM should use Nevada’s Conservation Credit System (CCS) as a methodology for developing mitigation options and if it does not then clarify how this RMPA aligns with the State Plan. BLM should require mitigation in all three habitat types (PHMA, GHMA, and OHMA) as expressed in the State plan.

**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.

**Summary:** The BLM should clarify what mitigation standards it can implement and when it can require mitigation. Language should be added to acknowledge BLM's authority to require mitigation in case-specific circumstances and explanation of "criteria exemptions."

**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 GRSG management is the implementation of mitigation actions to ameliorate the threats and impacts to 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:** BLM should make explicit in Appendix F mitigation activities occurring at federal and state levels respectively, mitigation projects occurring outside the CCS, and utilization of HQT to quantify impacts of anthropogenic disturbances.

**Response:** Appendix F has been removed in the Proposed Plan Amendment, as it is no longer applicable under current policy and regulation. However, BLM has made it explicit in Chapter 2 for the Proposed Plan Amendment that "when authorizing third-party actions that would result in direct, indirect, or cumulative impacts on Greater Sage-Grouse or their habitat, the BLM would require those impacts to be quantified using the most current version of the State of Nevada's Habitat Quantification Tool (HQT) to ensure consistency in tracking/reporting changes to Greater Sage-Grouse habitat quality and quantity."

**Summary:** BLM must, through a supplemental EIS or other means of information, evaluate the impacts of IM 2018-093, which prohibits BLM from utilizing compensatory mitigation.

**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:** Commenters expressed concern regarding the costs associated with mitigation.

**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 GRSG management is the implementation of mitigation actions to ameliorate the threats and impacts to 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:** A commenter requested a public comment period to discuss how BLM should consider and implement mitigation in respect to GRSG and alternative approaches to compensatory mitigation.

**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.

### **G.2.8 Exceptions/ Variances from Non-Fluid Mineral Sage-Grouse Restrictions**

**Summary:** In the Draft EIS Table 2-2, page 2-12, BLM should revise language regarding exceptions and better define criteria to avoid loopholes and generalizations. Evaluate proposed exceptions transparently with public input. Definitions should include habitat fragmentation, mining exemption criteria, ecological potential criteria, HQT, de minimus impacts, and valid existing rights.

**Response:** Within the Management Alignment Alternative and Proposed Plan Amendment, all authorizations subject to use of an allocation exception would still be required to conduct a site specific NEPA analysis, which would include a public participation component. It is also important to note that allocation exception would be required to be approved by the BLM's Nevada and/or California State Director.

**Summary:** The No-Action Alternative fails to provide exceptions for county emergency response, issues related to public health and safety, and county administrative functions.

**Response:** While not contained within the No Action Alternative, the Management Alignment Alternative and Proposed Plan Amendment would include allocation exceptions associated with authorizations that address public health and safety and routine administrative function conducted by State or local governments.

**Summary:** Commenters suggested that one-time exceptions be used for oil and gas leases and that FWS submit information for consideration before granting waivers, exceptions, and modifications.

**Response:** Within the Management Alignment Alternative and Proposed Plan Amendment, one-time exceptions would be replaced with simplified allocation exceptions applicable to all allocations, not just those associated with No Surface Occupancy. In addition, the BLM is not required to conduct Section 7 consultation for species that are not listed or a candidate under the Endangered Species Act. However, the BLM does and will continue to coordinate with the USFWS on projects and conservation activities conducted in the planning area.

**Summary:** One organization requested that there be a conservation net gain wherever there is geothermal, salable minerals, oil and gas, or wind energy development under the No-Action Alternative and Preferred Management Alignment

**Response:** On July 24, 2018, the Bureau of Land Management issued Instruction Memorandum (IM) 2018-093, Compensatory Mitigation. As outlined in the IM, 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 public lands. As such, the BLM has also determined that requiring compensatory mitigation to achieve a “net conservation gain” is inconsistent with the agency’s authority under FLPMA. Therefore, the BLM has revised the proposed plan amendment to align with existing policy and regulation by removing the net conservation gain standard and any requirements for mandatory compensatory mitigation.

### G.2.9 Seasonal Timing Restrictions

**Summary:** The No Action and Management Alignment Alternative do not include exceptions in seasonal timing restrictions for emergency actions and response, road maintenance, human health and safety, or activities within a buffer of leks.

**Response:** The Management Alignment Alternative and Proposed Plan Amendment include a waiver to modify (in coordination with NDOW and/or CDFW) the seasonal timing restriction dates if “modifications are needed to address an immediate public health and safety concern in a timely manner (e.g., maintaining a road impacted by flooding).” In response to comments, an additional exception would also be added to the Proposed Plan Amendment to modify seasonal timing restriction dates if a “proposed action would be determined a routine administrative function conducted by State or local governments, including prior existing uses, authorized uses, valid existing rights and existing infrastructure (i.e. rights-of-way for roads) that serve such a public purpose.”

**Summary:** The Management Alignment Alternative lacks an explanation of where seasonal restrictions should be and only differs from No Action Alternative to allow modification of seasonal restriction dates if the project serves to enhance GSGR habitats.

**Response:** In response to comments, seasonal habitats have been defined in the Final EIS’ Glossary. Due to the fact that seasonal habitats fluctuate over time and include site-specific coordination with NDOW and CDFW to determine their adequacy at the time an authorization is being proposed and analyzed, seasonal habitat areas were not mapped in this RMPA. In addition, seasonal timing restriction dates (within the Proposed Plan Amendment) would include waivers associated with public health and safety concerns and routine administrative functions conducted by State and local governments.

**Summary:** Seasonal timing restrictions are overly restrictive for grazing; dates should be specific to each grazing allotment and flexible depending on annual weather conditions.

**Response:** Seasonal restrictions would be evaluated through the site specific livestock grazing permit renewal process.

**Summary:** Travel necessary for mineral purposes cannot be restricted by seasonal times per mining rights under the U.S. Mining Law.

**Response:** Any restrictions (including seasonal timing restrictions) are subject to valid existing rights and all federal laws and mandates, including the 1872 Mining Law.

### **G.2.10 Lek Buffers**

**Summary:** Lek buffers are not fully analyzed nor provided for public review. A SEIS should be completed unless BLM believes the issue was properly analyzed, in which case previous analysis needs to be cited.

**Response:** The analysis contained in the 2015 Final EIS (Section 4.4 through Section 4.21), which was incorporated by reference in the 2018 Draft EIS, included analysis that was appropriate at a land use planning level, considering the impacts to Greater Sage-Grouse and various programs and resources from the implementation of entire alternatives, not solely on individual management prescriptions contained within them. The lek buffer appendix (Appendix B) through clarification (plan maintenance) has been slightly modified to clarify that lek buffer distances are not to be “applied” as a land use plan allocation, but rather used as a tool to assess and address impacts at the project specific NEPA level.

**Summary:** The current plan identifies a restriction of development within 3.0 miles from the perimeter of occupied leks but a standard calls for the complete restriction on land use for infrastructure throughout the PHMA.

**Response:** As outlined in Appendix B, the lower interpreted range of lek buffer distances vary for roads, fences, infrastructure, etc. These distances were derived from *USGS Report Conservation Buffer Distance Estimates for Greater Sage-Grouse – A Review (Open File Report 2014- 1239)*. The commenter’s reference to a “standard” that imposes a complete restriction on land use for infrastructure throughout the PHMA is not consistent with any proposed management action in the No Action or Management Alignment Alternative.

**Summary:** Addition of the 1.2-mile buffer zone for fences was not supported by USGS’ Open File Report; this buffer only applies for flat or rolling terrain.

**Response:** BLM has made the clarification in Appendix B that low structures (e.g., fences, rangeland structures) within 1.2 miles of leks are subject to modification only within areas of flat and rolling terrain.

**Summary:** Language in the Lek Buffers section should be revised to state that BLM will utilize general lek buffer distances and guidance identified in the USGS Open File Report 20141239 to establish the evaluation area around leks used to identify impacts.

**Response:** BLM has made the clarification in Appendix B that the BLM, “through project specific NEPA analysis, will assess and address impacts from the following activities using the lower end of the

interpreted range of lek buffer-distances and guidance identified in the USGS Report Conservation Buffer Distance Estimates for Greater Sage-Grouse – A Review (Open File Report 2014-1239).”

**Summary:** A commenter believes that the lek buffers are rigid, distance-based, one-size-fits-all measures and the restrictions have the potential to put millions of acres of land off-limits to multiple use.

**Response:** One set lek buffer distance for all types of authorizations is not appropriate and the BLM (through Appendix B) recognizes this, which is why the interpreted ranges for lek buffer distances between various types of actions differ (e.g. 1.2 miles for low structures and 3.1 miles for linear features). In addition, Appendix B also allows for justifiable departures from these distances to address this flexibility concern.

**Summary:** BLM should eliminate the lek buffer zone restrictions in Appendix B. Once the lek breeding season is over for the year, the lek buffer restrictions should not apply.

**Response:** Considering impacts to leks only during the breeding season does not coincide with best available science, such as the USGS Report Conservation Buffer Distance Estimates for Greater Sage-Grouse – A Review (Open File Report 2014-1239).

**Summary:** Site characteristics, including landscape features such as topography, must be considered in the lek buffer zone determination.

**Response:** BLM has included the term “topography” in the following clarifying statement within Appendix B: “Justifiable departures to decrease or increase from these distances from the lek where impacts are anticipated, based on local information and data, best available science, landscape features (i.e., topography), and other existing protections (e.g., land use allocations, state regulations), or factors reducing visibility and audibility may be appropriate.

**Summary:** Any restrictions that are warranted to protect occupied leks during the breeding season must respect claimants' rights under the U.S. Mining Law and related land use policies.

**Response:** All proposed actions contained in RMPA will be subject to valid existing rights, including those associated with the 1872 Mining Law.

**Summary:** Lek buffers must be developed in conjunction with local knowledge of GRSG seasonal movements and population responses to management actions. For the Nevada LUPA, apply changes to lek buffers as new information and science becomes available.

**Response:** If justifiable departures to lek buffer distances are warranted at the site specific scale, local information and data (as specified in Appendix B) would be considered.

**Summary:** A commenter requested that BLM extend the lek buffers beyond 2 miles to reduce the effects of indirect impacts.

**Response:** Lek buffer distances can be increased or decreased (as specified in Appendix B) and would be analyzed on a site specific project basis.

**Summary:** A County requested that BLM allow regular administrative and emergency services within lek buffer areas when required.

**Response:** Allowing regular administrative and emergency services within lek buffer areas would be considered on site specific project basis.

### **G.2.11 Required Design Features**

**Summary:** It should not be the responsibility of the applicant to identify appropriate RDFs. Rather it should be the BLM field office personnel who examine a project and select appropriate RDFs

**Response:** The responsibility of identifying appropriate RDFs will be conducted internally by a BLM interdisciplinary team working on the NEPA analysis associated with a specific project. However, BLM may wish to work with third party applicants in completing this worksheet for the project.

**Summary:** A commenter suggested specific revisions to items and language in Appendix C.

**Response:** Various modifications to Appendix C: Required Design Features were made based on commenters feedback. These changes are highlighted in gray text in Appendix C.

**Summary:** The Draft EIS states that no allocation decisions are tied to OHMA but the Required Design Features worksheets show that they are applicable to OHMA. Please clarify.

**Response:** BLM has corrected Chapters 2 and 4, clarifying that some land use plan allocation decisions (such as those associated with land tenure) do apply to OHMA. RDFs would also be applied to OHMA.

**Summary:** Many of the RDFs are not applicable to non-discretionary activities pursuant to the U.S. Mining Law and should be modified to not prevent mineral development.

**Response:** All proposed actions (including application of RDFs) contained in the RMPA will be subject to valid existing rights, including those associated with the 1872 Mining Law.

**Summary:** A commenter believes the RDF perch deterrents will increase operation and maintenance costs and time spent in the field which would lead to increased disturbance on GRSG from maintenance crews.

**Response:** One of three reasons to justify the departure from implementing a specific RDF for a particular project (provided in Appendix C) is if “a specific RDF will provide no additional protection to GRSG or its habitat.” In the event the NEPA analysis for a site specific project suggests that through the application of the RDF, more disturbances are projected, then this can be documented within the project file through the use of the RDF worksheet and specified in the project’s NEPA document.

**Summary:** A commenter requested removal of RDF GEN 10 from the RMPA because there is no evidence provided in the document to support a provision to minimize the impacts of livestock windmills or pump jacks on Sage-Grouse habitat.



**Response:** In the event that RDF GEN 10 is determined not to be effective in providing additional protections to GRSG, this can be documented on the RDF worksheet (Appendix C) and the RDF would not be required.

**Summary:** Fences are not considered tall structures and there is no evidence that fences create additional perches for avian predators. BLM should update fence standards based on the NRCS fence standards and specifications.

**Response:** In the event that an alternative RDF is determined to provide equal or better protection for GRSG or its habitat (through the use of other design features, such as fence standards outlined by NRCS), then this can be documented on the RDF worksheet (Appendix C) and the RDF would not be required.

**Summary:** A commenter requested the EIS disclose the metrics used in RDF determination for types of actions to be proposed in PHMA and GHMA designated lands.

**Response:** For the Management Alignment Alternative and Proposed Plan Amendment, Appendix C would be the appropriate matrix used to document application or departures from the application of RDFs in PHMA, GHMA, and/or OHMA.

**Summary:** BLM should keep “no surface occupancy” stipulations in place to protect habitat from drilling activities and geothermal development.

**Response:** Within the Management Alignment Alternative (Proposed Plan Amendment), the BLM has retained the no surface occupancy (NSO) stipulation (open with major stipulations) for PHMA. This stipulation did not change from the No Action Alternative (2015 ARMPA), however, the criteria for waiving, excepting, or modifying this stipulation has been simplified in the Proposed Plan Amendment, as described in Chapter 2.

### G.2.12 Fire and Invasive Species

**Summary:** The Final EIS should quantify the acreage that burned in each type of HMA and explain how, if at all, the impacts of fire were factored into the modified HMA designated boundaries. The EIS should also clarify whether the burned lands in the PHMA or GHMA would retain their existing designations or would no longer be designated as PHMA or GHMA.

**Response:** BLM has incorporated the acres burned between 2015-2017, split up by specific habitat management areas (PHMA: 357,805; GHMA: 400,534; OHMA: 373,347) in Chapter 3 of the Final EIS. Areas of PHMA, GHMA, and OHMA that have burned would still maintain their designations until a future amendment or plan maintenance action is conducted, following the process specified in Chapter 2. Existing designations of HMAs are based on modeling efforts conducted by USGS (Coates et. al. 2016) and as modified and approved by the State of Nevada. The modeling of habitat management areas conducted by USGS is derived from: (1) adding radio and GPS telemetry locations; (2) integrating output from high resolution maps (1–2 m<sup>2</sup>) of sagebrush and pinyon-juniper cover; (3) modifying the spatial extent of the analyses to match newly available vegetation layers; (4) explicit modeling of relative habitat suitability during three seasons (spring, summer, winter); (5) accounting for differences in habitat availability between more mesic sagebrush steppe; (6) integrating the three seasonal maps into a composite map of annual relative habitat suitability; (7) deriving updated land management categories

based on previously determined cut-points for intersections of habitat suitability and an updated index of sage-grouse abundance and space-use (AUI); and (8) masking urban footprints and major roadways out of the final map. For more detailed info please see Coates et al. 2016: [products.https://pubs.er.usgs.gov/publication/ofr20161080](https://pubs.er.usgs.gov/publication/ofr20161080). It is possible that the removal of sagebrush from 2015 to 2016 were reflected in the updated vegetation layers which could have reduced the suitability of those areas that burned from 2015-2016.

**Summary:** Wildfire management should be addressed in the RMPA/EIS, not just in a PEIS. BLM should provide funding for management that includes reduction of fuel loads, pre-suppression techniques, and post fire rehabilitation.

**Response:** The 2015 ARMPA included management actions associated with addressing the threats to wildfire and invasives, which are not being modified through this land use planning effort. However, fire risk has been included as an adaptive management warning for sage grouse habitat within Appendix D, consistent with the adaptive management strategy contained in the State of Nevada's Sage Grouse Conservation Plan (2014 as amended). Funding associated with implementation level activities is outside the scope of this planning effort.

**Summary:** Many commenters requested use of managed livestock grazing as a means of reducing fuel loads and affirmed that restricting grazing will increase vegetative fuel loads and increase wildfires.

**Response:** Restricting livestock grazing (specific to identifying areas as unavailable to livestock grazing) is not analyzed or incorporated in the RMPA. In addition, use of managed livestock grazing as a means of reducing fuel loads (targeted grazing) is a tool that BLM can implement and would not be prevented based on the provisions in any of the alternatives analyzed in this planning effort.

**Summary:** BLM needs to address the threat of invasive plant species as well as sagebrush and other shrub encroachment in fire management considerations.

**Response:** Management prescriptions associated with reducing invasives was analyzed and discussed in the 2015 Final EIS and have been incorporated by reference in the DRMPA.

**Summary:** Priorities for re-establishment of sagebrush cover should be re-evaluated with "recently burned native areas" receiving first consideration.

**Response:** Considering priorities for re-establishment of sagebrush cover is outside the scope of this planning effort.

### **G.2.13 Outcome Based Grazing**

**Summary:** Fuel load levels across the sub-region are a prominent threat to sage grouse and local economies. Moving forward, the BLM needs to recognize the use of livestock grazing as a tool to reduce this threat.

**Response:** BLM Nevada and California will continue to pursue outcome-based grazing initiatives that will exhibit a new management paradigm that BLM managers and livestock operators can use to establish management practices that can achieve specific management objectives that respond to changing, on-

the-ground conditions such as increased fuel loads when appropriate. This will better ensure healthy rangelands, high-quality wildlife habitat, and economically sustainable ranching operations.

#### **G.2.14 Land Health Assessments**

**Summary:** 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.

**Response:** All existing management action contained in the No Action Alternative and proposed management actions contained in the Management Alignment Alternative and Proposed Plan Amendment would not conflict with existing water rights in the State of Nevada and California.

**Summary:** Range improvements and supplemental feeding are critically important for achieving standards of rangeland health and for herd health. The LUPAs apply a negative focus on range improvements, including but not limited to water developments and fencing.

**Response:** While range improvements would need to comply with required design features and seasonal habitat restrictions, management flexibility has been incorporated into the Management Alignment Alternative and Proposed Plan Amendment to ensure that these restrictions are appropriate to conserve Greater Sage-Grouse, while still allowing activities such as range improvements to be implemented in a timely manner.

#### **G.2.15 New Alternative**

**Summary:** A commenter suggested a new maximum GRSG protection alternative, that BLM pledge to restore GRSG habitat lost to wildfires or other events on an annual basis. Another commenter requests that the land management plans adopted in 2015 be totally replaced with the Nevada Greater Sage-Grouse Conservation Plan. All state plans should be managed federally, regardless of state boundaries.

**Response:** BLM is focused on aligning its 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 1, issues were dismissed from detailed analysis because they did not align with the State's management plan, are not consistent with Federal laws or policies, or if the alternatives were already considered and analyzed in detail during the planning process for sage grouse that concluded in 2015. In the 2015 Final EIS, a maximum GRSG protection alternative and the Nevada Greater Sage-Grouse Conservation Plan (State's Alternative) were analyzed. Requiring all existing state plans to be managed federally is outside the scope of this planning effort.

#### **G.2.16 Preferred Alternative**

**Summary:** Documents developed to implement the Obama Administration's land use plans and mitigation are no longer consistent with current policy and cannot be used for the Preferred Alternative. Specifically, landscape-scale land use restrictions based on the NTT Report such as uniform lek buffers, seasonal restrictions, noise restrictions, disturbance caps, and required design features need to be eliminated and replaced with project-specific conditions.

**Response:** The Proposed Plan Amendment has been modified to respond to the latest policies enacted by the Secretary of the Interior, including IM 2018-093: Compensatory Mitigation. The alternatives

presented in the Draft EIS and now the Final EIS also respond to the planning issues that were identified during scoping to respond to the purpose and need, which is to align with the States in regards to Greater Sage-Grouse conservation.

**Summary:** The preferred alternative should include state and local perspectives in land use planning and decision making.

**Response:** BLM appreciates the engagement from all stakeholders throughout this land use planning process and has worked closely with local governments, as well as other Federal agencies and the State of Nevada and CDFW to formulate the Management Alignment Alternative and Proposed Plan Amendment. BLM has worked with stakeholders to ensure that the preferred alternative is not only responsive to the overall purpose and need for this planning effort, but also incorporates proposed management direction that reflects local perspectives.

**Summary:** BLM cannot include elements from the alternatives in the 2015 plan into the Preferred Alternative.

**Response:** The alternatives presented in the Draft EIS and now the Final EIS respond to the planning issues that were identified during scoping to respond to the purpose and need, which is to align with the States in regards to Greater Sage-Grouse conservation. Some components from the alternatives analyzed in the 2015 Final EIS were carried forward in the Management Alignment Alternative, including the 2015 No Action Alternative and the State's Alternative.

**Summary:** The use of "net conservation gain" in this alternative needs to be updated to be consistent with the State Plan definition.

**Response:** On July 24, 2018, the BLM issued Instruction Memorandum (IM) 2018-093, Compensatory Mitigation. As outlined in the IM, 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 public lands. As such, the BLM has also determined that requiring compensatory mitigation to achieve a "net conservation gain" is inconsistent with the agency's authority under FLPMA. Because the majority of comments associated with mitigation focus on the net conservation gain standard and requirements for compensatory mitigation, the BLM has concluded that these issues have been adequately addressed through the revisions that align the proposed plan with existing policy and regulation leaving the remainder outside the scope of the current plan and BLM's authority to require compensatory mitigation.

### **G.2.17 Range of Alternatives**

**Summary:** The No Action Alternative is not consistent with FLPMA and Department of the Interior policies and does not satisfy the purpose and need of the proposed action. Because the No Action Alternative cannot be selected, the Draft EIS proposes only one alternative, violating NEPA.

**Response:** 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 SFA designations, the net conservation gain mitigation standard, uniform lek buffer zones, disturbance and density caps, rigid adaptive management triggers, and travel restrictions in the No Action Alternative/2015 LUPs are landscape-scale management provisions that are unauthorized per Congress' revocation of the Planning 2.0 Rule and violate FLPMA.

**Response:** The 2015 ARMPAs were finalized before the Planning 2.0 rule was initiated by the BLM in late 2016. In addition, SFA designations, lek buffers, and adaptive management are all issues that are being addressed within the alternatives analyzed in this land use planning process.

**Summary:** BLM should reconsider the three percent cap on anthropogenic disturbance in proposed project areas and making PHMA an avoidance area for transmission lines greater than or equal to 100kV. Both inhibit new development, which violates the U.S. Mining Law.

**Response:** Given the three percent disturbance cap exception for the State of Nevada (as described in the existing ARMPA), disturbance caps were not a component within the existing ARMPA that would need to be modified to address the overall effort's purpose and need. In addition, the allocation exception process proposed in the Management Alignment Alternative and Proposed Plan Amendment provide the needed flexibility to allow various projects to be implemented across the sub-region. Finally, all actions proposed in the Management Alignment Alternative and Proposed Plan Amendment would be subject to valid existing rights, including those pursuant to the 1872 Mining Law.

**Summary:** One organization believes the range of alternatives is insufficient and that BLM should add a conservation alternative to reduce habitat loss and population declines of GSGR.

**Response:** The range of alternatives (including the No Action Alternative and Management Alignment Alternative) is adequate to address the purpose and need for these amendments. 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:** One mining company expressed concern regarding withdrawal implications for the Wood Gulch area under the No Action Alternative.

**Response:** Removal of the recommendation to withdraw SFA from the 1872 Mining Law (which includes the Wood Gulch area) was analyzed and incorporated in the Management Alignment Alternative and Proposed Plan Amendment.

**Summary:** Why does BLM claim that reducing total acreage OHMA's by 17% under the preferred alternative is negligible?

**Response:** When considering the magnitude of change in OHMA acres between the two alternatives in the context of the overall planning area, BLM still affirms that the reduction in OHMA (which in some instances shifted acres to GHMA, which includes added land use plan allocation protection) would be negligible.

### **G.2.18 Data and Science**

**Summary:** The Draft EIS does not follow the OMB standard for peer review. Scientific research and documentation is limited in scope with repetitive authors, especially lacking in current rangeland research, bird counts, and lek data. Analysis should be modified based upon the best available information, including state and local expertise.

**Response:** BLM has followed the appropriate peer reviewed process identified by the commenter. The best available local science was included in the 2015 ARMPA and in the DRMPA. Please see the references used in the 2015 ARMPA and DRMPA. Lek data has been incorporated into both documents and many sections were developed in close coordination with local and federal partners.

**Summary:** The Final EIS should incorporate the October 2016 Mineral Potential Report and Sagebrush Mineral Resource Assessment to supplement the Affected Environment and Environmental Consequences sections for Geology and Minerals.

**Response:** The October 2016 Mineral Potential Report and Sagebrush Mineral Resource Assessment referenced by the commenter was incorporated into the analysis contained in this Draft EIS, as the December 2016 SFA Withdrawal Draft EIS was incorporated by reference in several locations of this Draft EIS and Final EIS (see Chapter 4). The October 2016 Mineral Potential Report and Sagebrush Mineral Resource Assessment were key documents used as a resources in the December 2016 SFA Withdrawal Draft EIS.

**Summary:** To adequately reduce and restrict grazing, monitoring techniques need to utilize the Nevada Rangeland Monitoring Handbook and apply trend monitoring over multiple years.

**Response:** No proposed management actions within the Draft RMPA aim to restrict or reduce livestock grazing. In addition, BLM plans to utilize the Nevada Rangeland Monitoring Handbook as a preferred tool when monitoring rangeland resources for site specific activities.

**Summary:** BLM cannot definitively claim that Sage-Grouse were abundant prior to settlement by Americans, remove reference to this from the document. Include and base analysis on the fact that Sage-Grouse peaked in the 1960's per FWS Findings.

**Response:** References to sage grouse abundance prior to the 19<sup>th</sup> Century was not specifically referenced in this Draft EIS. However, this reference was cited in the 2015 Final EIS, referencing statements from the USFWS' Notice of 12-month petition from March 2010.

**Summary:** Eighty-four percent (84%) (20/24) of the successful nest sites reported by Hagen et al. 2007 were in "marginal" or "unsuitable" habitat as described by the HAF requirements. This indicates that the HAF information most likely discloses false findings / conclusions.

**Response:** The use of HAF assessments are outside the scope of this planning effort, as the appropriate use of the HAF should be conducted at the site specific scale.

**Summary:** The references cited for the riparian functionality requirement in the HAF are not valid.

**Response:** Requirements associated with conducting HAF assessments are outside the scope of this planning effort.

**Summary:** Coates et al. 2017 arbitrarily expands Sage-Grouse habitat 10 kilometers beyond the boundaries of Population Management Units and does not account for major freeways. This reference also includes five caveats that are not disclosed in the Draft RMPA.

**Response:** Coates et al. 2017 did not delineate Greater Sage-Grouse HMAs. Coates et al. 2014 and 2016 was used to delineate HMAs. A buffer of 8.5 kilometers was added to Population Management Units which was scientifically based. HMAs delineated in Coates et al. 2014 did include major freeways; however, Coates et al. 2016 which would be adopted in the proposed plan amendment (as modified by the State of Nevada) “masked urban footprints and major roadways out of the final map product” (Coates et al. 2017). In addition, the modifications made by the State of Nevada removes a majority of the 8.5 kilometer buffer by “clipping” all HMAs that fall outside the boundaries of the Biologically Significant Units. All other “caveats” or details regarding the map modeling process can be found in the USGS reports and are included by reference.

**Summary:** Appendix D is not consistent with the hard and soft warnings provided in Coates et al. 2017. Commenters questioned the size of area used to analyze triggers.

**Response:** See response above. Appendix D is consistent with the population triggers (signals) identified by USGS however, the terminology is different. As specified in Appendix D of the Proposed Plan Amendment, the appropriate scales used to analyze population triggers and apply management responses are at the individual lek, lek cluster, and biologically significant units (BSU). Adaptive management responses would only apply to habitat management areas (HMAs), which includes Priority, General and Other HMAs within these scales. Habitat adaptive management warnings and triggers would be analyzed only at the lek cluster scale.

**Summary:** Appendix D does not explain the rationale for cut-off response actions or explain actions for areas with less than 25% sagebrush cover.

**Response:** BLM appreciates the comment. The sagebrush cover percentages (habitat triggers) have been removed from Appendix D in an effort to align with the adaptive management strategy approved by the State of Nevada’s Sagebrush Ecosystem Council on July 17 and August 30, 2018.

**Summary:** Appendix A depicts Biologically Significant Units, it is not clear how these were designated.

**Response:** A citation to Figure 2-2b (depicting BSUs for the Management Alignment Alternative and Proposed Plan Amendment) has been added, referencing Coates et al. 2017, *Hierarchical population monitoring of greater sage-grouse (Centrocercus urophasianus) in Nevada and California—Identifying populations for management at the appropriate spatial scale: U.S. Geological Survey Open-File Report 2017-1089*. BSUs under the Management Alignment Alternative and Proposed Plan Amendment are equivalent to “climate clusters” defined in Coates et al. 2017.

**Summary:** BLM does not include scientific evidence to support the claim that SFAs are the best habitat for Sage-Grouse and can only be protected by withdrawal.

**Response:** SFAs were delineated by the USFWS and adopted in the 2015 ARMPA. The MAA includes the removal of SFAs.

**Summary:** One commenter requested that BLM disclose that Sage-Grouse have not been observed or documented in the Stillwater Mountains for decades as documented in the 2001 Nevada Sage-grouse Conservation Plan.

**Response:** Habitat management areas are based, in part, on available habitat and habitat suitability. BLM and the State of Nevada have determined that PHMA, GHMA, and/or OHMA are not present in the Stillwater Mountains. See Figure 2-1b for the Management Alignment Alternative and Proposed Plan Amendment.

**Summary:** Table I-1 shows acreages that total the state of Nevada, but the Planning Area in Figure I-1 excludes all or portions of some counties. In addition, the table shows Department of Energy managing 2,600 acres but BLM shapefile of 3/10/2016 shows DoE lands totaling 879,758 for the state.

**Response:** BLM has included definitions related to ecological site descriptions, ecological site potential, and State and Transition Models within the Glossary of this Final EIS. BLM will rely on its current monitoring methods and use of these tools and can consider the use of disturbance response groups. However, monitoring methods are outside the scope of this EIS.

**Summary:** One commenter suggested researching science specific to the application of ESD, State and Transition Models, and Disturbance Response Groups for proper application and implementation.

**Response:** The BLM does not refute that wild horses have increased since 2015. Wild horse & burros were not carried forward for further analysis due to the determination that this EIS/Amendment would not alter the management direction for wild horse & burros as analyzed in the 2015 ARMPA.

**Summary:** BLM cannot state that wild horse "data and information in the 2015 Final EIS" has not substantially changed. Wild horse herds in NV grow at 15-20% per year and have since 2015. Real time data is readily available from the BLM itself.

**Response:** As outlined in Chapter 3 of the Draft EIS, the BLM requested the USGS to inform the effort through the development of an annotated bibliography of 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). This report cited new science associated to impacts from discrete human activities, such as oil and gas development.

**Summary:** One commenter suggested BLM consider recent studies that confirm oil and gas development can harm both Sage-Grouse habitat and lifecycle activities.

**Response:** BLM continues and has used the best available science in developing alternatives that respond to the purpose and need for this planning effort.

**Summary:** Commenters questioned the correlations between vegetative cover and nest success due to variances in time of nest establishment and recording of vegetative heights. BLM should utilize best available science data and further analysis of references moving forward.



**Response:** BLM continues and has used the best available science in developing alternatives that respond to the purpose and need for this planning effort.

**Summary:** Commenters questioned why submitted volumes of peer reviewed scientific papers by some counties and other authored reports were omitted or ignored in the prior LUPA process and requests that BLM include the previously submitted data in the EIS.

**Response:** References submitted that were pertinent to the content outlined in the Final EIS have been added to the references. If suggested references did not correlate with the subject matter in the Final EIS or were not discussed, they were not included.

**Summary:** The LUPA failed to identify sagebrush species in accordance with standard Botanical taxonomy. The DRMP/EIS should refer to NRCS Ecological Site concepts and use technical basis provided by Cooperative Soil Survey, Ecological Site Description, and evaluation of plant communities in terms of Seral Status and State or Transition.

**Response:** While not referenced in the Draft EIS or Final EIS, the BLM wants to confirm that it does utilize NRCS Ecological Site information as well as Conservation Soil services, etc., specifically when conducting monitoring and range land health assessments.

**Summary:** BLM should be more explicit regarding criteria used to determine UUD. Who will determine UUD and when will this process occur?

**Response:** Undue and Unnecessary Degradation (UUD) is defined at 43 CFR 3809.5 and determined by an interdisciplinary team of agency specialists and is analyzed in site specific NEPA analysis. BLM utilizes 43 CFR 3809.4 to guide its assessment for determining when to take action necessary to prevent UUD under the Mining Law.

### **G.2.19 Assumptions and Methodology**

**Summary:** The Conservation Credit System (CCS) is the best tool for case-specific mitigation of human impacts on Sage-Grouse habitat. It should be validated and enabled by BLM in this review process.

**Response:** On July 24, 2018, the BLM issued Instruction Memorandum (IM) 2018-093, Compensatory Mitigation. As outlined in the IM, 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 public lands. As such, the BLM has also determined that requiring mitigation to achieve a “net conservation gain” is inconsistent with the agency’s authority under FLPMA. Therefore, the BLM has revised the proposed plan amendment to align with existing policy and regulation by removing the net conservation gain standard and any requirements for mandatory compensatory mitigation. Because the majority of comments associated with mitigation focus on the net conservation gain standard and requirements for compensatory mitigation, the BLM has concluded that these issues have been adequately addressed through the revisions that align the proposed plan with existing policy and regulation leaving the remainder outside the scope of the current plan and BLM’s authority to require compensatory mitigation.

**Summary:** Commenters asked how Nevada's Plan is related to BLM's land management plans and how the "net conservation gain" standard can be applied.

**Response:** On July 24, 2018, the BLM issued Instruction Memorandum (IM) 2018-093, Compensatory Mitigation. As outlined in the IM, 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 public lands. As such, the BLM has also determined that requiring mitigation to achieve a "net conservation gain" is inconsistent with the agency's authority under FLPMA. Therefore, the BLM has revised the proposed plan amendment to align with existing policy and regulation by removing the net conservation gain standard and any requirements for mandatory compensatory mitigation. Because the majority of comments associated with mitigation focus on the net conservation gain standard and requirements for compensatory mitigation, the BLM has concluded that these issues have been adequately addressed through the revisions that align the proposed plan with existing policy and regulation leaving the remainder outside the scope of the current plan and BLM's authority to require compensatory mitigation.

**Summary:** Retain the required use of the Habitat Quantification Tool (HQT) to avoid inconsistency and variability. It is currently unclear in the Draft EIS how often analysis will be conducted and what tool will be utilized to determine percent decline. If HQT is not utilized, the Final EIS should explain how mitigation would be quantified.

**Response:** Within the Proposed Plan Amendment, BLM has retained the management direction that when authorizing third-party actions that would result in direct, indirect, or cumulative impacts on Greater Sage-Grouse or their habitat, BLM would require impacts to be quantified using the State of Nevada's Habitat Quantification Tool (HQT) to ensure consistency in tracking/reporting changes to habitat quality and quantity.

**Summary:** One commenter requested additional details regarding the 3% disturbance cap for Biologically Significant Units and steps on how calculations were made so the results can be reproduced by different parties.

**Response:** The methods used to calculate anthropogenic disturbance levels at the BSU scale can be found within the Monitoring Framework contained in the 2015 ARMPA, at [https://eplanning.blm.gov/epl-front-office/projects/lup/21152/63239/68488/NVCA\\_Appendix\\_D\\_GRSB\\_Monitoring\\_Framework\\_.pdf](https://eplanning.blm.gov/epl-front-office/projects/lup/21152/63239/68488/NVCA_Appendix_D_GRSB_Monitoring_Framework_.pdf). Annual calculations at the BSU level are conducted by the BLM's National Operation Center annually and the results of which can be accessed on BLM's Landscape Approach Data Portal at <https://landscape.blm.gov/geoportal/catalog/main/home.page>. Much of the data used by the BLM to calculate disturbance at the BSU level is proprietary and may use different data standards for assessing certain types of disturbances, which may present challenges when third parties attempt to replicate this process. These datasets were identified by an interdisciplinary team due primarily to a regular update interval and consistent representation across the range of GRSB. Third parties wishing to replicate the process would be responsible for acquiring the necessary data licenses from the data providers identified in the Monitoring Framework.

**Summary:** BLM failed to provide support for the requirement of amending Conservation Plans; the 2015 plans have not been given adequate time for BLM to make any conclusions regarding their efficacy.

**Response:** Within the Executive Summary and Chapter 1 of the Draft EIS, BLM included a description of its purpose and need for this planning effort. BLM is also abiding by the timelines to complete this EIS, consistent with Secretarial Order 3355.

**Summary:** Monitoring schedules should be set and prioritized by the local office level on 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.

**Response:** BLM will continue to train and work with local staff to ensure monitoring is conducted at the appropriate scheduled times, consistent with existing BLM monitoring protocols.

### **G.2.20 Greater Sage-Grouse**

**Summary:** An organization requested that the EIS clearly state the presence of direct and indirect impacts resulting from anthropogenic disturbance inside Sage-Grouse Management Areas.

**Response:** BLM does acknowledge the presence of direct impacts, but also the presence of indirect impacts resulting from anthropogenic disturbance inside the PHMA, GHMA, and OHMA. This was specifically stated in the 2015 ARMPA which is incorporated by reference in the DRMPA.

**Summary:** A commenter requested that Sage-Grouse population objectives be removed from the Draft EIS.

**Response:** The Management Alignment Alternative and Proposed Plan Amendment have incorporated language in the RMPA that clarifies that “habitat objectives in the 2015 Final EIS are desired habitat conditions that are broad goals based on habitat selection that may not be achievable in all areas. Objectives should be based on sources such as ecological site descriptions, associated state-and-transition models.” In these alternatives, the BLM is retaining the habitat objectives and they may be modified following the processes outlined by the States, consistent with the purpose and need for this planning effort.

**Summary:** Wild horses negatively impact Sage-Grouse; BLM should gather excess wild horses within Sage-Grouse habitat.

**Response:** BLM will continue to work with local, state, and federal stakeholders to address the excess wild horses and burros across the sub-region.

**Summary:** Manage development on existing leases per regulations already in place. Sage-Grouse near energy development will be more difficult to conserve.

**Response:** Under the Management Alignment Alternative and Proposed Plan Amendment, oil and gas leases will be managed according to the stipulations outlined in Appendix E of the Draft EIS. BLM will also follow all existing mandates and policies associated with fluid mineral development.

**Summary:** The EIS must clearly state the benefits that Sage-Grouse receive when livestock are grazed on rangelands with Sage-Grouse habitat and include a description of how predation affects Sage-Grouse populations.

**Response:** The BLM recognizes the benefits that sage grouse receive from proper livestock grazing, which was analyzed in the 2015 ARMPA and incorporated by reference in this Draft EIS (see Section 4.11). While BLM does not have the authority to carry out certain predator control actions (such as permitting take permits), BLM is committed to working with partners who do, particularly in degraded habitat (recovering burned areas, areas of pinyon and juniper encroachment, etc.) where predators are having a disproportionate impact on local GRSG populations.

**Summary:** Potential re-listing on the Endangered Species List should be considered when projects result in Undue or Unnecessary Degradation.

**Response:** Listing determinations are within the authority of the USFWS, therefore, this comment is outside the scope of this planning effort.

### **G.2.21 Livestock Grazing**

**Summary:** Commenters believe that grazing should be used as a conservation tool for vegetation and fire management and that controlling these will improve Sage-Grouse habitat.

**Response:** BLM agrees that under certain circumstances, proper livestock management can be an effective conservation tool to reduce the present and widespread threat of fire and invasives to sage grouse within the sub-region. At a programmatic level, the BLM is currently analyzing the use of targeted grazing as a tool to reduce fuel loads through its Programmatic EISs for Fuel Breaks and Rangeland Restoration Treatments across the Great Basin Region (which is currently under development).

**Summary:** The Draft EIS should analyze the correlation between loss of livestock grazing and vegetation overabundance.

**Response:** Analyzing the correlation between loss of livestock grazing and vegetation overabundance would be conducted at the site specific allotment level and not at a land use planning level through this effort.

**Summary:** Grazing should not be considered a primary threat to Sage-Grouse.

**Response:** Livestock grazing is not considered a primary threat to sage grouse across the entire Nevada and Northeastern California sub-region. However, fire and invasives (as specified in the USFWS Conservation Objectives Team Report, 2013) is a present and widespread threat to populations within the sub-region.

**Summary:** A Nevada County takes issue with livestock grazing objectives in Section 2.6.2 and Table 2-2, claiming they are inconsistent with its County Plan namely because the objectives do not consider variability in ecological conditions.

**Response:** Within the Management Alignment Alternative and Proposed Plan Amendment, habitat objectives would be based on sources such as ecological site descriptions and associated state-and-transition models.

**Summary:** Rather than reduce animal unit months (AUMs), BLM should consider spreading cattle to allow moderate grazing and reduced fuel loads across a larger area.

**Response:** All management tools would be considered on an allotment by allotment basis. The alternatives analyzed in this EIS do not reduce AUMs.

**Summary:** BLM should remove MD LG 21 from the EIS because it contradicts the 2003 USDI-Solicitor Memorandum.

**Response:** Modifying MD LG 21 (as presented in the existing ARMPA) is outside the scope of this planning effort, as it does not respond to the effort's overall purpose and need, which is to align with the State of Nevada's Sage Grouse Conservation Plan (2014, as amended).

**Summary:** The Draft EIS fails to acknowledge or implement a process for Temporary Non-Renewable (TNR) grazing.

**Response:** BLM has adopted the State of Nevada's adaptive management strategy within the Proposed Plan Amendment (see Appendix D) that identifies Temporary Non-Renewable (TNR) grazing as a potential tool to respond to adaptive management warnings and triggers.

**Summary:** Any language relating to a reduction in grazing use due to allowable use level must be removed.

**Response:** Language relating to a reduction in grazing use due to allowable use levels is not incorporated within the proposed actions presented in the Management Alignment Alternative or Proposed Plan Amendment.

### **G.2.22 Fluid Minerals**

**Summary:** The following was not included in the Draft EIS: "Land with high mineral or oil and gas values shall remain open for economic use."

**Response:** The comment is outside the scope of this planning effort, as this action would not respond to the purpose and need for this planning effort. The 2015 plans adequately address fluid mineral leasing and its impacts on Greater Sage-Grouse habitats.

### **G.2.23 Lands and Realty**

**Summary:** Remove the disturbance caps or clarify that they only apply to BLM land, in which case locatable mineral related disturbances are exempt.

**Response:** Valid existing rights associated with the 1872 Mining Law would be exempt from the disturbance caps contained in the 2015 ARMPA. However, it is important to note that disturbance caps are not being amended through this planning effort and any management actions proposed in the existing 2015 ARMPA and those proposed in the Management Alignment Alternative (Proposed Plan Amendment) would only be applied to BLM administered lands.

### **G.2.24 Socioeconomics**

**Summary:** The socioeconomic impacts analysis is inadequate and fails to calculate detailed economic and fiscal impacts to Counties and mining companies as well as mitigation to those impacts.

**Response:** Within the Draft EIS and Final EIS, the BLM has incorporated by reference the socioeconomic effects analysis contained in the 2015 Final EIS and the 2016 Draft EIS associated with the proposed SFA withdrawal. At a land use planning level, BLM has determined that this level of analysis is adequate.

**Summary:** BLM should work with UNR during this analysis; the university has a Socioeconomic Baseline Data collection process for the entire state and is performing a socioeconomic and fiscal impacts analysis for the GSGR plans independently.

**Response:** The Socioeconomic Baseline Data Report referenced by the commenter is still under development and will not be completed in time for incorporation into this document. However, BLM has included a statement in Section 4.4 *Incomplete or Unavailable Information* of the Final EIS that specifies this. In addition, BLM does plan to work with UNR in the completion of this baseline document.

**Summary:** BLM opted to conduct a qualitative analysis despite economic impact information given to BLM through locally sourced data and reports.

**Response:** At a land use planning level, BLM has determined that the qualitative level of analysis conducted in the Draft EIS is adequate, including the incorporation by references from the 2015 Final EIS and the 2016 Draft EIS associated with the proposed SFA withdrawal.

**Summary:** Increase Payments in Lieu of Taxes (PILT) to offset economic impacts to local governments, Counties, and States.

**Response:** Increase Payments in Lieu of Taxes (PILT) to offset economic impacts to local governments, Counties, and States is outside the scope of this planning effort.

**Summary:** The environmental impacts of increased mining outweigh the little economic benefit to local communities of a temporary labor force.

**Response:** Socioeconomic analysis relating to sage grouse conservation can be found in Section 4.10 of the Final EIS.

**Summary:** The analysis of economic effects should include liability of costs for takings of private property, especially regulatory decisions that prevent ranches from accessing and using existing property rights within federally controlled lands.

**Response:** Liability of costs for takings of private property would not be impacted by the proposed decisions outlined in the Management Alignment Alternative.

**Summary:** Hard triggers are an unreasonable burden on the economic security of Nevada Counties; soft triggers should be implemented only when necessary, considering all factors.

**Response:** Within the Management Alignment Alternative and Proposed Plan Amendment, immediate hard trigger responses in the form of land use plan allocation decisions have been removed. Soft trigger responses will be implemented at the implementation level, consistent with the Adaptive Management Strategy presented in Appendix D of this Final EIS.

### **G.2.25 Vegetation**

**Summary:** The EIS should include discussion of conifer removal as a beneficial treatment to wildlife and other vegetation.

**Response:** Information on conifer removal effects on GRSG was analyzed in the 2015 Final EIS (which has been incorporated by reference in the Draft EIS and Final EIS, see Section 4.6). In addition, acres of treatment in the Draft RMPA were disclosed from 2015-2017 in Section 3.4 of the Draft EIS and Final EIS. These treatments did include conifer removal.

**Summary:** Vegetative management should focus on diversity of vegetation and be revised to include criteria for rangeland health and GRSG habitat and consider selective grazing.

**Response:** The 2015 Final EIS (which has been incorporated by reference in the Draft EIS and Final EIS) includes information on vegetation management and rangeland health. Selective grazing is still an available tool that the BLM can apply on an allotment by allotment basis.

### **G.2.26 Travel and Transportation**

**Summary:** BLM should provide flexibility for manager discretion for off road vehicle use to manage range improvements and livestock. Travel restrictions should not impact the ability of permittees to access and manage allotments and livestock.

**Response:** Within the Management Alignment Alternative and Proposed Plan Amendment, BLM has incorporated a list of criteria (situations) in which an exception to an allocation decision tied to PHMA, GHMA, and OHMA (such as the allocation to limit travel to existing roads/routes) would be permitted if the criteria is met and as approved by the BLM's State Director (see Chapter 2, Allocation Exceptions).

**Summary:** Travel management appears to be carried over from the 2015 plan and not fully analyzed in this plan.

**Response:** Analysis from the range of alternatives analyzed in the 2015 Final EIS has been incorporated by reference in the Draft EIS and Final EIS. The commenter is correct that management actions tied to comprehensive travel management did not change across the alternatives analyzed in this EIS, however, based on the habitat management area mapping changes for PHMA, GHMA, and OHMA between the alternatives, the acres of public land limited to existing routes did slightly decrease across the sub-region and analysis from this proposed action can be found in Section 4.12.2.

**Summary:** One County is concerned that travel restrictions interfere with the county's development goals and will restrict access on roads and public lands.

**Response:** Within the Management Alignment Alternative and Proposed Plan Amendment, BLM has incorporated a list of criteria (situations) in which an exception to an allocation decision tied to PHMA, GHMA, and OHMA (such as the allocation to limit travel to existing roads/routes) would be permitted if the criteria is met and as approved by the BLM's State Director (see Chapter 2, Allocation Exceptions).

**Summary:** Travel management restrictions cannot interfere with ingress and egress rights for the purpose of exploring for or developing minerals.

**Response:** The alternatives analyzed within this EIS do not include proposed management that would interfere with ingress and egress rights for the purpose of exploring for or developing minerals subject to the Mining Law, as all management actions proposed in the alternatives would be subject to valid existing rights, including those associated with the 1872 Mining Law.

### **G.2.27 Renewable Energy**

**Summary:** Removal of lithium deposits will impede the nation's ability to develop renewable energy resources.

**Response:** Under the Management Alignment Alternative and Proposed Plan Amendment, no areas would be recommended for withdrawal and all proposed actions within these alternatives are subject to valid existing rights, including those associated with the 1872 Mining Law.

### **G.2.28 Cumulative Effects**

**Summary:** BLM fails to analyze fully the potential cumulative impacts to Sage-Grouse and respective habitats.

**Response:** The cumulative effects analysis contained in the Draft EIS has been updated to incorporate range-wide WAFWA Management Zone quantitative cumulative effects analysis to sage grouse. See Section 4.13 within the Final EIS.

**Summary:** The cumulative impact analysis from the 2015 LUPA is not an adequate analysis for the current analysis.

**Response:** The cumulative effects analysis contained in the Draft EIS has been updated to incorporate range-wide WAFWA Management Zone quantitative cumulative effects analysis to sage grouse. See Section 4.13 within the Final EIS.

**Summary:** Review the list of projects in Table 4-5 to ensure they fully consider "incremental impacts when added to the past, present, and reasonable foreseeable future actions."

**Response:** BLM has reviewed the list of projects in Table 4-5 to ensure they fully consider incremental impacts when added to the past, present, and reasonable foreseeable future actions.

**Summary:** BLM must identify the present effects of past actions, more specifically, cumulative impacts of the 2015 plans.

**Response:** Table 4-5 in the Draft EIS contained a full list of past, present, and reasonably foreseeable actions which were used to develop the cumulative effects analysis contained in Section 4.13 of the Draft EIS.

**Summary:** One commenter specifically expressed concern about dismissal of predators and Wild Horses and Burros as substantial impacts.

**Response:** Wild horse & burros and predation were not carried forward for further analysis due to the determination that this EIS/Amendment would not alter the management direction for wild horse & burros as analyzed in the 2015 ARMPA.



### **G.3 RANGEWIDE COMMENTS**

#### **G.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.

#### **G.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.

#### **G.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] [l]ack of effort is due almost entirely to lack of capacity, not expertise."<sup>14</sup> ? 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.<sup>15</sup> ? Interior Secretary Zinke has told lawmakers that he wants to reduce the Department workforce by 4,000 full-time jobs.<sup>16</sup> (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.<sup>17</sup> 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."<sup>18</sup> 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-1 essentially meaningless. As the 2018 USGS Synthesis of recent scientific research states, "Restoring sagebrush communities can be difficult, costly and slow."<sup>19</sup> In *Desert Survivors v. U.S. Dept. of the Interior*, Case No. 16-cv-01165-JCS (N.D. CA May 15, 2018)<sup>20</sup>, 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.<sup>21</sup> 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.<sup>22</sup> 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.<sup>23</sup> 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.

### G.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 "lesser 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. 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.<sup>12</sup> 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.<sup>13</sup> 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](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.

### **G.3.5 Data and Science**

A 2016 Wyoming study by Smith et al.<sup>33</sup> 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.<sup>35</sup> 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.<sup>36</sup> 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).

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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.<sup>32</sup>

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.<sup>29</sup>

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.<sup>31</sup> 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.

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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.<sup>30</sup>

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.<sup>24</sup> 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 2015<sup>25</sup> (USGS Annotated Bibliography) and the USGS report that synthesizes and outlines potential management implications of the new science.<sup>26</sup> (USGS Synthesis). These data are intended to show that changes to the landscape since the 2015 plans are "relatively minimal."<sup>27</sup> 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.<sup>28</sup> 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.

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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 feature 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.<sup>3</sup> 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 Schladweiler 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 72 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.<sup>32</sup> ? 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.<sup>73</sup> 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.<sup>74</sup> There has, however, been a gradual decrease in recommended requirements for fluid mineral leasing within priority areas. \* 2011 NTT Report<sup>75</sup>: 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.<sup>76</sup> \* 2013 COT Report<sup>77</sup>: 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.<sup>78</sup> \* 2015 BLM Plans<sup>79</sup>: 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.<sup>80</sup> \* 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.<sup>81</sup> 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.<sup>82</sup> 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).<sup>83</sup> \* 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.<sup>84</sup> \* 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.<sup>85</sup> \* 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 km<sup>2</sup> and majority of nests (63%) were in areas with = 1 well per km<sup>2</sup>.<sup>86</sup> \* 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.<sup>87</sup> \* 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.<sup>88</sup> \* 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.<sup>89</sup>

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 cyclicality, 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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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.")

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 68 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 ("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.

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 cyclicality, 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.

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.

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>.<sup>12</sup> 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.<sup>86</sup> 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,<sup>87</sup> 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 winddispersed 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 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 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

We also recommend that the 2018 FEIS incorporate by reference the October 2016 Mineral Potential Report and Sagebrush Mineral Resource Assessment that the U.S. Geological Survey ("USGS") prepared for BLM. Incorporating the October 2016 USGS Mineral Potential Report would cure the deficiencies in the 2015 FEIS, which did not include Affected Environment or Environmental Consequences for Geology and Minerals. It is not currently included in the references section in the 2018 DEIS or specifically incorporated by reference and needs to be added. The 2016 SFA Withdrawal DEIS presents overwhelming documentation of the miniscule impact that mineral activities within the SFAs would create over the next 20 years and the enormous economic harm that the proposed withdrawal would cause in Nevada that justifies BLM's selection of the Preferred Alternative in the 2018 DEIS to jettison the SFA withdrawals. As documented in the 2016 SFA Withdrawal DEIS, the footprint of mining and mineral exploration activities in the SFAs as designated in the 2015 LUPs was projected to amount to a mere 2,620 acres across the six SFA states. BLM quantifies these impacts as affecting only about 0.026 percent of the 10 million-acre SFAs. (2016 SFA Withdrawal DEIS at 4-75). The 2016 SFA Withdrawal DEIS also includes important information about the scope of mining impacts under a No Action Alternative (i.e., without the SFA withdrawals), which is now BLM's Preferred Action in the 2018 DEIS: ". . .the total amount of mining related disturbance in sagebrush habitat under the No Action Alternative would be 9,554 acres, or approximately one-tenth of 1 percent of the total withdrawal area... These disturbances could impact vegetation communities on 0.1 percent of the SFAs with the majority of the impacts estimated to occur in Nevada and Idaho." (SFA Withdrawal DEIS at 4-71 and 4-72, bold emphasis added.) 1 <https://pubs.usgs.gov/sir/2016/5089/b/sir20165089b.pdf> 2 The 2016 SFA Withdrawal DEIS documents that the proposed 20-year withdrawal would cause a staggering aggregate adverse impact of \$14 billion in reduced economic output, \$2.4 billion in less labor compensation, and 34,000 fewer jobs in five of the six SFA states, with Nevada, Idaho, and Wyoming bearing the brunt of these impacts. The 2,620 acres is comprised of 187 acres in Idaho, 81 acres in Montana, 2,285 acres in Nevada, 66 acres in Oregon, 1 acre in Wyoming, and 0 acres in Utah. (SFA Withdrawal DEIS at 2-10). The 2016 SFA Withdrawal DEIS clearly documents that mineral activities do not adversely impact GSG or its habitat and that the proposed withdrawal was unwarranted. In light of this information, BLM is completely correct and justified in excluding the SFA mineral withdrawal from its Preferred Alternative in the 2018 DEIS and must reject the No Action Alternative considered in the 2018 DEIS which would preserve the SFA withdrawals.

BLM acknowledges that ". . .landscape level mapping may not accurately reflect on-the-ground conditions." (DEIS at 2-6) and states "[ ] Need for adjusting habitat management areas (HMAs) so that they reflect the best available science" (DEIS at ES-3). PGC is concerned that the Allocation Exception Process is too narrow and rigid to give BLM the necessary flexibility to use best available science (e.g., field-verified habitat data) and to make project-specific decisions in GSG habitat based on actual, field-verified habitat data. The allocation exception process needs to state clearly that one of the circumstances which always requires an allocation exception is when a project applicant provides on-the-ground habitat data collected by a qualified biologist using BLM-approved data collection protocols that documents different habitat conditions than on Figure 1-2b. BLM should be required to base project decisions on actual field-verified habitat conditions rather than on the habitat management classifications shown on Figure 2-1b. Therefore, whenever BLM has field-verified habitat data that have been provided by a project proponent, the State of Nevada, or otherwise obtained by BLM, BLM must use this information in making land use decisions. In these circumstances, the landscape management area classification map (e.g., Figure 2-1b) cannot be used as the basis for BLM's decision. The restrictions that apply to the PI-IMA management classification must not be required on lands that are GHMA, OHMA,

or non-habitat based on field-verified habitat conditions. Similarly, the restrictions that apply to GHMA must not be required on lands that are OHMA or non-habitat based on field-verified habitat conditions. Because BLM is compelled to use best available science, granting an allocation exception should be the standard operating procedure that does not require the State Director's authorization. BLM District Managers should be authorized to grant allocation exceptions whenever BLM is provided with field-verified habitat data that conflicts with Figure 2-1 b. As stated elsewhere, the land use restrictions in the amended 2018 GSG LUP cannot substantially interfere with a claimant's rights under the U.S. Mining Law including the rights of ingress and egress, and reasonable use and occupancy for mineral exploration and development purposes. The following discussion of the Allocation Exception Process as presented in Table 2-2 is poorly worded and confusing: "Verify use of landscape-scale mapping of PHMA, GHMA, and OHMA in regards to the application of allocations and stipulations." (DEIS at ES-3 and 2-12). As written, this appears to contradict the DEIS provisions pertaining to modifying habitat management area designations based on field-verified habitat data and diminish or even eliminate the need for an exception process. To make the allocation exception process consistent with the procedures outline to modify habitat management area designations PGC suggests this sentence needs to be re-written to say: "Use field-verified habitat data whenever available to make project-specific decisions and to apply allocation exceptions and stipulations." Similarly, the sentence on Table 2-2 stating "In PI-IMA and GHMA, the State Director may grant an exception to the allocations and stipulations described in Section 2-5 if one of the following applies..." is circular and confusing because Table 2-2 is the only content in Section 2.5.

It should be noted that Sage-grouse have not been observed or documented in the Stillwater Mountains for decades as documented in the 2001 Nevada Sage-grouse Conservation Plan, which notes there are no active leks or population estimates for the Stillwater Population Management Unit.

We recommend that DOI explicitly state in the RODs for the LUPAs in clear terms that since issuance of the Reports, science and information about GRSB has evolved, and shortcomings with the Reports have become evident. DOI should expressly state that management prescriptions from the 7 Reports should be viewed with caution and modified based upon the best available information, including state and local science and knowledge.

Appendix A: Maps, Figures 2-2a and 2-2b Figures 2-2a and 2-2b depict Biologically Significant Units and Lek Clusters designated in the No Action Alternative and Management Alignment Alternative respectively. It is not clear how designating these groups as "biologically significant" is appropriate. Coates et al. 2017, the publication upon which the Management Alignment map is based, appears to delineate these areas based mainly on climatic areas. However, the term Biologically Significant Unit implies emigration, immigration and most importantly gene flow within the area. Tribal Sage-grouse studies have produced data that conclude it would be highly unlikely that these important biological processes would take place across such large land areas. For example, the Management Alignment Alternative combines the Lassen/South Washoe, Likely Tables PMU, Northwest Great Basin, Pueblo Range, Black Range, and Western Pershing units from the No Action Alternative units into one Biologically Significant Unit titled Carson City. Given the distance and terrain in between these units, it is highly unlikely that enough emigration, immigration, or gene flow is occurring between the populations in Western Pershing and populations in Likely Tables PMU to call them communally a biologically significant unit. The Tribe is concerned that lumping these units together into fewer and larger conglomerations will result in the loss of understanding of the extremely important smaller population units. For instance, if the a truly biologically significant unit (as designated in the No Action Alternative)

experiences a population decline, when grouped into a larger unit, the significance of such decline would likely be minimized and overlooked.

\* Continue to Improve sage-grouse data: Our understanding is that there is little hard evidence for bird counts and that there is little up-to-date data on leks. Much of the data supplied in the previous EIS is decades old and does not take into consideration recent changes to the environment. In particular, fires and recent human developments have impacted some lek sites, but these sites remain in the model used for designation and regulation of sage-grouse habitat. The data need to be brought current before management recommendations can be made appropriately.

Please correct your text to fully accept the series of reports authored by Nevada Assemblyman Ira Hansen and the web site of Nevada Naturalist and Rancher Cliff Gardner <http://www.gardnerfiles.com/>

We have found that agency officials, including state agency employees, have proclaimed, with no technical support, that sage grouse were abundant prior to settlement by Americans and have declined since about 1860. That unsupported assumption is false, pervasive, and must be removed from reference in accordance with federal standards for objective and factual information.

History shows that there was a dramatic increase in sage grouse numbers and distribution from 1860 to historic high numbers in about 1960. History then shows there has been a sage grouse decline from historic high numbers in the Twentieth Century. This decline in sage grouse numbers (and other wildlife) parallels the federal agency decimation of ranches and livestock numbers. Factual information from Hansen, Gardner, and others has been provided to BLM, USFWS, USFS, and Nevada Sagebrush Ecosystem Council repeatedly and is ignored or worse is rejected in favor of purely speculative statements about sage grouse numbers and habitat. Please include in the DRMP/EIS the fact that the historic numbers of sage grouse peaked about 1960 not prior to 1860 and base your analysis on that factual data that indicates it has been federal regulatory decisions that coincide with sage grouse decline over the last 40 years.

DRMP/EIS must carefully characterize habitats that are actually required by sage grouse in order for the birds to thrive and be abundant. As a starting point, where populations of the birds are healthy should be the locations where detailed descriptions of the occupied habitat are completed. LUPA]FEIS carelessly failed to identify sagebrush species in accordance with standard Botanical taxonomy and failed to adhere to standards of objectively providing the technical details of sagebrush dominated plant communities and other attributes of sage grouse habitat. DRMP/EIS should refer to NRCS Ecological Site concepts and then actually use the technical basis provided by Cooperative Soil Survey, Ecological Site Description, and evaluation of plant communities in terms of Seral Status and State or Transition. DRMP/EIS should avoid or discard landscape descriptions that lack technical substantiation such as the TNC and WAFWA Management Zone depictions apparently based on GAP and RE-GAP.

EPA recommends that the Final EIS either specify the objectives in question or include a citation to their source document.

Issue #1: Viability of GRSG. The Department (FWS and BLM) previously manipulated the status of GRSG, suggesting therefrom a false view that something more is needed relating to permitted livestock grazing upon the public lands in the Western United States, beyond what is already in place. E.g. 43 C.F.R. Part 4100, subpart 4180. This manipulation must stop and the Department must provide a sound

statement as to the status of GRSG. A. Historic Population Trends for Greater Sage-Grouse. The FWS Findings admit that GRSG "numbers are difficult to estimate due to the large range of the species, physical difficulty in accessing some areas of habitat, the cryptic coloration and behavior of hens (Garton et al. in press, p. 6), and survey protocols." See 75 Federal Register 13921 (3/23/2010) ("FWS Findings"). The FWS Findings ultimately conclude "since neither presettlement nor current numbers of sagegrouse are accurately known, the actual rate and magnitude of decline since presettlement times is uncertain." See FWS Findings, page 13923. Despite the recognition that the rate and magnitude of change in GRSG populations over time is uncertain, the FWS Findings assume that GRSG populations have significantly declined from pre-settlement populations based primarily upon conclusions from several sources indicating that "sage-grouse population numbers in the late 1960s and early 1970s were likely two to three times greater than current numbers". See FWS Findings, page 13922. [Note that the cited high populations in the late 1960s and early 1970s tell us nothing about pre-settlement numbers.] The FWS Findings report that "three groups of researchers using different statistical methods (but the same lek count data) concluded that rangewide greater sage-grouse have experienced long-term population declines in the past 43 years, with that decline lessening in the past 22 years." See FWS Findings, page 13923. However, looking back 43 years, or even 80 years, tells us nothing about pre-settlement GSG numbers. The FWS Findings ultimately conclude "(a)lthough the declining population trends have moderated over the past several years, low population sizes and relative lack of any sign of recovery across numerous populations is troubling." See FWS Findings, page 13987. But this conclusion is based primarily upon the observed GRSG population declines from the high numbers in the 1960s to today, which cannot be used to establish how current GRSG populations compare to pre-settlement populations. Yet, based primarily upon estimated populations at these two points in history, the FWS Findings assume a relatively linear trend line for sage-grouse populations, and thus falsely presume that pre-settlement GRSG populations were abundant. B. Current Greater Sage-Grouse Population: 350,000 to 535,000 RangeWide. Notwithstanding what may be the pre-settlement populations, the FWS Findings estimate that the current GSG population range-wide totals approximately 535,000 birds. Table 4 of the FWS Findings reports GRSG population estimates by state / region based upon data from state wildlife agencies collected between 2002 and 2008. The estimates for all of the state / region populations combined total 535,542 GRSG. See FWS Findings, Table 4, page 13921. Based thereon, it must be stated that the total estimated current GRSG population of approximately 535,000 birds is 107 times greater than the minimum effective population of 5,000 birds needed to maintain sufficient genetic material to protect the species from the long-term risk of extinction. See FWS Findings, page 13959, wherein the FWS Findings comment, citing Traill et al. (2010, p. 32), that "a minimum effective population size must be 5,000 individuals to maintain evolutionary minimal viable populations of wildlife (retention of sufficient genetic material to avoid effect of inbreeding depression or deleterious mutations)." The estimated populations for Idaho, Montana, and Wyoming in Table 4 of the FWS Findings were based upon hunting harvest data, assuming that 5% of the population is harvested. Elsewhere, the text in the FWS Findings assume that 10% of the population is harvested by hunting (page 13921), which would halve the estimated populations reported in Table 4 (also page 13921) for Idaho, Montana, and Wyoming, resulting in a total estimated current GSG population of over 350,000 birds (351,252, see Table 1 on page 18 herein). This is still 70 times greater than the minimum effective population. Based upon a current estimated population for GSG of 350,000 to 535,000 birds, 70 to 107 times greater than the minimum effective population of 5,000 birds, it is clear that a viability population of GRSG current exist. However, instead of capitalizing on this fact, the FWS Findings fret that the species may warrant listing because presumed trends of declining populations, if continued, may threaten the species with extinction sometime in the future. However, given the estimated contemporary (1985 to 2007) rate of decline of



1.4% per year (page 13922), it would take 300 to 330 years for the estimated current GSG population to dwindle to the minimum effective population of 5,000 birds. Speculating what might occur three centuries from now stretches far beyond the foreseeable future. Issue #1, Recommendation 1: LUPA as related to GRSG are not warranted based on existing population data. GRSG should be managed at a state level by state agencies just as all other game species. FWS must take a hard look at facts and data when considering species for listing. If, however, the Department of the Interior ("DOI") erroneously decides against this recommendation, we have provided further issues and comments below. Issue 1, DEIS comment 1: This recommendation remains valid. Since DOI ignored this recommendation in the DEIS (see DEIS at Table ES-2), the Issue, the Comment, and the Recommendation remain the same and remain valid.

There seems to be a discrepancy between "DEIS: Table 1-1 Land Management in the Planning Area" (p. 1-3) and "DEIS: Figure 1-1 Planning Area" (map p. 1-4) Table shows acreages that total 70,274,300 acres, which is the size of the state of Nevada. However, the map shows the actual Planning Area to exclude all of Clark, portions of Lincoln and Nye and perhaps a bit of Esmeralda counties. How is it that part of the state is as big as the whole state? Also, Table shows Department of Energy as managing 2,600 acres, but BLM shapefile of 3/10/2016 shows DoE lands totaling 879,758 for the state. If 877,000+ acres are left off the DoE acreage, then how does the total equal that of the state? It also looks like the acreage assigned to "Private" is overly large.

the SEP requests clear information to be articulated within this DEIS regarding the criteria used to determine UUD. Who will determine UUD? When will this process occur? How does this process relate to the multiple use mandate according to the Federal Land Policy and Management Act?

I 1-7 Bullet 2 BLM must ensure that any clarifications are founded in previously completed analyses. If adequate analysis cannot be cited to support the clarification, then BLM must complete that analysis in this EIS.

Chapter 3 3 3-1 20-21 BLM cannot state that wild horse "data and information in the 2015 Final EIS" has not substantially changed. Wild horse herds in NV grow at 15-20% per year and have since 2015. Real time data is readily available from the BLM itself.

3 3-1 3.1.1 Because NCA want to have Table 2-2 apply related to ESD, associated State and Transition Models, Disturbance Response Groups and current ecological state of the cite, it should also incorporate pertinent science specific to the proper application and implementation of such information and tools. This includes, but is not limited to the following studies: BOLTZ, S., AND G. PEACOCK. 2002. Ecological sites: understanding the landscape. *Rangelands* 24:18-21. BRISKE, D.D., B.T. BESTELMEYER, T.K. STRINGHAM, AND P.L. SHAVER. 2008. Recommendations for development of resilience based state-and-transition models. *Rangeland Ecology & Management* 61:359-367. SOIL SURVEY DIVISION STAFF. 1993. Soil survey manual. Soil Conservation Service US Department of Agriculture Handbook 18. STRINGHAM, T.K., P. NOVAK-ECHENIQUE, P. BLACKBURN, C. COOMBS, D. SNYDER, AND A. WARTGOW. 2015. Final report for USDA ecological site description state-and-transition models, Major Land Resource Area 28A and 28B Nevada. University of Nevada Reno, Nevada Agricultural Experiment Station Research Report 2015-01. p. 1524. Available at: <http://www.cabnr.unr.edu/resources/MLRA.aspx>. STRINGHAM, T.K., P. NOVAK-ECHENIQUE, P. BLACKBURN, D. SNYDER, AND A. WARTGOW. 2015. Final report for USDA ecological site description state-and-transition models by disturbance response groups, Major Land Resource Area 25

Nevada. University of Nevada Reno, Nevada Agricultural Experiment Station Research Report 2015-02:572. Available at: <http://www.cabnr.unr.edu/resources/MLRA.aspx>. STRINGHAM, T.K., P. NOVAK-ECHENIQUE, D. SNYDER, S. PETERSON AND K. SNYDER. 2016. Disturbance Response Grouping of Ecological Sites Increases Utility of Ecological Sites and State-and-Transition Models for Landscape Planning in the Great Basin. *Rangelands* 38(6):371-378.

3 3-2 Bullet 2 Based on recent science, NCA has concern with the following statement, "the authors found strong selection and positive survival for high horizontal cover and total shrub cover during nesting and late brood-rearing across all sites". NCA recommends replacing with "selection and positive survival relationships with vegetation (grass and shrub) cover during nesting and late brood-rearing across landscapes still exist. Evidence for a ubiquitous positive relation between grass height and nest success was either greatly diminished (Gibson and others, 2016a) or not supported (Smith and others, 2017b), although some studies that corrected for phenology still support this relation (Smith and others, 2017b; Coates and others, 2017a). Indicator values for grass height need to be examined to ensure they have not been derived from studies using vegetation data collected at different times for successful and unsuccessful nests without applying correction factors and are geographically appropriate." The second bullet mischaracterizes Gibson et al (2016) and links Gibson to the conclusion that "the authors found strong selection and positive survival for high horizontal cover and total shrub cover during nesting and late brood-rearing across all sites." Yet, the USGS points out many studies that do not necessarily make this conclusion. USGS explicitly states that "Indicator values for grass height contained in the habitat objectives tables of the 2015 BLM land use plans...may need to be examined to ensure they have not been derived from studies using vegetation data collected at different times for successful and unsuccessful nests without applying correction factors (Gibson and others, 2016a) and that science findings are geographically appropriate." Examples referenced and discussed by USGS include Gibson et al. (2016) and Smith et al. (2017). Gibson et al. (2016), concluded that "the correlation between grass height and nest success could instead be due to a built-in bias in timing of when vegetation is measured around hatched and failed nests. If habitat measurements are made immediately after researchers determine fate of a nest (either failure or hatch), measurements may be taken weeks later at successful nests than at failed nests, which allows grasses more time to grow. Because the nesting season occurs in the spring during green-up - when grasses can grow more than a half an inch a week - it appears that hatched nests are surrounded by taller grass. Dr. Gibson's study suggested this timing bias is the reason that so many studies have concluded that tall grass is important for concealing nests from predators" (as discussed in Sage Grouse Initiative, Taking the Bias Out of Grass Height Measurements, Science to Solutions Series Number 15, at 4 (2017)). Smith et al. (2017) "re-analyzed data from three independent studies that previously showed a correlation between grass height and nest success. Smith and his team reevaluated data from studies in the Powder River Basin of southeast Montana and northeast Wyoming (Doherty study), Smith's own research in central Montana, and a site in northeast Utah. When combined with Gibson's research in Nevada, the studies encompassed 1,204 sage grouse nests over 24 study site-years from across the range of sage grouse. In Gibson's study, measurements of vegetation were made at the expected hatch date for all nests, regardless of their actual outcome. This minimized any difference between failed and hatched nests in when vegetation was measured. Gibson then used a linear regression to predict vegetation height at the date of nest fate, simulating the biased methods common in other sage grouse nesting studies. For his study, Smith used the data that was collected at nest fate - the biased way - and applied the reverse correction to obtain grass heights as though they had been sampled using unbiased methods. Smith found that, when uncorrected, all of the datasets revealed a strong correlation between grass height and nest success. However, following the simple

correction to account for bias, there was no longer any association between grass height and nest success in two of the three studies, while the association was slightly reduced in strength but still apparent in the third Powder River Basin. At hatch date, median grass heights at hatched and failed nests were within just 0.05 inches of one another across all re-analyzed datasets. Overall, the research strongly affirmed Gibson's initial findings and suggests that the height of grass is not nearly as crucial to sage grouse nesting success as previously thought" (also as discussed in Sage Grouse Initiative, Taking the Bias Out of Grass Height Measurements, Science to Solutions Series Number 15, at 4 (2017))

Appendix D Appendix D D-4 D.5.2 Habitat Soft and Hard Triggers (Signals) What is the best available science that indicates these percent change values are valid habitat triggers? Rationale supported by citations must be added to this section to validate this approach.

Appendix D D-5 D.6 Step 2 Determine the Causal Factor It is unclear what is being said under a. and b. presently. It would seem that a key component of the Casual Factor Analysis would be defining the appropriate geographical area. Triggers are programed at the Lek, Lek Cluster and BSU levels, which can be significantly different in size and characteristic. As such, perhaps the best way to couch the "casual factor analysis area" is that the appropriate analysis area (including all pertinent seasonal habitat types) will be determined by the stakeholder group.

Recent studies confirm that oil and gas development can harm both sage-grouse habitat and lifecycle activities, such as breeding.<sup>10</sup> Consequently, it is vital that protections associated with oil and gas 6 Dahlgren, D.K., Messmer, T.A., Crabb, B.A., Larsen, R.T., Black, T.A., Frey, S.N., Thacker, E.T., Baxter, R.J., and Robinson, J.D., 2016, Seasonal movements of greater sage-grouse populations in Utah- Implications for species conservation: *Wildlife Society Bulletin*, v. 40, no. 2, p. 288-299 (emphasis supplied). <https://onlinelibrary.wiley.com/doi/abs/10.1002/wsb.643> 7 M. Holloran et al. Letter to the Honorable Ryan K. Zinke (June 8, 2018). 8 NV DEIS Appendix B at B-1; Utah DEIS Appendix B at B-1. 9 P.S. Coates et al. Evaluating Greater Sage-Grouse seasonal space use relative to leks: Implications for surface use designations in sagebrush ecosystems: *Journal of Wildlife Management*, v. 77, p. 1598-1609; see also D.K. Dahlgren et al. infra note 9. 10 See, 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 (Finding that oil and gas developments Detailed Comments on NV- CA DEIS The Nature Conservancy 4 of 23 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.

Pages 2-8, 2-9 (pdf 46-47) discuss hard and soft triggers ("signals" per Coates et al. 2017), and refer to Appendix D, which is also referred to as the Adaptive Management Strategy., We note as a preface to our comments on Appendix D, that the Map in Appendix D, as with Coates et al. 2017, do not remove non-habitat that is the Interstate 80 corridor. Further, as can be seen from RMPA Map I-1, there is a 6 mile corridor of checkerboard and/or private lands on each side of the Interstate that is not "masked over", as put by Coates et al. 2016, 2017. 26. We also note as a preface, that Coates et al. 2014 and 2016 and 2017 continue to (1) arbitrarily expand sage-grouse habitat by 10 kilometers beyond the boundaries of the Population Management Units described by NDOW, in collaboration with local working groups. Maps based upon an arbitrary definition of habitat can only be found to be arbitrary and

erroneous. While Coates et al. 2016, 2017 claim to have accounted for major freeways, they do not, and they do not account for the 6 miles of checkerboard and/or private lands on each side of the Interstate Freeway. Compare Map Figure I-1 to Coates et al. 2017 maps, also found in Appendix D. 27. Page 2-8 (pdf 46). The phrase "biologically significant unit" is not used by Coates et al. 2017. Further, Coates et al. 2017 appear to consider all seven of their habitat groupings, from the lek to the entire Nevada and northeast California region, to be "biologically significant units". The RMPA should refrain from characterizing these authors' "climate clusters" as "biologically significant units". Instead, the RMPA should use the same phraseology used by Coates et al. 2017. This will minimize confusion between the research conducted and the RMPA. APPENDIX B. 28. Throughout Appendix B, the word "lek" or "leks" should be changed to "active or pending lek(s)". 29. Because Appendix B provides that there exist multitudes of variation that might alter consideration of the lek buffer distances. BLM should develop a checklist for these lek buffer distances, as it has for RDFs in Appendix C. 9 | Page 30. Throughout Appendix B, where used, the phrase "active or occupied" should be replaced with "active or pending". 31. Appendix B should add the assurance that, if and when a population of sage-grouse begin using the area around a developed livestock water trough (as is known to occur), that the Permittee will not be required to cease use of the trough for livestock watering, and will not be required to change season of use of the area serviced by the trough. It is rational to conclude that, if the presence of the trough and its associated grazing use has created a zone that sage-grouse find desirable for lekking, then the existing grazing use has increased the lek habitat availability, and such activity should continue.

APPENDIX C 32. The heading of the RDF worksheet should make clear that the RDFs (may) apply to new structures, but not existing structures.

Appendix D is not consistent with Coates et al. 2017. Coates et al. 2017 do not state, relative to soft signals, that "management changes are needed at the project or implementation level." Coates et al. 2017 in fact state that a soft signal could be set off by poor lek counting, or a number of other reasons (see Coates et al, 2017, page 2 (pdf 12)). Coates et al. 2017 also specifically "did not evaluate management effectiveness of soft signals because they are intended to identify populations that are steadily declining and perhaps require more monitoring and 10 | Page localized threat assessment before implementing any management action." Coates et al., page 26 (pdf 36). 37. Appendix D is also remiss in not adopting the "early warning system" as it is more fully expressed in Coates et al. 2017, which requires some self-examination of the underlying data in their "soft warnings" and "hard warnings". Coates et al. 2017 state: "However, identification of trends that signal population decline may need to be tempered using safeguards that protect against implementing action too soon owing to short-term population dynamics or errors in lek counts, or because local populations are simply tracking population trends occurring at broader spatial scales driven by less-manageable stochastic factors (for example, population cycles driven largely by variation in climate)." Coates et al. 2017, pages 6-7 (pdf 16-17). Thus, Coates et al. 2017 provide for "safety stops" that are intended not to act too soon to a perceived decline, and secondly not to act too late for a more-likely real decline for a particular lek, lek cluster, or large grouping. 38. While we continue to contend that Coates et al. 2014, 2016, and 2017 rely upon an arbitrary expansion of sage-grouse habitat (adding 10 km to the edge of the PMUs determined by NDOW, in concert with local sage-grouse working groups), nevertheless, Coates et al. 2017 provide a rational set of thresholds, warnings, and signals, including "safety stops", which are not reflected, but should be, by Appendix D and the body of the RMPA. See Coates et al. 2017 page 2 (pdf 12).

Appendix D also does not explain why the smallest examination of triggers will be the lek cluster, rather than the lek, which seems to be the logical place to start. (See Section D.5.1, D.5.2).

Appendix D (or the body of the DRMPA) does not reveal any contemplated actions for areas with less than 25% sagebrush cover, but does not explain a reason for this. 42. Appendix D (or the body of the DRMPA) does not explain the rationale for cut-off for response actions. In other words, what is the rationale for the 65% threshold between response actions? 43. Coates et al. 2017 expressed 5 caveats to their analysis; therefore, these authors recognized problems and issues with their own analysis. These caveats should be considered in the application of Coates et al. 2017, and the RMPA should make this explicitly clear.

ES-1 ES-2 P 1, Lines 1-2 In addition to the provided list, the BLM's efforts through the Management Alignment Alternative also seek ways of incorporating additional/new information and ever-evolving "best available science" in an effective and efficient manner. These points should be added to this paragraph / sentence.

Chapter Page Paragraph / Line / Figure / Table Comment 2.3.2 2-3 P 2 Where deemed appropriate in this section, NACO suggests adding language that reads, "...allowance for ground truthing presence of GRSG habitat before a final implementation decision is made..." Please See County Needs Attachment 2 2-3 P 2 Revise to read "...based on the most updated best available science and habitat data..." See explanations above regarding plan maintenance. 2 2-3 P 2 The sentence should include "...revision and simplifying an allocation exception process to allow for the consideration of projects (, public health / safety and administrative functions that serve a public purpose) within designated Habitat Management Areas...". 2 2-5 Table 2-1 Table 2-1 lists a suite of Land Use Plan Allocations and terms such as "retain (land tenure), avoidance, exclusion, open with minor/major stipulations, limited, closed and not available" regarding allocations within mapped PHMA, GHMA, and OHMA. The State Plan does not contain similar allocations restrictions, and therefore this table is inconsistent with the State Plan. NACO appreciates and support the footnote added for the Management Alignment Alternative, and would request that the footnote specifically indicate ground-truthing of modeled habitat.

3 3-1 3.1.1 Section 3.1.1 focuses only on sage-grouse literature since 2015. USGS reports referenced only focus on science since Jan 2015. Eureka County (and others) submitted volumes of peer reviewed scientific papers that existed in 2015 that the BLM either omitted or ignored in the prior LUPA process. Our comment letter on the prior EIS specifically referenced this data along with scientific sources and asked for them to be included. NACO asks that the BLM now consider and synthesize this previously-submitted data demonstrating the previous EIS being flawed and not based on the best available science, incorporated herein by reference. See Eureka County Comments on DEIS, filed January 29, 2014, at 55-62. This science must also be considered and incorporated. Eureka County provided pages of information regarding this previously omitted science. The late Kent McAdoo and Dr. Sherm Swanson also provided information about the many papers and studies BLM failed to include. Also, Dr. Bill Payne, Dean of UNR CABNR, provided a review highlighting the previous omission of Nevada specific studies on sage grouse and various land use impacts to sage grouse, especially grazing. It is crucial that BLM consider and incorporate the previously omitted science and the new science since 2015. Given NACO's desire to apply Table 2-2 through the lens of ESD, associated State and Transition Models, Disturbance Response Groups and current ecological state of the cite, it should also incorporate pertinent science specific to the proper application and implementation of such information and tools.

This includes, but is not limited to the following studies: \* BOLTZ, S., AND G. PEACOCK. 2002. Ecological sites: understanding the landscape. *Rangelands* 24:18-21. \* BRISKE, D.D., B.T. BESTELMEYER, T.K. STRINGHAM, AND P.L. SHAVER. 2008. Recommendations for development of resilience based state-and-transition models. *Rangeland Ecology & Management* 61:359-367. \* SOIL SURVEY DIVISION STAFF. 1993. Soil survey manual. Soil Conservation Service US Department of Agriculture Handbook 18. \* STRINGHAM, T.K., P. NOVAK-ECHENIQUE, P. BLACKBURN, C. COOMBS, D. SNYDER, AND A. WARTGOW. 2015. Final report for USDA ecological site description state-and-transition models, Major Land Resource Area 28A and 28B Nevada. University of Nevada Reno, Nevada Agricultural Experiment Station Research Report 2015-01. p. 1524. Available at: <http://www.cabnr.unr.edu/resources/MLRA.aspx>. \* STRINGHAM, T.K., P. NOVAK-ECHENIQUE, P. BLACKBURN, D. SNYDER, AND A. WARTGOW. 2015. Final report for USDA ecological site description state-and-transition models by disturbance response groups, Major Land Resource Area 25 Nevada. University of Nevada Reno, Nevada Agricultural Experiment Station Research Report 2015-02:572. Available at: <http://www.cabnr.unr.edu/resources/MLRA.aspx>. \* STRINGHAM, T.K., P. NOVAK-ECHENIQUE, D. SNYDER, S. PETERSON AND K. SNYDER. 2016. Disturbance Response Grouping of Ecological Sites Increases Utility of Ecological Sites and State-and-Transition Models for Landscape Planning in the Great Basin. *Rangelands* 38(6):371-378.

The Science Cited Never Supported SFA Boundaries The withdrawal process adopted wholesale the assumption that the SFAs constitute the best habitat for Sage Grouse; and that it can only be protected by withdrawal. While it is important to work closely with the FWS to implement regulatory assurances like the State Plan, to continue to conserve GSG habitat and to avoid a future listing, the BLM must make explicit reference to the scientific and other sources relied upon for conclusions in the statement. 40 C.F.R. § 1502.24. The SFA Boundaries included lands that were not GSG habitat because it was based on facially erroneous data that identified areas of non-habitat as critical GSG habitat. The threat to sage-grouse that the SFA withdrawal was meant to protect against is habitat fragmentation, yet the Agency could not calculate the impact to sage-grouse because it was too negligible. The Need for any withdrawal is to prevent the fragmentation of greater sage-grouse habitat caused by surface disturbance within the habitat area: "One of several major threats to public lands identified in the LUP amendments is the fragmentation of greater sage-grouse habitat due to mineral exploration and development related to hard rock mining." During the SFA Withdrawal process, NACO asked the BLM why habitat fragmentation had not been analyzed. To summarize, the response was "the area is too big," and "we do not know where the disturbance will occur" to calculate or map potential impacts from disturbance.<sup>18</sup> This makes sense, considering the disturbance-to-withdrawal ratio is so small that it didn't even compute. This information is crucial to the impacts analysis, as disturbance is only relevant to determine to what extent mining contributes to habitat fragmentation. This conclusion is consistent with the FWS's initial findings on March 23, 2010 for petitions to list the Greater Sage-Grouse as Threatened or Endangered at 75 Fed. Reg. 13910, which highlights that the FWS did not "have comprehensive information on the number or surface extent of mines across the range," but that "Nevada (MZs III, IV, and V) is ranked second in the United States in terms of value of overall nonfuel mineral production in 2006 (USGS 2006, p. 10)." On October 2, 2015, the FWS issued another finding stating that "Consistent with our 2010 finding, we do not have a comprehensive dataset about existing and proposed mining activity to do a quantitative analysis of potential impacts to sage-grouse." 80 Fed. Reg. 59,915 (Oct. 2, 2015) "...Overall, the extent of [mining] projects directly affects less than 0.1 percent of the sage-grouse occupied range. Although direct and indirect effects may disturb local populations, ongoing mining operations do not affect the sage-grouse range wide." 80 Fed. Reg. 59,858. Also, USFWS quantified the

huge area of the western U.S. that contains GSG habitat: "The sagebrush ecosystem upon which the sage-grouse depends remains one of the largest, most widespread ecosystems in the United States, spanning approximately 70 million ha (173 million ac)". 80 Fed. Reg. 59,933]. This information was provided prior to further information obtained through the Mineral Potential Report and Socioeconomic Impacts Analysis. The COT Report Supports Only Localized, Not Widespread Risk of Mining in SFAs The withdrawal proposal relied on the recommendations from A Report on National Greater SageGrouse Conservation Measures, Sage-grouse National Technical Team (December 21, 2011) (NTT Report) and Greater Sage-grouse (*Centrocercus urophasianus*) Conservation Objectives: Final Report, U.S. Fish and Wildlife Service (February 2013) (COT Report). NACO and Nevada's Counties have in the past expressed many concerns with the ARMPA's reliance on the NTT and COT Reports as conflicting with the Sagebrush Ecosystem Council and Sagebrush Ecosystem Technical Team findings supporting the State of Nevada's Action Plan. greater sage-grouse habitat - this could include fragmentation of seasonal habitats (i.e., nesting/brooding and winter) and connected populations (i.e., leks); and (3) Calculations of vegetation/habitat impacts relative to the availability of these resources within the proposed withdrawal area. 18 Discussion from a Cooperating Agency Call, on Thursday, March 23 at 12:30 PM PST. Nevertheless, the ARMPA cites to those reports, and therefore they should be used to determine whether the scale of the SFAs and the widespread proposed withdrawal were supported by the science cited. The NTT Report does propose a "withdrawal from mineral entry based on risk to the sage-grouse and its habitat from conflicting locatable mineral potential and development." However, the NTT report does not discuss where a withdrawal might be most appropriate or imply that it should cover 10 million acres of habitat nationwide. Rather, the FEIS and ARMPA rely upon the COT Report to determine the NTT's request to evaluate risk from conflicting locatable mineral potential and development. Looking to the COT report, the SFAs do not represent the areas at greatest risk from mining. The COT Report shows that threats from mining within the SFA areas are only localized and not widespread. Table 2 delineates Sage-grouse quasi-extinction risk and threats by management zone and populations as defined by Garton et al. 2011. Threats are characterized as (Y = threat is present and widespread), (L = threat present but localized), (N = threat is not known to be present), and (U = unknown). Figure 3 complements this table by designating Sage-grouse management zones, populations, and Priority Areas for Conservation. This table correlates to the threats present in each management zone. The Sage-Grouse Priority Areas that encompass the SFAs are numbered 26a (Northern Great Basin) and 31 (Western Great Basin). The threat of mining to is designated "L," or "threat present but localized" in both the Northern and Western Great Basins, even where the threat of mining is only elevated to "present and widespread" in management area 14 (Northwest Interior) which is not an SFA. In fact, the only areas on the map within the COT report that expresses a widespread threat of mining is in the Northwest Interior. This area, the Northwest Interior, is home to mining operations run by Newmont Mining Corporation, a company engaged in an Enabling Agreement that allows for mitigation and net conservation gains from mining threats to Greater Sage Grouse (See Section C on Cooperating Agreements). Another Enabling Agreement between the BLM and Barrick Gold Corporation covers Sage-Grouse habitat in an area with the exact same characteristics as those subject to the SFA. If a cooperating agreement with mitigation requirements with a private party is sufficient to protect an area with a widespread threat of mining, then it is insufficient to conclude that that some areas labeled as having a "localized" threat of mining should be subject to a widespread withdrawal lasting twenty plus years.<sup>25</sup> Mitigation measures similar to those in the Newmont and Barrick Enabling Agreements could be applied to mining projects in the SFA, with a similar positive outcome. Therefore, the COT Report does not support a need for widespread withdrawal above and beyond the many measures being implemented in the Northern or Western Great Basin Priority Areas.

The FWS Listing Decision Does Not Support the SFA Boundaries In 2010 the FWS was aware only "of approximately 63,000 acres of existing mining related disturbance within the range of sage-grouse."<sup>26</sup> The notice indicates that mining related disturbance has not changed. Yet the FWS supports its own "recommendations for mineral withdrawal in SFAs that would remove potential impacts on approximately 10 million acres of sage-grouse habitat."<sup>27</sup> The FWS only concludes with reference to the Ashe Memo that "The Federal Plans designate the most important sagebrush habitat as SFAs where locatable mineral withdrawal is recommended... Within the areas of greatest conservation importance (SFAs), DOI will recommend withdrawal from locatable mineral entry." The findings again state that the threat of mining is localized rather than widespread. The FWS notes its findings are consistent with the recommendations in the COT Report, that "Minerals are not distributed evenly across the sage-grouse landscape, and as a result, mining activities tend to be localized or regional."<sup>80</sup> Fed. Reg. 59,915; See previous citations about mining impacting 0.1% of the 173 million total acres of greater sage-grouse habitat. Again, an Agency may not adopt wholesale another Agency's conclusions unless those conclusions are supported by the best available science. 40 C.F.R. § 1502.24. The FWS listing decision at 80 FR 59872 discusses the COT Report and new scientific information. Even here the findings reference the Ashe Memo discussed above to support the strongholds.<sup>28</sup> This Memo, as discussed above, does not support the strongholds with any citation to science or supporting analysis. Because the FWS never supported its request to add the strongholds with scientific citation or analysis, the BLM may not rely on the FWS's conclusion or request to support the strongholds.

We also recommend that the 2018 FEIS incorporate by reference the October 2016 Mineral Potential Report and Sagebrush Mineral Resource Assessment that the U.S. Geological Survey ("USGS") prepared for BLM. In our comments on the 2015 FEIS, we stressed that one of the many reasons the document was insufficient and did not comply with NEPA was because it lacked <https://pubs.usgs.gov/sir/2016/5089/b/sir20165089b.pdf> sections describing the Affected Environment and Environmental Consequences to Geology and Mineral Resources. Incorporating the October 2016 USGS Mineral Potential Report would cure this deficiency. It is not currently included in the references section in the 2018 DEIS or specifically incorporated by reference and needs to be added.

3 3-1 3.1.1 Section 3.1.1 focuses only on sage-grouse literature since 2015. USGS reports referenced only focus on science since Jan 2015. Eureka County (and others) submitted volumes of peer reviewed scientific papers that existed in 2015 that the BLM either omitted or ignored in the prior LUPA process. Our comment letter on the prior EIS specifically referenced this data along with scientific sources and asked for them to be included. We ask that the BLM now consider and synthesize this previously-submitted data demonstrating the previous EIS being flawed and not based on the best available science, incorporated herein by reference. See Eureka County Comments on DEIS, filed January 29, 2014, at 55-62. This science must also be considered and incorporated. Eureka County provided pages of information regarding this previously omitted science. The late Kent McAdoo and Dr. Sherm Swanson also provided information about the many papers and studies BLM failed to include. Also, Dr. Bill Payne, Dean of UNR CABNR, provided a review highlighting the previous omission of Nevada specific studies on sage grouse and various land use impacts to sage grouse, especially grazing. It is crucial that BLM consider and incorporate the previously omitted science and the new science since 2015. Given Eureka County's desire to apply Table 2-2 through the lens of ESD, associated State and Transition Models, Disturbance Response Groups and current ecological state of the cite, it should also incorporate pertinent science specific to the proper application and implementation of such information and tools. This includes, but is not limited to the following studies: ? BOLTZ, S., AND G. PEACOCK. 2002.



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3 3-2 Bullet 2 We have strong concern with the following statement, "the authors found strong selection and positive survival for high horizontal cover and total shrub cover during nesting and late broodrearing across all sites." Please remove this statement and replace with "selection and positive survival relationships with vegetation (grass and shrub) cover during nesting and late broodrearing across still exist. Evidence for a ubiquitous positive relation between grass height and nest success was either greatly diminished (Gibson and others, 2016a) or not supported (Smith and others, 2017b), although some studies that corrected for phenology still support this relation (Smith and others, 2017b; Coates and others, 2017a). Indicator values for grass height need to be examined to ensure they have not been derived from studies using vegetation data collected at different times for successful and unsuccessful nests without applying correction factors and are geographically appropriate." The second bullet mischaracterizes Gipson et al (2016) and links Gipson to the conclusion that "the authors found strong selection and positive survival for high horizontal cover and total shrub cover during nesting and late brood-rearing across all sites." Yet, the USGS points out many studies that do not necessarily make this conclusion. USGS explicitly states that "Indicator values for grass height contained in the habitat objectives tables of the 2015 BLM land use plans...may need to be examined to ensure they have not been derived from studies using vegetation data collected at different times for successful and unsuccessful nests without applying correction factors (Gibson and others, 2016a) and that science findings are geographically appropriate." Examples referenced and discussed by USGS include Gipson et al. (2016) and Smith et al. (2017). Gibson et al. (2016), concluded that "the correlation between grass height and nest success could instead be due to a built-in bias in timing of when vegetation is measured around hatched and Page 33 of 89 failed nests. If habitat measurements are made immediately after researchers determine fate of a nest (either failure or hatch), measurements may be taken weeks later at successful nests than at failed nests, which allows grasses more time to grow. Because the nesting season occurs in the spring during green-up - when grasses can grow more than a half an inch a week - it appears that hatched nests are surrounded by taller grass. Dr. Gibson's study suggested this timing bias is the reason that so many studies have concluded that tall grass is important for concealing nests from predators" (as discussed in Sage Grouse Initiative, Taking the Bias Out of Grass Height Measurements, Science to Solutions Series Number 15, at 4 (2017)). Smith et al. (2017) "re-analyzed data from three independent studies that previously showed a correlation between grass height and nest

success. Smith and his team reevaluated data from studies in the Powder River Basin of southeast Montana and northeast Wyoming (Doherty study), Smith's own research in central Montana, and a site in northeast Utah. When combined with Gibson's research in Nevada, the studies encompassed 1,204 sage grouse nests over 24 study site-years from across the range of sage grouse. In Gibson's study, measurements of vegetation were made at the expected hatch date for all nests, regardless of their actual outcome. This minimized any difference between failed and hatched nests in when vegetation was measured. Gibson then used a linear regression to predict vegetation height at the date of nest fate, simulating the biased methods common in other sage grouse nesting studies. For his study, Smith used the data that was collected at nest fate - the biased way - and applied the reverse correction to obtain grass heights as though they had been sampled using unbiased methods. Smith found that, when uncorrected, all of the datasets revealed a strong correlation between grass height and nest success. However, following the simple correction to account for bias, there was no longer any association between grass height and nest success in two of the three studies, while the association was slightly reduced in strength but still apparent in the third Powder River Basin. At hatch date, median grass heights at hatched and failed nests were within just 0.05 inches of one another across all re-analyzed datasets. Overall, the research strongly affirmed Gibson's initial findings and suggests that the height of grass is not nearly as crucial to sage grouse nesting success as previously thought" (also as discussed in Sage Grouse Initiative, Taking the Bias Out of Grass Height Measurements, Science to Solutions Series Number 15, at 4 (2017))

Appendix A Figure 1-2a Apply to all similar maps: Please map the overall Habitat Management Area (HMA), assumed to be the overall extent (perimeter) of Habitat Area, for sake of clarity. Appendix A Figure 1-2b Apply to all similar maps: Please map the overall Habitat Management Area (HMA) for sake of clarity. This should match the Sage-grouse Management Area (SGMA) now referred to as the Sage-grouse Management Category Area (SGCMA), or spatial extent (overall perimeter) of GRS management in Nevada, as adopted by the Sagebrush Ecosystem Council in December 2015. Appendix A Figure 2-2a It should be noted that there is mapped habitat from Figure 1-2a that falls outside of the BSUs and Lek Clusters. Appendix A Figure 2-2b It should be noted that portions of the updated BSUs and Lek Clusters fall outside of the HMA (BLM) or SGCMA (Nevada Plan). The HMA/SGCMA boundary should be added to this map to better illustrate this issue. Appendix A Figures 2-3b to 2-13b All "Allocation Specific Maps" under the Management Alignment Alternative should include a note under any mapped allocation restriction (i.e. closed, exclusion, avoidance, retention, limited, etc.) Page 41 of 89 that such allocations restrictions are subject to ground-truthing of mapped / modeled habitat as well as the exception process.

The OMB standard was not followed in the peer review of the so called "best available science" throughout the DEIS. For example, both the Sage-Grouse National Technical Team Report (NTT Report) and the FWS Greater Sage-Grouse Conservation Objectives Final Report (COT Report) are heavily relied throughout the DEIS alternatives but these documents did not follow the OMB standard for peer review. We point out specific issues related to both reports and other science in the DEIS in more detail below. Scientific research and documentation used within the DEIS is limited in scope to repetitive authors and does not adequately incorporate recent rangeland research or current understandings of rangeland dynamics and largely omits rangeland scientists and other rangeland professionals. Proper peer review and adoption of the full range of best and current science is necessary for consideration and adoption by BLM prior to the Final EIS and ROD.

Selection of the proper inventory or monitoring techniques and interpretation of the data will only be acceptable when performed by people whose judgment is the result of successful experience and well developed skills. Technical guidance as found within peer reviewed scientific publications and various agency or interagency handbooks and manuals serves as reference material and may be incorporated into this document upon approval by the Board of Eureka County Commissioners. Suitable reference material is included as attachments to Page 58 of 89 this plan or by reference within the text. Reference material includes, for example: the Nevada Best Management Practices, USDA Natural Resource Conservation Service Range and Pasture Handbook, Nevada Rangeland Monitoring Handbook (1984 First Edition or 2006 Second Edition), Standards and Guidelines for Grazing Administration as written by the Association of Rangeland Consultants, March 12, 1996, Standards and Guidelines as written by the Northeast Great Basin Resource Advisory Council. o There is limited to no mention or incorporation of these peer reviewed and technically sound references that were developed specifically for Nevada.

"Monitoring: Document ecological status and trend data obtained through rangeland studies supplemented with actual use, utilization (use pattern mapping), and climatic data in accordance with the Nevada Rangeland Monitoring Handbook; Document ecological sites or forage suitability groups, and ecological similarity index as defined by NRCS National Range and Pasture Handbook, with specific reference to ecological status and trend data and "State and Transition" interpretations of ecological status; Document progress in the development and implementation of Allotment Management Plans; Document the development and implementation of Pinyon pine, juniper, and shrub abatement, control, or harvest plan(s); Annually review and document wild horse herd population inventories, and conduct inventories when necessary, including reports of wild horse movement, grazing habits, numbers and other data provided by permittees, lessees and landowners" (p. 6-11) These required monitoring components have not been completed as required by our Master Plan and therefore, the analysis is lacking and flawed since the data was minimal and the data quality going into the development of the DEIS was poor.

"Identify and initiate reductions in stocking levels only after monitoring data demonstrates that grazing management including range improvements and specialized grazing systems are not supporting basic soil, vegetation and watershed goals" (p. 6-14). o The monitoring proposals in the DEIS focus on blanket criteria, utilization standards, and indicator based approaches. These are fine only as long as they help focus where additional monitoring is needed and to make adjustments in management along the way. The DEIS proposed to reduce and restrict grazing based on these subjective monitoring techniques. Trend monitoring, over multiple years, and objective monitoring of ecosystem function is imperative before any reduction or restriction in grazing. Snapshot monitoring at one point in time (as is often the case with the qualitative techniques) does not inform on whether progress is being made towards objectives and standards.

Any future adjustments should be based on the best available science developed and refined by local experts and partners specific to the habitat and conditions found in Nevada, rather than other habitats located outside of the Great Basin.

### **G.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."<sup>90</sup> BLM also admits that, "Projects that would likely be precluded under the No Action Alternative could proceed under the 2018 proposed amendments."<sup>91</sup> 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.<sup>93</sup>

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.<sup>94</sup> 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.<sup>95</sup>

**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. <sup>66</sup> 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

### **G.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.

### **G.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.<sup>61</sup> 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,<sup>62</sup> 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.<sup>63</sup> 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.<sup>64</sup> \*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.<sup>55</sup> 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.<sup>56</sup> 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.<sup>57</sup> The USGS Synthesis has confirmed the importance of maintaining connectivity between different sage-grouse populations to conserve genetic diversity.<sup>58</sup> 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.<sup>59</sup> 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.<sup>60</sup> A just-released U.S. Forest Service study (Cross 2018) attempted to quantify the importance of connectivity across the sagebrush range.<sup>61</sup> 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,<sup>62</sup> 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.<sup>63</sup> 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.<sup>64</sup> [See Attachment PG 37 and 38] 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.

**VII. GENERAL HABITAT MANAGEMENT AREAS SHOULD BE MAINTAINED.** The Utah DEIS would eliminate all protections for general habitat.<sup>47</sup> Other states would weaken protections for sage-grouse in general habitat;<sup>48</sup> Idaho, for example would eliminate lek buffers, reduce the application of required design features, and eliminate compensatory mitigation in general habitat.<sup>49</sup> 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,<sup>50</sup> their designation is still important to sage-grouse conservation. The FWS 2015 Sage-grouse Listing Decision states: The designation as GHMAs provide 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 GHMAs will likely be less than in PHMAs due to less stringent required conservation measures, GHMAs do have restrictions that benefit sage-grouse conservation.<sup>51</sup> It is important to ensure that seasonal habitats not included in priority areas receive some protection,<sup>52</sup> 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.<sup>53</sup> 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.<sup>54</sup>

In addition, general habitat can serve as a location for compensatory mitigation offsets and restoring degraded habitat.<sup>53</sup> 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.<sup>54</sup> 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.<sup>55</sup> 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.<sup>56</sup> 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.<sup>57</sup> The USGS Synthesis has confirmed the importance of maintaining connectivity between different sage-grouse populations to conserve genetic diversity.<sup>58</sup> 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.<sup>59</sup> 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.<sup>60</sup>

### G.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.<sup>153</sup> 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.<sup>150</sup> 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."<sup>151</sup> Examples of appropriate plan maintenance provided in the BLM Land Use Planning Handbook include



"correcting minor data, typographical, 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."<sup>152</sup> 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.

### **G.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.

### **G.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.

### **G.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.<sup>67</sup> 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.<sup>68</sup> 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. <sup>69</sup> 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.<sup>70</sup> 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.<sup>71</sup> 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.

**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.<sup>65</sup> 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."<sup>66</sup> 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.<sup>67</sup> 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.<sup>68</sup> 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. <sup>69</sup> 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.<sup>70</sup> 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.<sup>71</sup> 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.

### **G.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.<sup>100</sup>

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.<sup>4</sup> 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 study<sup>101</sup> recommended there be 5 km (3.1 miles) between leks and infrastructure related to energy development.<sup>102</sup> 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.<sup>103</sup> 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.<sup>104</sup> 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.<sup>105</sup> ? 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.<sup>106</sup> 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.<sup>107</sup> 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.<sup>108</sup> 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.<sup>109</sup> 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.<sup>96</sup> Other DEISs also increase the degree of discretion afforded to decrease or increase<sup>97</sup> buffers.<sup>98</sup> Still other DEIS propose to provide "clarification" for lek buffers without stating what form that clarification would take.<sup>99</sup> 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.

### G.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.<sup>112</sup> 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.<sup>113</sup> 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,"<sup>135</sup> 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.<sup>136</sup> This general authority also confers broad discretion on BLM to impose mitigation requirements on project applicants, including compensatory mitigation in appropriate circumstances.<sup>137</sup> 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."<sup>138</sup> A 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".<sup>148</sup> 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.<sup>149</sup> 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.<sup>120</sup> This direction guides every significant aspect of the management of public lands under FLPMA, including the development of land management plans,<sup>121</sup> project-specific authorizations for the use, occupancy, development of public lands,<sup>122</sup> the granting of rights of way on public lands,<sup>123</sup> and the promulgation of regulations to implement each of these authorities.<sup>124</sup> 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.<sup>125</sup> 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.<sup>133</sup> 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".<sup>134</sup> 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.<sup>142</sup> 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.<sup>143</sup> 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."<sup>144</sup> The DEISs also state that, "The BLM will work to be consistent with or complementary to the management actions in [state] plans whenever possible."<sup>145</sup> 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).<sup>146</sup> 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.<sup>147</sup> 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".<sup>126</sup> The principles of multiple use and sustained yield pervade and underpin each of BLM's authorities under FLPMA, including the policies governing the Act,<sup>127</sup> the development of land use plans,<sup>128</sup> the authorization of specific projects,<sup>129</sup> and the granting of rights of way.<sup>130</sup> 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...<sup>131</sup> 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".<sup>132</sup> 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".<sup>14</sup> 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. I 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." I 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". I 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. I 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. I 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). I 46 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. I 47 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*.<sup>139</sup> 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.<sup>140</sup> 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."<sup>141</sup> 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.<sup>110</sup> 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.<sup>111</sup> 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.

### **G.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.<sup>46</sup> 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.

### **G.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 BLMPAPO web page (<http://www.wy.blm.gov/jjo-papo/>). Instead the analysis drew comparisons only to a study conducted in Lander WY.

### **G.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.

### **G.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. 1-25): . . . 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. 1-18 - 1-19). 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.<sup>44</sup> 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."<sup>45</sup>

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](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.

### **G.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 Env'tl 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.

### **G.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.

#### **G.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, I-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, I-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.

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 1-8. 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, 1-8, 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, 1-6. 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.

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.

### **G.3.22 Greater 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.<sup>2</sup> 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 . . . 3See, 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

### **G.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.

### **G.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.<sup>46</sup> 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.

#### **G.4 NEVADA-CALIFORNIA-SPECIFIC COMMENTS**

##### **G.4.1 Purpose and Need**

The purpose and need of the DEIS is too narrowly focused and a shift from the original 2015 EIS and analysis of the range of alternatives.

The purpose and need of the DEIS is too narrowly focused and a shift from the original 2015 EIS and analysis of the range of alternatives.

BLM'S purpose and need violates NEPA. BLM is employing an unlawful "purpose and need" for the Draft EIS. 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 EIS that forecloses consideration of any alternative that does not "align with individual state plans. . . ." See NV/CA Draft EIS 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 EIS. According to the Draft EIS, "[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." NV/CA Draft EIS 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 NV/CA Greater Sage-Grouse Approved RMP at I-8. Yet, BLM has totally and impermissibly eliminated this fundamental objective from the Draft EIS. 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].").

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 and need of the 2018 Draft EIS, pursuant to Secretarial Order 3353, is to "contribut[e] to economic growth and energy independence" (NV/CA Draft EIS at 2-3), or, in other words, increase development opportunities on public lands. Therefore, BLM cannot base the pro-development alternatives in its 2018 Draft EIS 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.

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.

I 1-3 2-10 It is crucial that BLM ensure the Purpose and Need is based on legal authorities and requirements. This section could better bolster the legal foundation for any changes that flow from this EIS, including an explanation of the Court Order

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.

Purpose/Need for proposed amendments: First of all, I am unaware of any "new" or old scientific information which supports "refinements" to the 2015 GRSG conservation plans. In fact, the draft EIS fails to provide credible scientific support for any of the proposed changes. As a participant in the development of GRSG conservation plans in Nevada and Eastern California, I was concerned that the plans were not restrictive enough in addressing the major threats to GRSG, including loss and fragmentation of habitat especially by wildfires and invasive weeds in Nevada and the lack of regulatory certainty by land and resource managers to address these problems.

#### **G.4.2 Issues Dismissed from Detailed Analysis**

**Disturbance and Density Caps** The contribution of disturbance caps toward greater sage-grouse conservation was not considered in the RMPA/EIS. WREC believes the requirement of a three percent disturbance cap discourages the clustering of anthropogenic disturbances and encourages a project proponent to search for an area that is not currently disturbed to pursue a project. Standards and Guidelines throughout the current Plan, that would be applied regardless of Alternative A or B in the RMPA/EIS, call for disturbances to be grouped together; however, many are not able to be grouped due to the three percent disturbance cap. WREC POWER ENGINEERS, INC. PAGE 4 experienced this frustration directly with a recent new distribution line ROW application. Despite placing the distribution line in close proximity to an interstate highway, a town, a housing subdivision, a state highway, an open-pit mine, and a railway, WREC was told the distribution line could not be approved because it was above the three percent disturbance cap. WREC requests flexibility be developed into the three percent



disturbance cap to accommodate for clustering proposed projects in areas that are already disturbed, and not restricting them based on the level of current disturbance in the Final RMPA/EIS.

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.

Because ravens (and other corvids) are protected under the Migratory Bird Treaty Act, neither the Federal or State plans regarding greater sage-grouse management adequately address the predation issue. It is imperative that an earnest analysis of the predation problem be addressed by the planning process.

The final decision regarding greater sage-grouse must report 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 where they interfere with other management objectives.

NCA recognizes the rationale provided here why additional analysis will not occur for Wild Horses and Burros (WHB). However, the provisions and management decisions related to WHB in the previous process have not been adhered to. The EIS should address this issue and be frank and propose real, actionable solutions to the WHB issue that were not identified in the previous EIS. The previous EIS failed to acknowledge that WHB remain on the public lands on a year-round basis and are not managed for the benefit of the rangeland resource that supports their very existence. Impacts to key habitats by unchecked horse populations cannot continue to be ignored. Only their numbers are attempted to be controlled, but with minimal success. There typically are no rest periods for the range in HAs or HMAs, riparian areas nor wetland meadows. Numbers control is all that the BLM has available to them today to effectively manage horses, and Congress has again placed prohibition on how BLM can use funding to address excess on-range WHB. In addition, any attempts to restore rangelands to benefit GSG within HMA's is improbable due to the restrictions that would be applied when attempting to protect a new seeding or defer use from an area for a period of time to allow for natural regeneration. Fencing and other structural improvements would also become a real challenge. Given the actual performance record of BLM and the exceedingly out-of-control numbers, how will the actual corrections be brought about that the previous EIS proposed?

This fails to point out the limiting factor on raven control, limited take. State wildlife and agricultural agencies have a limited take based on a permit issues by USFWS, because of the Migratory Bird Treaty Act. This has hamstrung the ability to implement the appropriate scale and duration of raven control. This has resulted in the "science" that exists and is biased because the science was based on discrete timeframes and not sustained efforts. However, since the EIS fails to properly analyze predator control, the answers will not be found in this process. That is partially why NCA advocates for adequately analyzing predator control in this EIS.

BLM previously argued and is adopting by reference that the issues of hunting and predator control are outside of their jurisdiction and authority. It is impossible to holistically frame management without analyzing the cumulative effects and recognizing their role. Also, the agencies with jurisdiction by law and special expertise on the issue of hunting and predation are cooperating agencies (e.g., FWS, NDOW,

USDA, NDA, counties). It is not an issue of whether or not BLM can implement predator control, but it is an issue of the magnitude of predation as a factor in causing the decline in sage-grouse populations that needs to be in the analysis to provide perspective on how effective management actions under the authority of BLM will be in sustaining sage-grouse populations and habitats. The BLM NEPA Handbook speaks to "expanding the scope of a NEPA analysis to consider connected and cumulative actions of all cooperating agencies into a single document improve overall interagency coordination" (p. 112). Also, the CEQ regulations speak to streamlining and eliminating duplication while satisfying NEPA (40 CFR 1506.2(b)). CEQ guidance is clear that even items not under full or even partial control of BLM/USFS must still be analyzed when connected and when a major component. As highlighted in the BLM NEPA Handbook (H-1790-1) and mandated by law, the EIS must "rigorously explore and objectively evaluate all reasonable alternatives" (40 CFR 1502.14(a) and NEPA Sec. 102(2)(C)(iii)) and "study develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources" (NEPA Sec. 102(2)(E)). \* Of note is that "[i]n determining the alternatives to be considered, the emphasis is on what is 'reasonable' rather than on whether the proponent or applicant likes or is itself capable of implementing an alternative. 'Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable...' (Question 2a, CEQ, Forty Most Asked Questions Concerning CEQ's NEPA Regulations, March 23, 1981)" (BLM NEPA Handbook p. 50). Further, CEQ provides guidance on framing "relevant, reasonable mitigation measures" even if they are outside the jurisdiction of the agency Question 19ba, CEQ, Forty Most Asked Questions Concerning CEQ's NEPA Regulations, March 23, 1981). Further, "while some mitigation strategies are within the BLM's control...most mitigation strategies require action by other government entities-typically cities, counties, and State agencies...the relevant, reasonable mitigation measure are likely to include mitigation measure that would be carried out by other Federal, State or local regulatory agencies or tribes. Identifying mitigation outside of BLM jurisdiction serves to alert the other agencies that can implement the mitigation. (BLM NEPA Handbook p. 62). It is very clear in CEQ regulations (specifically 1502.14(f) and 1502.16(h)) that speak to mitigation irrespective of jurisdiction. Also, the CEQ FAQ 19b is very clear in presenting the CEQ guidance related to this exact issue (in which guidance has been in place since 1981): 19b. "How should an EIS treat the subject of available mitigation measures that are (1) outside the jurisdiction of the lead or cooperating agencies, or (2) unlikely to be adopted or enforced by the responsible agency? A. All relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperating agencies, and thus would not be committed as part of the RODs of these agencies. Sections 1502.16(h), 1505.2(c). This will serve to [46 FR 18032] alert agencies or officials who can implement these extra measures, and will encourage them to do so. Because the EIS is the most comprehensive environmental document, it is an ideal vehicle in which to lay out not only the full range of environmental impacts but also the full spectrum of appropriate mitigation. However, to ensure that environmental effects of a proposed action are fairly assessed, the probability of the mitigation measures being implemented must also be discussed. Thus, the EIS and the Record of Decision should indicate the likelihood that such measures will be adopted or enforced by the responsible agencies. Sections 1502.16(h), 1505.2. If there is a history of non-enforcement or opposition to such measures, the EIS and Record of Decision should acknowledge such opposition or non-enforcement. If the necessary mitigation measures will not be ready for a long period of time, this fact, of course, should also be recognized." Just because hunting and predation are outside of BLM jurisdiction does not mean that the analysis and subsequently identified mitigation are unnecessary or not required. How can BLM address all connected GSG impacts and actions without analyzing predators and hunting effects and identifying proper mitigation? The full picture

will not be answered and the analysis falls short in disclosing what can be done, holistically, to address GSG conservation. It can be demonstrably argued that predation, previously identified as a USFWS-identified threat is a significant issue and that analysis of this issue is necessary to make a reasoned choice between alternatives, especially since the Nevada State Plan includes scientifically-based predator control. Predation and predator control are significant issues that should be analyzed.

The 2015 RMPA erred, and the 2018 DRMPA errs, in refusing to address predator control, particularly avian predator control.

the RMPA should address and require control of sage grouse predators.

Of addition concern in the DRMPA is the lack of consideration of across-the-board declines in habitat or sage-grouse numbers due to climate in the region (Nevada and NE California) and the West. The 2018 DRMPA appears to ignore these larger climate groups in its process. Coates et al. 2017 expressly calls for identifying changes "from the top down"; that is, are similar trends occurring throughout the range, or within the Great Basin that are not occurring throughout the range; or are occurring throughout Nevada that are not occurring in the remainder of Great Basin; or that are occurring within one or more of the climate clusters that are not occurring in the others? Coates et al. 2017 contrasted the smaller scale clusters (that is, lek and neighborhood cluster) against the climate cluster, and the climate cluster was contrasted against the region. See Coates et al. 2017 page 8 (pdf 18). The RMPA should adopt this approach.

**ROLE OF SCIENCE—PREDATORS AND NOISE** Sadly, two important issues were eliminated from further study in the 2018 EIS—predators and the impacts of noise on Greater sage-grouse. Predation has been shown to be a significant factor in Nevada (Coates et al. 2007\*, followed by multiple papers since and as recent as 2016). The rapid increase of predators in Nevada has been linked to land management and anthropogenic changes that the BLM should consider in future decisions, even if raven management is not practical. \*[Efficacy of CPTH-treated egg baits for removing ravens]

I also wish to protest the failure to re-engage on the noise limitations (Appendix K, 2015 FEIS). This regulation is not based on science. In fact, inclusion of Amstrup and Phillips 1977 based on a comment, shows that science is not the motivation for this regulation; given that the statement supported by this citation states that noise does not diminish rapidly with distance, whereas noise does diminish in a predictable manner, following fundamental rules of physics. The BLM's 2015 FEIS addresses noise on pages 4-16 to 4-18. However, none of the references cited in these sections are studies with stated hypotheses related to noise or identify specific noise levels that cause harm to the Greater sage-grouse. Many of the studies cited have no specific data on noise, and nearly all of them are merely speculative or cite other documents that also do not have any data regarding impacts of noise on Greater sage-grouse. About two-thirds of the references actually mention Greater sage-grouse, though many are not directly related to noise, and none appear to have actual field data related to noise and Greater sage-grouse. Most basic to a scientific-based argument is to cite the references used to build an argument precisely enough that the reader can fact check your interpretation of previous work. The exercise of trying to determine at what levels noise affects Greater sage-grouse and to verify the argument for regulating noise is complicated by the fact that the reference list in the FEIS (2015, provided in Chapter 7) is not complete or consistent (Patricelli et al. 2013; Blickley and Patricelli 2012/2013?; Patricelli and Blickley 2012) with the citations provided in these short two pages. Further, not all references are easily obtainable (Amstrup and Phillips 1977; Kaiser 2006; Blickley and Patricelli 2012/2013?; Patricelli and

Blickley 2012). These failings violate requirements of the Data Quality Act. Failures such as not anchoring regulations in science, and compounding that by not making the science used available to the public, only invite lawsuits and leave project proponents with little trust that their expenditures actually have an impact on the environment as we would hope.

ES-3.3 ES-7 P 2, Bullet 8 NACO struggles with including "Recreation" under "resource topics dismissed from detailed analysis", given public land recreation's direct link with access to public lands and the potential changes to Comprehensive Travel Management. At a minimum, this linkage should be acknowledged.

I 1-11 24-25 Hunting and predator control should be analyzed in the EIS. BLM previously argued and is adopting by reference that the issues of hunting and predator control are outside of their jurisdiction and authority. It is impossible to holistically frame management without analyzing the cumulative effects and recognizing their role. Also, the agencies with jurisdiction by law and special expertise on the issue of hunting and predation are cooperating agencies (e.g., FWS, NDOW, counties). It is not an issue of whether or not BLM can implement predator control, but it is an issue of the magnitude of predation as a factor in causing the decline in sage-grouse populations that needs to be in the analysis to provide perspective on how effective management actions under the authority of BLM will be in sustaining sage-grouse populations and habitats. The BLM NEPA Handbook speaks to "expanding the scope of a NEPA analysis to consider connected and cumulative actions of all cooperating agencies into a single document improve overall interagency coordination" (p. 112). Also, the CEQ regulations speak to streamlining and eliminating duplication while satisfying NEPA (40 CFR 1506.2(b)). CEQ guidance is clear that even items not under full or even partial control of BLM/USFS must still be analyzed when connected and when a major component. As highlighted in the BLM NEPA Handbook (H-1790- 1) and mandated by law, the EIS must "rigorously explore and objectively evaluate all reasonable alternatives" (40 CFR 1502.14(a) and NEPA Sec. 102(2)(C)(iii)) and "study develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources" (NEPA Sec. 102(2)(E)). Of note is that "[i]n determining the alternatives to be considered, the emphasis is on what is 'reasonable' rather than on whether the proponent or applicant likes or is itself capable of implementing an alternative. 'Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable...'" (Question 2a, CEQ, Forty Most Asked Questions Concerning CEQ's NEPA Regulations, March 23, 1981)" (BLM NEPA Handbook p. 50). Further, CEQ provides guidance on framing "relevant, reasonable mitigation measures" even if they are outside the jurisdiction of the agency (Question 19ba, CEQ, Forty Most Asked Questions Concerning CEQ's NEPA Regulations, March 23, 1981). Further, "while some mitigation strategies are within the BLM's control...most mitigation strategies require action by other government entities-typically cities, counties, and State agencies...the relevant, reasonable mitigation measure are likely to include mitigation measure that would be carried out by other Federal, State or local regulatory agencies or tribes. Identifying mitigation outside of BLM jurisdiction serves to alert the other agencies that can implement the mitigation. (BLM NEPA Handbook p. 62). It is very clear in CEQ regs (specifically 1502.14(f) and 1502.16(h)) that speak to mitigation irrespective of jurisdiction. Also, the CEQ FAQ 19b is very clear in presenting the CEQ guidance related to this exact issue (in which guidance has been in place since 1981): 19b. "How should an EIS treat the subject of available mitigation measures that are (1) outside the jurisdiction of the lead or cooperating agencies, or (2) unlikely to be adopted or enforced by the responsible agency? A. All relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are

outside the jurisdiction of the lead agency or the cooperating agencies, and thus would not be committed as part of the RODs of these agencies. Sections 1502.16(h), 1505.2(c). This will serve to [46 FR 18032] alert agencies or officials who can implement these extra measures, and will encourage them to do so. Because the EIS is the most comprehensive environmental document, it is an ideal vehicle in which to lay out not only the full range of environmental impacts but also the full spectrum of appropriate mitigation. However, to ensure that environmental effects of a proposed action are fairly assessed, the probability of the mitigation measures being implemented must also be discussed. Thus, the EIS and the Record of Decision should indicate the likelihood that such measures will be adopted or enforced by the responsible agencies. Sections 1502.16(h), 1505.2. If there is a history of non-enforcement or opposition to such measures, the EIS and Record of Decision should acknowledge such opposition or non-enforcement. If the necessary mitigation measures will not be ready for a long period of time, this fact, of course, should also be recognized." Just because hunting and predation are outside of BLM jurisdiction does not mean that the analysis and subsequently identified mitigation are unnecessary or not required. How can BLM address all connected GRSG impacts and actions without analyzing predators and hunting effects and identifying proper mitigation? The full picture will not be answered and the analysis falls short in disclosing what can be done, holistically, to address GRSG conservation. It can be demonstrably argued that predation, previously identified as a USFWS-identified threat is a significant issue and that analysis of this issue is necessary to make a reasoned choice between alternatives, especially since the Nevada State Plan includes scientifically-based predator control. Predation and predator control are significant issues that should be analyzed.

I 1-12 2-3 While the resource topics of "Wildland Fire and Fire Management" and "Wild Horse and Burros" are suggested for dismissal from detailed analysis due to no potentially significant impacts from actions in this EIS, proper management of these two issues is still a top priority for local government. Further, an additional 10,000 horses have been born in Nevada, and over 1 million acres of wild land have burned since 2015 with additional impacts (not counting the ½ million + acres that have already burned this fire season). NACO recognizes the rationale provided here why additional analysis will not occur for Wild Horses and Burros (WHB). However, the provisions and management decisions related to WHB in the previous process have not been adhered to. The EIS should address this issue and be frank and propose real, actionable solutions to the WHB issue that were not identified in the previous EIS. The previous EIS failed to acknowledge that WHB remain on the public lands on a year-round basis and are not managed for the benefit of the rangeland resource that supports their very existence. Only their numbers are attempted to be controlled, but with minimal success. There typically are no rest periods for the range in HAs or HMAs, riparian areas nor wetland meadows. Numbers control is all that the BLM have available to them today to effectively manage horses, and Congress has again placed prohibition on how BLM can use funding to address excess on-range WHB. In addition, any attempts to restore rangelands to benefit GRSG within HMA's is improbable due to the restrictions that would be applied when attempting to protect a new seeding or defer use from an area for a period of time to allow for natural regeneration. Fencing and other structural improvements would also become a real challenge. Given the actual performance record of BLM and the exceedingly out-of-control numbers, how will the actual corrections be brought about that the previous EIS proposed? Beyond excuses for not having enough resources, what confidence can there be that BLM will not continue to practice the management process of "do as we say, not as we do"? BLM should not "target" the uses of public land that are easypicking without first addressing the mismanagement of the uses that are under the primary jurisdiction of the BLM itself. The BLM's failure to properly manage WHB has created a situation, in

many cases, where the burden is now on the other users of the land, primarily wildlife (including GRS) and ranchers, to pay the price for BLM's shortfall. See County Needs Attachment

ES-3.3 ES-7 P 2, Bullet 8 We cannot understand with including "Recreation" under "resource topics dismissed from detailed analysis" given public land recreations direct link with access to public lands and the potential changes to Comprehensive Travel Management. At a minimum, this linkage should be acknowledged.

#### **G.4.3 Habitat Boundary/ Habitat Management Area Designations**

**Modifying Habitat Management Area Designations** The inflexible application of the habitat maps in the 2015 FEIS and Great Basin Region and Rocky Mountain Region Records of Decision ("RODs") was inappropriate because these landscape-scale maps have not been field-verified. As discussed in Section II. B., these landscape-scale maps are inconsistent with Congress' rejection of BLM's Planning 2.0 Rule and current Executive and Secretarial Orders that have revoked landscape-scale land use planning and mitigation policies. PGC is thus pleased that the 2018 DEIS recognizes the need for site-specific habitat data to inform land use decisions. We also strongly support BLM's proposal to use plan maintenance to incorporate new, on-the-ground habitat data rather than requiring a plan amendment.

PGC would like to embrace and emphasize the importance of BLM's acknowledgement that . . .the habitat management area designations (Figure 2-1b) do not constitute a land use plan decision but rather a landscape level reference of relative habitat suitability." (DEIS at 2-6). This is a key element of BLM' s Preferred Alternative that must be included in the Preferred Alternative in the FEIS. PGC recommends that the legend on the maps in Appendix A be modified to include a statement that site-specific, field-verified habitat data are required to make project-specific land use decisions and that these maps are not to be used to make site-specific land use decisions.

The 2018 FEIS and amended LUP should establish that Best Available Scientific Data comprised of site-specific, field-verified habitat maps are to be used in making project-specific land use decisions. Land use decisions that impose land use restrictions that impede or affect multiple uses including but not limited to lek buffer zones, seasonal and temporal travel restrictions, required design features, noise limits, and disturbance caps should be limited to areas with field-verified important habitat. Land use restrictions must not be based solely on landscape-scale habitat maps developed with remote sensing data and modeling. In the case of mineral exploration and development projects, land use restrictions must not interfere with claimants' rights to enter, occupy, and use the public lands for mineral purposes pursuant to the U.S. Mining Law. PGC's recommendation to base land use decisions on field-verified habitat data will improve the protection of actual and important GSG habitat while eliminating arbitrary and unnecessary restrictions on lands with less important habitat - or even no habitat. The use of field-verified habitat maps will insure that BLM's management of GSG habitat will focus on protecting the "best-of-the-best" habitat by applying appropriate land use restrictions and mitigation measures to address site-specific conditions. Using field-verified data will also ensure that any necessary restrictions and mitigation measures reflect the best way to protect important GSG habitat. Basing land use decisions on actual habitat conditions will ensure protection of priority habitat areas while reducing the broad and serious economic hardships to state and local governments, companies, and individuals who use public lands for mineral exploration and development, renewable and conventional energy development, grazing, hunting, guiding, recreation, and other uses.

The Management Alignment Alternative in the 2018 DEIS states that the habitat management maps would be refined and updated with new spatial and telemetry data every three to five years or when new data are incorporated into the model. (DEIS at 2-7). PGC suggests that BLM should continually refine the map with on-the-ground data that would help ground-truth the habitat model data. BLM should capitalize upon the site-specific GIS-based habitat baseline data that permit applicants provide in conjunction with their project proposals. For example, mineral exploration and development proposals submitted pursuant to the 43 CFR Subpart 3809 regulations typically include biological resources baseline studies that contain information on the presence or absence of GSG and GSG habitat. BLM typically uses these data in the NEPA analyses prepared to evaluate these proposals. The GIS-based habitat data collected by project proponents are valuable information that BLM should use to update and refine its habitat classification maps on a more regular basis than every three to five years.

The inflexible application of the habitat maps in the 2015 FEIS and Great Basin Region and Rocky Mountain Region Records of Decision ("RODs") was inappropriate because these landscape-scale maps have not been field-verified. As discussed in Section II. B., these landscape-scale maps are inconsistent with Congress' rejection of BLM's Planning 2.0 Rule and current Executive and Secretarial Orders that have revoked landscape-scale land use planning and mitigation policies. PGC is thus pleased that the 2018 DEIS recognizes the need for site-specific habitat data to inform land use decisions. We also strongly support BLM's proposal to use plan maintenance to incorporate new, on-the-ground habitat data rather than requiring a plan amendment. PGC would like to embrace and emphasize the importance of BLM's acknowledgement that . . .the habitat management area designations (Figure 2-1b) do not constitute a land use plan decision but rather a landscape level reference of relative habitat suitability." (DEIS at 2-6). This is a key element of BLM's Preferred Alternative that must be included in the Preferred Alternative in the FEIS. PGC recommends that the legend on the maps in Appendix A be modified to include a statement that site-specific, field-verified habitat data are required to make project-specific land use decisions and that these maps are not to be used to make site-specific land use decisions. The 2018 FEIS and amended LUP should establish that Best Available Scientific Data comprised of site-specific, field-verified habitat maps are to be used in making project-specific land use decisions. Land use decisions that impose land use restrictions that impede or affect multiple uses including but not limited to lek buffer zones, seasonal and temporal travel restrictions, required design features, noise limits, and disturbance caps should be limited to areas with field-verified important habitat. Land use restrictions must not be based solely on landscape-scale habitat maps developed with remote sensing data and modeling. In the case of mineral exploration and development projects, land use restrictions must not interfere with claimants' rights to enter, occupy, and use the public lands for mineral purposes pursuant to the U.S. Mining Law. PGC's recommendation to base land use decisions on field-verified habitat data will improve the protection of actual and important GSG habitat while eliminating arbitrary and unnecessary restrictions on lands with less important habitat - or even no habitat. The use of field-verified habitat maps will insure that BLM's management of GSG habitat will focus on protecting the "best-of-the-best" habitat by applying appropriate land use restrictions and mitigation measures to address site-specific conditions. Using field-verified data will also ensure that any necessary restrictions and mitigation measures reflect the best way to protect important GSG habitat. Basing land use decisions on actual habitat conditions will ensure protection of priority habitat areas while reducing the broad and serious economic hardships to state and local governments, companies, and individuals who use public lands for mineral exploration and development, renewable and conventional energy development, grazing, hunting, guiding, recreation, and other uses. The Management Alignment Alternative in the 2018 DEIS states that the habitat management maps would be refined and

updated with new spatial and telemetry data every three to five years or when new data are incorporated into the model. (DEIS at 2-7). PGC suggests that BLM should continually refine the map with on-the-ground data that would help ground-truth the habitat model data. BLM should capitalize upon the site-specific GIS-based habitat baseline data that permit applicants provide in conjunction with their project proposals. For example, mineral exploration and development proposals submitted pursuant to the 43 CFR Subpart 3809 regulations typically include biological resources baseline studies that contain information on the presence or absence of GSG and GSG habitat. BLM typically uses these data in the NEPA analyses prepared to evaluate these proposals. The GIS-based habitat data collected by project proponents are valuable information that BLM should use to update and refine its habitat classification maps on a more regular basis than every three to five years.

The County is also concerned about BLM's use of the term "Habitat Management Areas" (HMA), which the County interprets as SGCMA, and the potential for future changes. Page 3 of the State Plan defines SGCMA as, the spatial extent of sage-grouse management in Nevada.

It is unclear to the County if the BLM will expand SGCMA's to match the Coates et al 2016 map, or if the BLM will adopt the State of Nevada SGCMA's (December 2015) and if those areas will change going forward. This clarification is critical to Churchill County as a large portion of the County (including nearly the entire Stillwater Mountains) is mapped by BLM (Figure 1-2a) and Coates et al 2016 as SGCMA (general or other habitat) while the State - adopted mapping (Figure 1-2b) does NOT included this area within the SGCMA.

Furthermore, the current State-adopted SGCMA (or the BLM's HMA if a definition is offered consistent with the State Plan) should be shown on each of these maps so that there is a better understanding of what is being proposed.

Under the Management Alignment Alternative, the NvMA supports the proposed methods to be used to better reflect the current state of science habitat mapping, and on the ground verification of the presence or absence of that habitat.

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.

Modifying Habitat Management Area Designations No-Action Alternative: The BLM's continued reliance on the same maps that it published in the previous LUPA process is highly flawed. These maps are based on analysis described in Coates et al 2014, which has since been updated (Coates et al 2016). Therefore, the use of the previously published maps does not meet the standard of utilizing the "best available science". In the document abstract, Coates et al 2016 specifically lists the updates that were made between 2014 and 2016, by stating: These updates include: (1) adding radio and GPS telemetry locations from sage-grouse monitored at multiple sites during 2014 to the original location dataset beginning in 1998; (2) integrating output from high resolution maps (1-2 rn2 ) of sagebrush and pinyon-juniper cover as covariates in resource selection models; (3) modifying the spatial extent of the analyses to match newly available vegetation layers; (4) explicit modeling of relative habitat suitability during three seasons (spring, summer, winter) that corresponded to critical life history periods for sage-grouse (breeding, broodrearing, over-wintering); (5) accounting for differences in habitat availability between more mesic sagebrush steppe communities in the northern part of the study area and drier Great Basin sagebrush in



more southerly regions by categorizing continuous region-wide surfaces of habitat suitability index (HSI) with independent locations falling within two hydrological zones; (6) integrating the three seasonal maps into a composite map of annual relative habitat suitability; (7) deriving updated land management categories based on previously determined cut-points for intersections of habitat suitability and an updated index of sage grouse abundance and space-use (A UI); and (8) masking urban footprints and major roadways out of the final map products. Given the above updates, the BLM should NOT rely on the Coates et al 2014 mapping data for any Alternative as it is clearly out of date. The County's concern with reliance on this out of date and incomplete mapping product is specifically with update #8 listed in Coates et al 2016. The BLM's current maps include: Cities (i.e. City of Winnemucca), Towns (i.e. Town of Eureka), Highways (i.e. US Highway 50), and important County Roads and existing infrastructure (i.e. Humboldt County Landfill). The allocation decisions associated with these flawed maps has resulted in direct harms and potential future harms to local government in its required administrative function and resulted in inconsistent implementation of the LUPA. Management Alignment Alternative: The BLM needs to better explain its alignment with State-approved maps for the overall perimeter of Sage-grouse Management Category Areas (SGMCA) as well as management area categories within that perimeter: PHMA, GHMA, and OHMA. Please keep in mind that SGMCA is defined on Page 10 of the Nevada State Plan as "The spatial extent of sage-grouse management in Nevada..." and SGMCA's were approved by the State through its Sagebrush Ecosystem Council (SEC) with technical input from the I, Nevada Division of Wildlife (NDOW) and the SEC's Technical Team (SETT). The management area categories within the SGMCA perimeter were developed by USGS (Coates et al 2016). The BLM should adopt the SGMCA mapping approved by the Nevada Sagebrush Ecosystem Council in December 2015. This mapping was developed utilizing the analysis completed and described by Coates et al 2016, including additional refinement by the scientific experts associated with NDOW and the SETT. The BLM should consult with both to better describe and document the refinements that were made between the Coates et al 2016 product and the maps adopted and dated December 2015.

The approach of ground-truthing is supported by both Coates et al 2014 and Coates et al 2016 in the following statements made in the Conclusion section: The power or plan amendment/revision, as appropriate of this approach rests within the map output that can be downscaled back to the local level that may help inform specific, "on the ground", habitat-management decisions. However it is important to recognize that field data and other sources of information should be used in conjunction with inferences from this model. (Coates et al 2014) [emphasis added] Also, the County would emphasize the need to include two key factors in any mapping update: 1. Input from local government, including but not limited to: Counties, Conservation Districts and Local Area Work Groups (established specifically for local Sage-grouse Conservation Efforts); and, 2. Mapping updates should incorporate any new information derived from project specific ground-truthing and/or exemption decisions made since the last update. While the County supports the streamlined process for incorporating such updates through "plan maintenance", there may be occasion where such changes are warranted through a more formal plan amendment process. As such, Washoe County suggests incorporating language from the No-Action Alternative, that reads "Through plan maintenance or plan amendment/revision, as appropriate There should be a clear description of the conditions under which plan maintenance is appropriate for map revisions versus plan amendment/revision. For instance, Coates et al 2016 states: ...because only 6.5 and 8.5 percent area classified as habitat and management category changed between studies, the updated maps represent model refinements based on better input data rather than a complete mapping overhaul, (page 18) [emphasis added]

When making project and mitigation decisions, Primary Habitat management Areas (PHMA) and GHMA must be considered a functional unit as connectivity through GHMA is key to PHMA populations.

However, as described in Table-2-2, this habitat assessment process will be used only to inform criteria (i) under the Allocation Exception process. The process should be used to inform all environmental analysis of all proposed projects, including locatable mineral projects under 43 C.F.R. Subpart 3809. Without a process for evaluating and, if necessary, correcting habitat classification at the project-specific level, BLM's environmental analysis, including NEPA documents could be incorrect.

**BLM Should Use Accurate, Site-Specific Data to Support Habitat Designations and Project Level Decisions** The 2015 LUPA decision was flawed because the habitat designations were overbroad and based on limited or incorrect data.

The Federal District Court for the District of Nevada has directed BLM to perform supplemental NEPA analysis to correct and evaluate habitat designations. *Western Exploration, LLC v. U.S. Dept of Interior*, 250 F. Supp. 3d 718, 750-751 (D. Nev. 2017). In its rush to meet the September, 2015 deadline associated with settlement of a separate lawsuit over listing of the greater sage-grouse, BLM failed to adequately and accurately define sage-grouse habitat designations that were central to the land use restrictions and management directions. Habitat designations are based on large scale maps where thousands or even millions of acres are subjected to land management restrictions without any supporting data that the land that may be restricted is actually sage-grouse habitat.

The ARMPA also failed to include measures to efficiently and expeditiously correct errors in habitat mapping or to allow proponents of project level decisions to provide site-specific data to correct or clarify habitat designations. The ARMPA also fails to allow BLM to consider site-specific data which shows areas of non-habitat within GHMA or PHMA when making impact determinations or assessing mitigation needs.

The habitat mapping issue directly affects the Thacker Pass project. BLM lands near Thacker Pass are categorized as PHMA, but site surveys have shown that much of the land proposed to be disturbed by the project is dominated by cheat grass, or where sagebrush is present it is diseased or dying and without adequate understory to provide sage-grouse habitat. Repeated surveys have shown no sage-grouse use in the area. In fact, it is clear from the site conditions that better habitat is available north of and above (in elevation) the Thacker Pass site and that sage-grouse in the area use those areas to the exclusion of the Thacker Pass lands. LNC has commissioned numerous studies and surveys to document local habitat conditions, but under the terms of the ARMPA, BLM has ignored relevant site specific data in favor of the large scale habitat maps. This error has significant, on-the-ground implications for sage-grouse conservation. LNC is currently developing a mine plan, including locations for ancillary facilities such as a processing facility, tailings storage facility and waste rock dump, to support the extraction of lithium. Under the current plan (and the proposed revision) such facilities should avoid or minimize impacts to mapped PHMA and GHMA to the extent practicable. When the maps are not correct, this guidance is also incorrect. Incorrect maps also lead to incorrect assessment of impacts to habitat. BLM has partially addressed this issue in the Draft EIS by 1) adopting the updated maps, 2) providing additional flexibility for habitat management designations, and 3) identifying a classification correction process in the Allocation Exception Process. DEIS pages 2-7 and 2-12. Unfortunately, these measures are incomplete-the mapping errors near the Thacker Pass project remain in the updated maps and the correction measures in the Allocation Exception Process do not apply to locatable mineral proposals.

The revised language for MD SSS 17 (habitat management area designation flexibility) includes review and refinement only every 3 to 5 years or "when new data are incorporated into the model." BLM should adopt a specific provision in the revised plan that allows the agency to modify the habitat maps for PHMA and GHMA based on site-specific data gathered in connection with a proposed action or environmental analysis if that data shows that the lands in question do not meet applicable criteria to be classified as PHMA or GHMA. In other words, there should be flexibility to revise the habitat management area designation at the project review level.

The Commenter supports 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 proposes to update and make adjustment to HMAs and include language that would allow the BLM to update the 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. See Nevada DEIS at ES-9.

**The Clark Project HMAs Can Be Removed Pursuant to Plan Maintenance** The Clark Project suffers from I-IMA designations that are clearly in error, the first being the split HMA designations over the Project's active mine site, (Figures 1 and 2, above), and the second being an I-IMA designation through a tidy, precise "spike" cutting through the heart of a significant access roads to serve the Project's critical transportation infrastructure. (Figure 4). Such I-IMA designations were as patently incorrect as the landfill designated as PI-IMA and rejected by the Nevada Federal District Court in *Western Exploration, et al. v. U.S. Department of the Interior*, and need to be remedied immediately. 43 CFR § 1610.5-4 requires plan maintenance "as necessary," and in the case of the Clark Project, such re-designation is critically "necessary." Figure 4. "Spike" designation GHMA/OHMA bisecting essential Clark Project transportation and operational infrastructure. As applied to the Clark Project, I-IMA designations that are clearly erroneous and void ab initio. They fail to qualify under any HMA criteria because the Clark active mine site fails to support Fifteen "areas of occupied seasonal or year-round habitat outside of [priority habitat management areas]," (GHMA), or lands that "contain seasonal or connectivity habitat areas," (OHMA). Nevada and Northeastern California Greater Sage-Grouse ARMPA at 1-6. Accordingly, HMA re-designation is appropriate through plain maintenance: Here, where the HMA descriptions on the Clark Site are blatantly incongruous with the physical land mass chosen to support the habitat designation, plan maintenance in this case perfectly aligns with other examples of maintenance actions grounded in science, including "refining the known habitat of a special status species" as pointed to in the BLM Handbook.

An important concept reasonably developed by the courts in an ESA context-important here because the purpose and need of the current land use plan amendments are designed to advance ESA interests to avoid treatment under the ESA of the GRSG-is found in critical habitat jurisprudence. With respect to HMA designations that arguably fit with the quantity and quality of performance expected from such a designation, the question arises as to flexibility of project operations within appropriately-designated habitat management areas. Judicial review of destruction or adverse modification of critical habitat is instructive to provide a test for operational flexibility in appropriately-designated HMAs. Assuming that PHMA is an arguable analogue to designated critical habitat for listed species, the courts instruct that, in the context of Section 7 consultation, a proposed Federal action that might destroy or adversely modify

designated critical habitat is allowable under the ESA, provided: (1) The affected area is insignificant relative to the total designated critical habitat; (2) The localized effects are fully discussed; and (3) The use of large-scale analysis does not mask multiple site specific effects that pose a significant risk to the species when considered in the aggregate. see *Rock Creek Alliance v. U.S. Forest Service*, 703 F.Supp.2d 1152, 1198 (D. Mont. 2010). See also *Butte Envir. Council v. U.S. Army Corps of Eng'rs*, 620 F.3d 936, 947-48 (9th Cir. 2010) (holding that FWS's determination that critical habitat would be destroyed was thus not inconsistent with its finding of no 'adverse modification' because the project would affect only a very small percentage of each affected species' critical habitat). In evaluating the prospect for flexible operations within designated habitat management areas for GRSG, a similar test could be developed by BLM as is utilized for destruction or adverse modification of critical habitat. To provide for operational flexibility in correctly-designated Sixteen HMAs, the overall range of the GRSG must be considered with respect to flexibility for site specific activities. To the degree that the functionality and scale of the impacts on HMAs will not lead to overall impairment of the habitat, operational flexibility within HMAs will certainly be appropriate given what the Federal courts have provided with respect to review of proposed actions that unquestionably degrade designated critical habitat. The Commenter does not concede that any operational flexibility is needed in the HMA designations on the Clark Project Site because both GHMA and OHMA were incorrectly designated in the first instance, are void ab initio, and should be re-designated as soon as possible through plan maintenance. So stated, any delay in HMA re-designation stands to potentially impact the certainty of EPM's business model, as an amendment to the plan of operation requested by EPM was withdrawn as a direct result of the mis-designated 'HMAs on the Clark Site. Should there be any uncertainty about the illegitimacy as to the GHMA/OHMA designations on the Clark Project Site, for purposes of immediate relief, it can safely be represented that no arguable function of the HMAs in place at Clark satisfy the criteria of any GRSG occupation seasonal or otherwise - or lend themselves to GRSG population connectivity. Further, the acreage at issue at the Clark Project is insignificant relative to the total I-HMAs designated in Nevada and across the complete GRSG range. Accordingly, eliminating the HMA designations on the Clark Site remains a comfortable fit for plan maintenance.

EPM fully supports the opportunity proposed in the Management Alignment Alternative to provide exceptions and stipulations which run concurrently with the PHMA, GHMA and OHMA designations, respectively. As discussed earlier, the Clark Project presently suffers from misdesignated HMAs in the first instance, which for purposes of these comments, presume to be originally designated in clear error, as were other HMA designations before the United States District Court. And to reaffirm, the position of the Commenter is that such original designations are void ab initio. So stated, EPM supports the proposed allocation exception process as applied to its Clark operations for the following reasons: I. As earlier described, the GHMA allocations imposed on the Clark Project are unsuitable in the first instance and meet the criteria of lacking the ecological potential to become marginal or suitable habitat for GRSG. Additionally, redesignating GHMA on Clark will not result in direct, indirect, or cumulative impacts on GRSG and its habitat, and thus meets criteria (i) as set forth in Section 2.5 at 2-12. Seventeen In further analysis of the allocation exception criteria, (ii) is inapplicable to the HMA allocations on the Clark Project site due to their original mis-designation and unsuitability as discussed above. Addressing (iii), the "spike" GHMA designation effectively cuts off project infrastructure and thus meets criteria (iii) as being necessary to "address public health and safety concerns" related to central transportation corridors on the project site. This complements criteria (iv) as being required to re-authorize existing infrastructure and having no impact whatsoever on GRSG and its habitats. See also (v), as also being required to serve "existing infrastructure (i.e., rights-of-way for roads) that serve ... a

public purpose." See Nevada DEIS, Section 2.5 at 2-13. 2. To the degree that the habitat management area designations flexibility component to the Nevada DEIS includes review and refinement every three to five years for mapping, the mis-designated HMA can be appropriately addressed through plan maintenance. As noted in the particularly conspicuous misdesignation of the Clark Project's active mine site as including consideration of habitat suitability to inform refinement and adjustment of I-IMA boundaries, this process comfortably accommodates lifting HMA designations inappropriately imposed in the first instance through plan maintenance activity. Accordingly, for the Clark Project site, the triggering of the allocation exception process is unnecessary. Should the proposed allocation exception process be necessary for the HMA mis-designations on the Clark Project site, as noted above, such exceptions to the HMA designations are appropriate for elimination altogether under several criteria proposed in the Nevada DEIS.

A Significant Aspect of the PLUPA, as applied to the Protestant, is Based upon Invalid or Incomplete Information In the PLUPA/FEIS, it appears that a certain part of the Clark Project on BLM land is proposed to be bisected and designated as a General Habitat Management Area (GHMA) and Other Habitat Management Area (OHMA). Even though the BLM portion of the Project is wholly disconnected from broader and more significant GRSG habitat to the north, the portion of the Clark Project designated as GHMA s, was also designated as a travel and transportation limited area, (See map attached as Attachment A.) Additionally, from what the Protestant can ascertain, a spike of Federal land designated as GHMA splits the project site, and due to travel restrictions, appears to have cut off a key transportation corridor between parts of the Project site, see also Attachment A. Finally, the portion of BLM land incorporated located on the Project site was - only several months ago designated for disposal by BLM in a draft RMP document, only to be subsequently designated CJHMA and OMMA in the instant PLUPMFEIS. see Draft Resource Management Plan and Environmental Impact Statement, Bureau of Land Management, Carson City District, Nevada (November 2014) Volume 4 Appendix A, Figures 2-70, 2-71, 2-73.

In the Draft EIS, BLM erroneously suggests that PHMA and GHMA are not actually land use plan decisions, but are instead something far less consequential - "a landscape level reference of relative habitat suitability." NV/CA Draft EIS at 2-6. What this phrase means is not at all clear. But it does create unnecessary confusion and uncertainty concerning the legal effect of habitat designations. BLM must clarify that habitat designations are, in fact, land use plan decisions. Moreover, the habitat designations are the most important decisions included in the plan because they dictate where land use allocations and stipulations apply for activities that could harm Greater sage-grouse, including energy development, grazing, and mining. FLPMA identifies a range of decisions that BLM must incorporate into land use plans, including "[I]and areas for limited, restricted or exclusive use; designation, including ACEC designation. . . ." 43 C.F.R. § 1601.0-5(n)(1). BLM's land use planning handbook also lists "special designations" as a type of "land use plan decisions." H-1601-1 at App. C-1. Further, it is apparent that, in the 2015 ARMPA, BLM viewed habitat designations as a crucial land use plan decision that "protect the most important GRSG habitat areas" and "identify the management decisions that apply to those areas. . . ." ROD and ARMPAs for the Great Basin GRSG Sub-Regions at 1-14; see also NV/CA ARMPA at 1-4 ("GRSG habitat on BLM-administered lands in the decision area consists of lands allocated as priority habitat management areas (PHMA), general habitat management areas (GHMA), and other habitat management areas. . . ."). Finally, FWS's 2015 "not warranted" determination is predicated on the designation and ongoing protection of habitat management areas, stating: The Federal Plans provide clear management regulations with measurable objectives to address invasive annual grasses, conifer encroachment,

improper grazing, and free roaming equids. They prioritize management in the most important habitat (PHMA), which encompasses approximately 60 percent of the breeding habitat in the Great Basin. All forms of development-from energy, infrastructure, and grazing structures- would be avoided in PHMA unless further assessment found the project not to have any adverse effects on the species. 80 Fed. Reg. at 59,940-941. In short, any attempt by BLM to water-down the legal effect of the habitat designations could have serious consequences for Greater Sage-grouse and the ongoing validity of FWS's "not warranted" determination. In the final plan amendment, BLM must strike the characterization of the habitat designations included on page 2-6 and reinforce that those designations are land use plan decisions that BLM is committed to upholding and enforcing.

BLM must involve the public prior to updating habitat management area maps and designations. BLM must commit to involving the public in any and all future changes to habitat management area maps. The Draft EIS lacks such a commitment, and would allow BLM to make unlimited changes to the maps through plan maintenance (as opposed to the 2015 RMP, which directs BLM to also employ amendments and revisions, "as appropriate"). NV/CA Draft EIS at 2-7. First, BLM must not use plan maintenance for updating habitat maps in all circumstances, as proposed in the Draft EIS. The cumulative effect of making unlimited habitat boundary changes across Nevada could dramatically reduce the acreage totals for PHMA and GHMA, particularly in concert with other changes proposed in the Draft EIS, such as the "allocation exception process." Changes of this nature would not be "minor," because they would "result in expansion in the scope of resource uses ... of the approved plan." 43 CFR §1610.5-4. Therefore, they would not be suitable for plan maintenance under BLM's regulations. BLM must instead continue to recognize that plan revisions/amendment may be necessary to update habitat maps - such as when greater than 3 percent of the habitat area polygon would be reduced -- - and clearly define the circumstances that would justify the use of plan maintenance. Second, even where plan maintenance is appropriate, BLM should still provide the public with the opportunity to review and comment on proposed changes to habitat maps. BLM's land use planning handbook does not foreclose public engagement around plan maintenance efforts. While the Draft EIS states that "other stakeholders would be encouraged to participate in the process by submitting relevant information to the listed agencies", id. at 2-7, if the habitat maps are changed through plan "maintenance" - with no public notice - the only participants who will know about that process will be the proponents of a project. If BLM opens the process to "other stakeholders," that process must be open for all stakeholders (through notice-and-comment for those stakeholders), not just for project proponents. Thus, given the widespread interest in sage-grouse conservation and to ensure that the public is fully aware of changes to the habitat maps, BLM should provide for public engagement opportunities when updating habitat maps through plan maintenance. In sum, while we fully support the use of the most up-to-date scientific data to define habitat boundaries, any changes to those boundaries must be made through a public process. Further, those changes must only be made because of new habitat data, and not to streamline the approval process for specific projects or activities.

Chapter 4.7.2 Impacts of Management Alignment Alternative (Page 4-14) This section describes the net loss of over one million acres of Habitat Management Areas including the loss of 44,000 acres of the highest quality available habitat (PHMA) as a minor action. Describing this quantity of land as minor is subjective and therefore inappropriate. This is especially true given that the Management Alignment Alternative plans to gut SFA designations and their associated protections. Sufficient data to show that the amount of land no longer needs to be managed for this species is not included within this DEIS. A

decision to change or remove management designations should be as transparent as possible. No process to change the designations was included within the Management Alignment Alternative.

With respect to HMA designations that arguably fit with the quantity and quality of performance expected from such a designation, the question arises as to flexibility of project operations within appropriately designated HMAs. Judicial review of destruction or adverse modification of critical habitat is instructive to provide a test for operational flexibility in appropriately designated HMAs. Assuming that PHMA is an arguable analogue to designated critical habitat for listed species, the courts instruct that, in the Page Twenty-Two context of Section 7 consultation, a proposed Federal action that might destroy or adversely modify designated critical habitat is allowable under the ESA, provided: 1) The affected area is insignificant relative to the total designated critical habitat; 2) The localized effects are fully discussed; and 3) The use of large-scale analysis does not mask multiple site-specific effects that pose a significant risk to the species when considered in the aggregate. *Rock Creek Alliance v. U.S. Forest Service*, 703 F.Supp.2d 1152, 1198 (D. Mont. 2010). See also *Butte Env'tl. Council v. U.S. Army Corps of Eng'rs*, 620 F.3d 936, 947-48 (9th Cir. 2010) (FWS's determination that critical habitat would be destroyed was thus not inconsistent with its finding of no "adverse modification" because the project would affect only a very small percentage of each affected species' critical habitat.) In evaluating the prospect for flexible operations within designated habitat management areas for GRSG, a similar test could be developed by the BLM as is utilized for destruction or adverse modification of critical habitat. To provide for operational flexibility in correctly designated HMAs, the overall range of the GRSG must be considered with respect to flexibility for site specific activities. To the degree that the functionality and scale of the impacts on HMAs will not lead to overall impairment of the habitat, operational flexibility within HMAs will certainly be appropriate given what the Federal courts have provided with respect to review of proposed actions that unquestionably degrade designated critical habitat.

We recommend that the Final EIS for the Greater Sage Grouse RMPA include an update on the status of those PEISs and disclose whether or not they have the potential to result in any changes to Habitat Management Area designations.

While non-SFA habitat designations will remain in place, these designations will be essentially meaningless as the agency can waive the outlined stipulations for these areas based on any one of six broadly worded (and sure to be broadly interpreted) criteria. Indeed, the amendments seem to be specifically written in a way that the acreage of each habitat management area will decline over time given the ease that restrictions are waived and the language that allows for regular adjustments to management area boundaries without additional public scoping or comment.

Under Alternative B, LCPD will have had the opportunity to examine the local habitat along proposed projects to determine if suitable greater sage-grouse habitat is actually present or not, rather than relying on maps intended for a much larger scale. From Table 2-2 of the RMPA/EIS: When a proposed project is thought to be in an area that is unsuitable for Greater Sage-Grouse within PHMA, GHMA, and/or OHMA [Other Habitat Management Area], habitat assessments of the project site and its surrounding areas would be conducted by a qualified biologist with Greater Sage-Grouse experience using BLM-approved methods based on Stiver et al. 2015 and compliant with current BLM Policy, to identify suitable, marginal, or unsuitable Greater Sage-Grouse habitats at multiple scales.

Language should be added tying these determinations and decisions to qualified people using acceptable methods. Even though GHMA is not PHMA, metapopulation dynamics will rely heavily on connectivity

through GHMA, thus it needs to be clear that these projects will not just be "waved" through because it is GHMA.

The SETT recommends that the BLM works in cooperation with the rights-of-way holders to conduct maintenance, in addition to operation activities authorized under an approved ROW grant, in a way that avoids and minimizes effects on sage-grouse and their habitat.

**Modifying Habitat Management Area Designations:** The County does NOT support the "No Action Alternative" for the following reasons. The U.S. District Court for the District of Nevada recognized Humboldt County's standing in the Sagegrouse Lawsuit, and the harms to the County from the NEPA violation and errors in the decision and mapping, due in part to the County's Regional Landfill that is erroneously designated as being situated in the middle of Sage-grouse habitat. In addition, the erroneous mapping in the Record of Decision ("ROD") for the BLM's 2015 Nevada and Northeastern California Greater Sage-grouse Land Use Plan (2015 I-UP) shows the City of Winnemucca as falling within Sagegrouse habitat. Finally, the County has great concern for cascading negative impacts due to incorrect habitat management area designations on important land uses. Such important public land uses include but are not limited to: transportation and travel management, county administrative access, maintenance of existing county infrastructure (i.e. roads), renewable energy development, ranching, recreation, mineral exploration and development, and important utility rights-of-way.

The County supports the "Management Alignment Alternative" with several suggested clarifications. The County supports utilizing the 2015 State-adopted maps as an initial starting point. However, the BLM needs to acknowledge, in the DEIS, that the maps were derived from a modeling exercise. As such, areas mapped as "priority, general, or other habitat" may actually include areas of non-habitat and/or non-use by Sage-grouse. The BLM must allow provisions for ground-truthing of habitat before making a final decision on allocation decisions and/or mitigation requirements for a given project. The BLM must also realize that habitat areas could change and shift as new and more information (i.e. Sage-grouse collar data, updated lek data, etc.) becomes available.

[comment:67-8; 105.0301]e 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. 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. 78[comment end]

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.



we support the Management Alignment Alternative for modifying habitat management areas

ES-5 ES-9 Table ES-4, Management Alignment Alternative This column states that As the boundaries are updated, the allocations associated with each Habitat Management Area (Table 2-1 in Chapter 2) would be adjusted to match the newest Habitat Management Area boundaries (Coates et al. 2016). However, Coates et al. 2016 didn't adopt the Sage-grouse Management Area (SGMA) boundaries, the State of Nevada did when it approved its Habitat Management Category Mapping in December 2015. Is the BLM suggesting that the SGMA boundaries will change, or the habitat classifications (priority, general and other) within the SGMAs, or both? NACO would advocate for maintaining the SGMA boundaries since those have been previously set and approved by the State, and then updating the categories within the boundaries as appropriate. This clarification must be made to provide consistent mapping that has alignment between the State, BLM and USGS (Coates et al) mapping products.

2 2-6 Table 2-2, Issue 1, Modifying Habitat Management Area Designations Sub-issue 1, Conform to management No-Action Alternative: The BLMs continued reliance on the same maps that it published in the previous LUPA process is highly flawed. These maps are based on analysis described in Coates et al 2014, which has since been updated (Coates et al 2016). Therefore, the use of the previously published maps does not meet the standard of utilizing the "best available science". In the document abstract, Coates et al 2016 specifically lists the updates that were made between 2014 and 2016, by stating: These updates include: (1) adding radio and GPS telemetry locations from sage-grouse monitored at multiple sites during 2014 to the original location dataset beginning in 1998; (2) integrating output from high resolution maps (1-2 m<sup>2</sup>) of sagebrush and pinyon-juniper cover as covariates in resource selection models; (3) modifying the spatial extent of the analyses to match newly available vegetation layers; (4) explicit modeling of relative areas identified by the States habitat suitability during three seasons (spring, summer, winter) that corresponded to critical life history periods for sage-grouse (breeding, brood-rearing, over-wintering); (5) accounting for differences in habitat availability between more mesic sagebrush steppe communities in the northern part of the study area and drier Great Basin sagebrush in more southerly regions by categorizing continuous region-wide surfaces of habitat suitability index (HSI) with independent locations falling within two hydrological zones; (6) integrating the three seasonal maps into a composite map of annual relative habitat suitability; (7) deriving updated land management categories based on previously determined cut-points for intersections of habitat suitability and an updated index of sage grouse abundance and space-use (AUI); and (8) masking urban footprints and major roadways out of the final map products. Given the above updates, the BLM should NOT rely on the Coates et al 2014 mapping data for any Alternative as it is clearly out of date. NACOs concern with reliance on this out of date and incomplete mapping product is specifically with update #8 listed in Coates et al 2016. The BLMs current maps include: Cities (i.e. City of Winnemucca), Towns (i.e. Town of Eureka), Highways (i.e. US Highway 50), and important County Roads and existing infrastructure (i.e. Humboldt County Landfill). The allocation decisions associated with these flawed maps has resulted in direct harms and potential future harms to local government in its required administrative function and resulted in inconsistent implementation of the LUPA. Management Alignment Alternative: The BLM needs to better explain its alignment with State approved maps for the overall perimeter of Sage-grouse Management Category Areas (SGMCA) as well as management area categories within that perimeter: PHMA, GHMA, and OHMA. Please keep in mind that SGMCA is defined on Page 10 of the State Plan as "The spatial extent of sage grouse management in Nevada..." and SGMCA's were approved by the State through its Sagebrush Ecosystem Council with technical input from NDOW and the SETT. The management area categories within the SGMCA perimeter were developed by USGS (Coates et al

2016). The BLM should adopt the SGMCA mapping approved by the Nevada Sagebrush Ecosystem Council in December 2015. This mapping was developed utilizing the analysis completed and described by Coates et al 2016, including additional refinement by the scientific experts associated with the Nevada Department of Wildlife and the Nevada Sagebrush Ecosystem Technical Team. The BLM should consult with both to better describe and document the refinements that were made between the Coates et al 2016 product and the maps adopted and dated December 2015.

2 2-7 Table 2-2, Issue 1, Modifying Habitat Management Area Designations Sub-issue 2, Habitat management area designations flexibility No-Action Alternative: Once again, NACO would stress that this alternative's reliance on Coates et al 2014 relies on outdated information, and not "best available science" as described in the above comments. Management Alignment Alternative: NACO generally supports this approach, and would emphasize the need to include two key factors in any mapping update: 1. Input from local government, including but not limited to: Counties, Conservation Districts and Local Area Work Groups (established specifically for local Sage-grouse Conservation Efforts); and, 2. Mapping updates should incorporate any new information derived from project-specific ground-truthing and/or exemption decisions made since the last update. While NACO supports the streamlined process for incorporating such updates through "plan maintenance", there may be occasion where such changes are warranted through a more formal plan amendment process. As such, NACO suggests incorporating language from No-Action Alternative, that reads "Through plan maintenance or plan amendment/revision, as appropriate...". There should be a clear description of the conditions under which plan maintenance is appropriate for map revisions versus plan amendment/revision. For instance, Coates et al 2016 states, because only 6.5 and 8.5 percent area classified as habitat and management category changed between studies, the updated maps represent model refinements base on better input data rather than a complete mapping overhaul. (page 18) [Emphasis added] To address these comments, please revise the language in the second paragraph to read "The review and refinement process would be scientifically based and occur through the Nevada Sagebrush Ecosystem Program process which would include review and input from the SETT, NDOW, BLM, USFS, and USFWS and local government agencies, especially related to local knowledge, and approval from the SEC." Add "when appropriate" to read "...through plan maintenance, when appropriate." It should also be clear that BLM is not pre-decisional in that every change in the management designations would be through plan maintenance; BLM must leave room for changes be made through a plan amendment when necessary (and plan maintenance is not appropriate).

Why does Management Alignment Alternative only allow potential exceptions to PHMA and GHMA? Please add OHMA as well.

Appendix A Figure 1-2a Apply to all similar maps: Please map the overall Habitat Management Area (HMA), assumed to be the overall extent (perimeter) of Habitat Area, for sake of clarity. Appendix A Figure 1-2b Apply to all similar maps: Please map the overall Habitat Management Area (HMA) for sake of clarity. This should match the Sage-grouse Management Area (SGMA) now referred to as the Sagegrouse Management Category Area (SGCMA), or spatial extent (overall perimeter) of GRSG management in Nevada, as adopted by the Sagebrush Ecosystem Council in December 2015. Appendix A Figure 2-2a It should be noted that there is mapped habitat from Figure 1-2a that falls outside of the BSUs and Lek Clusters. Appendix A Figure 2-2b It should be noted that portions of the updated BSUs and Lek Clusters fall outside of the HMA (BLM) or SGCMA (Nevada Plan). The HMA/SGCMA boundary should be added to this map to better illustrate this issue. Appendix A Figures 2-3b to 2-13b All

"Allocation Specific Maps" under the Management Alignment Alternative should include a note under any mapped allocation restriction (i.e. closed, exclusion, avoidance, retention, limited, etc.) that such allocations restrictions are subject to ground-truthing of mapped / modeled habitat as well as the exception process.

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

WMC recommends that the legend on the maps in Appendix A be modified to include a statement that site-specific, field-verified habitat data are required to make project-specific land use decisions and that these maps are not to be used to make site-specific land use decisions. The 2018 FEIS and amended LUP should establish that Best Available Scientific Data comprised of site-specific, field-verified habitat maps are to be used in making project-specific land use decisions. Land use decisions that impose land use restrictions that impede or affect multiple uses including but not limited to lek buffer zones, seasonal and temporal travel restrictions, required design features, noise limits, and disturbance caps should be limited to areas with field-verified important habitat. Land use restrictions must not be based solely on landscape-scale habitat maps developed with remote sensing data and modeling. In the case of mineral exploration and development projects, land use restrictions must not interfere with claimants' rights to enter, occupy, and use the public lands for mineral purposes pursuant to the U.S. Mining Law. WMC's recommendation to base land use decisions on field-verified habitat data will improve the protection of actual and important GSG habitat while eliminating arbitrary and unnecessary restrictions on lands with less important habitat - or even no habitat. The use of field-verified habitat maps will insure that BLM's management of GSG habitat will focus on protecting the "best-of-the-best" habitat by applying appropriate land use restrictions and mitigation measures to address site-specific conditions. Using field-verified data will also ensure that any necessary restrictions and mitigation measures reflect the best way to protect important GSG habitat. Basing land use decisions on actual habitat conditions will ensure protection of priority habitat areas while reducing the broad and serious economic hardships to state and local governments, companies, and individuals who use public lands for mineral exploration and development, renewable and conventional energy development, grazing, hunting, guiding, recreation, and other uses. The Management Alignment Alternative in the 2018 DEIS states that the habitat management maps would be refined and updated with new spatial and telemetry data every three to five years or when new data are incorporated into the model. (DEIS at 2-7). WMC suggests that BLM should continually refine the map with on-the-ground data that would help ground-truth the habitat model data. BLM should capitalize upon the site-specific GIS-based habitat baseline data that permit applicants provide in conjunction with their project proposals. For example, mineral exploration and development proposals submitted pursuant to the 43 CFR Subpart 3809 regulations typically include biological resources baseline studies that contain information on the presence or absence of GSG and GSG habitat. BLM typically uses these data in the NEPA analyses prepared to evaluate these proposals. The GIS-based habitat data collected by project proponents are valuable information that BLM should use to update and refine its habitat classification maps on a more regular basis than every three to five years.

WMC is concerned that the Allocation Exception Process is too narrow and rigid to give BLM the necessary flexibility to use best available science (e.g., field-verified habitat data) and to make project-specific decisions in GSG habitat based on actual, field-verified habitat data. The allocation exception process needs to state clearly that one of the circumstances which always requires an allocation exception is when a project applicant provides on-the-ground habitat data collected by a qualified

biologist using BLM-approved data collection protocols that documents different habitat conditions than on Figure 1-2b. BLM should be required to base project decisions on actual field-verified habitat conditions rather than on the habitat management classifications shown on Figure 2-1b. Therefore, whenever BLM has field-verified habitat data that have been provided by a project proponent, the State of Nevada, or otherwise obtained by BLM, BLM must use this information in making land use decisions. In these circumstances, the landscape management area classification map (e.g., Figure 2-1b) cannot be used as the basis for BLM's decision. The restrictions that apply to the PHMA management classification must not be required on lands that are GHMA, OHMA, or non-habitat based on field-verified habitat conditions. Similarly, the restrictions that apply to GHMA must not be required on lands that are OHMA or non-habitat based on field-verified habitat conditions. Because BLM is compelled to use best available science, granting an allocation exception should be the standard operating procedure that does not require the State Director's authorization. BLM District Managers should be authorized to grant allocation exceptions whenever BLM is provided with field-verified habitat data that conflicts with Figure 2-1b. As stated elsewhere, the land use restrictions in the amended 2018 GSG LUP cannot substantially interfere with a claimant's rights under the U.S. Mining Law including the rights of ingress and egress, and reasonable use and occupancy for mineral exploration and development purposes. The following discussion of the Allocation Exception Process as presented in Table 2-2 is poorly worded and confusing: "Verify use of landscape-scale mapping of PHMA, GHMA, and OHMA in regards to the application of allocations and stipulations." (DEIS at ES-3 and 2-12). As written, this appears to contradict the DEIS provisions pertaining to modifying habitat management area designations based on field-verified habitat data and diminish or even eliminate the need for an exception process. To make the allocation exception process consistent with the procedures outline to modify habitat management area designations WMC suggests this sentence needs to be rewritten to say: "Use field-verified habitat data whenever available to make project-specific decisions and to apply allocation exceptions and stipulations." Similarly, the sentence on Table 2- 2 stating "In PHMA and GHMA, the State Director may grant an exception to the allocations and stipulations described in Section 2-5 if one of the following applies..." is circular and confusing because Table 2-2 is the only content in Section 2.5.

The BLM's Record of Decision ("ROD") and Approved 2015 Resource Management Plan Amendments ("ARMPAs") stated that the plans "were developed to address specific, identified threats to the species" and that with the objective of protecting the "most important" GSG habitat areas, "planning began with mapping areas of important habitat" across the range. While Coeur supports the objective, unfortunately, the mapping process was fundamentally flawed which resulted in arbitrary designation of previously disturbed and sometimes already developed lands as "priority" habitat management area (PHMA) designated for protection and extreme management restrictions. Moreover, significant changes in the final EIS included erroneous mapping information that may have an unwarranted effect to Coeur if used to implement restrictions on current or future exploration or development operations in Nevada. For example, as the Nevada Federal Court recognized, the final EIS turned 75,100 acres of non-habitat into PHMA - a status requiring the highest level of protection and reserved for what was purportedly the best greater sage-grouse habitat, and 21,611 acres identified in the draft EIS as non-habitat into SFA which is purportedly the "best of the best" and results in absolute prohibitions of certain uses. Particular lands that were not subject to any management restrictions because they were non-habitat in the draft EIS suddenly became encumbered with the most extreme management decisions in the final plan amendments which the Nevada Federal Court found "did not allow for intelligent public participation in the EIS process." The Nevada Division of Wildlife, the agency with primary jurisdiction over the greater sage-grouse in Nevada - commented on the administrative draft of the proposed plan that the SFAs did

not "represent the most important landscapes" and expressed concerns that the re-prioritization of management actions to the SFA with a lack of state input misplaced conservation priorities "as a result of policy-based, rather than science-based, planning." Coeur shares these concerns with the habitat mapping designations included in the ARMPA. The mapping of lands as priority and general habitat was based on high level modeling and does not reflect accurate on-the-ground conditions.

In the RMP FEIS, lands formerly classified as SFA must be managed according to their actual habitat conditions based on site-specific habitat data. The SFA lands must not be automatically reclassified as PHMA because the SFA in the 2015 LUPs include areas of non-habitat and areas that should be classified as General Habitat Management Areas ("GHMA") and Other Habitat Management Areas ("OHMA"). In all cases, habitat designation must be site-specific and based on science, not policy. Coeur recommends removing landscape-scale habitat designations developed with remote sensing data and modeling such as PHMA, GHMA, and OHMA from the 2018 RMP FEIS and replacing them with the historic range of greater sage-grouse habitat as a single designation within which field-verified data is incorporated into NEPA analysis.

ES-5 ES-9 Table ES-4, Management Alignment Alternative This column states that Egement Area (Table 2-1 in Chapter 2) would be adjusted to match the newest Habitat Management Area boundaries (Coates et al. 2016). However, Coates et al. 2016 didn't adopt the Sage-grouse Management Area (SGMA) boundaries, the State of Nevada did when it approved its Habitat Management Category Mapping in December 2015. Is the BLM suggesting that the SGMA boundaries will change, or the habitat classifications (priority, general and other) within the SGMAs, or both? We would advocate for maintaining the SGMA boundaries since those have been previously set and approved by the State, and then updating the categories within the boundaries as appropriate. This clarification must be made to provide consistent mapping that has alignment between the State, BLM and USGS (Coates et al) mapping products. ES-4 ES-9 Table ES-4 Paragraph 1: BLM will need to verify this, but Coates et al. 2016 identifies BSU boundaries, and the State of Nevada through its Sagebrush Ecosystem Council established Habitat Management Areas / SMGAs (see above comment).

Table 2-2 Issue: Modifying Habitat Management Area Designations We note the following for the record, and to confirm that these categories are broad scale, and that ground truthing is of paramount importance. The mapping and designation of lands as priority habitat is infested with local errors that show the maps cannot be relied upon for local scale decision making. As one of many examples we are aware of, there is a large area in southern Eureka County designated as a PHMA that incorrectly includes the Town of Eureka, US Highway 50, State Route 278, the Eureka County landfill, the Falcon-to-Gondor major distribution power line, multiple ancillary power lines, multiple subdivisions with homes, paved roads and gravel roads, farms with alfalfa fields and irrigation systems, and hay barns, among other infrastructure, and pinyon-juniper woodlands. These arbitrary and incorrect habitat delineations could have serious implications for Eureka County and our socioeconomic viability if not verified by local information and ground-truthing. See County Needs Attachment 2 2-6 2-7 Table 2-2 Issue: Modifying Habitat Management Area Designations Conform to management areas identified by the states Revise Topic from "Conform to management areas identified by the states" to "Update management areas to incorporate current best available science which are the management categories identified by the states." BLM is required to use the best available science. The current habitat maps in Alternative A are not the best available science as documented by USGS. Therefore, BLM cannot select Alternative A habitat maps. The State habitat map from December 2015 is the best available science and

must be selected by BLM. It was the map developed in Coates et al. 2016 with further refinements based on local scientific expertise of NDOW and the SETT. No-Action Alternative: The BLMs continued reliance on the same maps that it published in the previous LUPA process is highly flawed. These maps are based on analysis described in Coates et al 2014, which has since been updated (Coates et al 2016). Therefore, the use of the previously published maps does not meet the standard of utilizing the "best available science". In the document abstract, Coates et al 2016 specifically lists the updates that were made between 2014 and 2016, by stating: These updates include: (1) adding radio and GPS telemetry locations from sage-grouse monitored at multiple sites during 2014 to the original location dataset beginning in 1998; (2) integrating output from high resolution maps (1-2 m<sup>2</sup>) of Page 20 of 89 sagebrush and pinyon-juniper cover as covariates in resource selection models; (3) modifying the spatial extent of the analyses to match newly available vegetation layers; (4) explicit modeling of relative habitat suitability during three seasons (spring, summer, winter) that corresponded to critical life history periods for sage-grouse (breeding, brood-rearing, over-wintering); (5) accounting for differences in habitat availability between more mesic sagebrush steppe communities in the northern part of the study area and drier Great Basin sagebrush in more southerly regions by categorizing continuous region-wide surfaces of habitat suitability index (HSI) with independent locations falling within two hydrological zones; (6) integrating the three seasonal maps into a composite map of annual relative habitat suitability; (7) deriving updated land management categories based on previously determined cut-points for intersections of habitat suitability and an updated index of sage grouse abundance and space-use (AUI); and (8) masking urban footprints and major roadways out of the final map products. Given the above updates, the BLM should NOT rely on the Coates et al 2014 mapping data for any Alternative as it is clearly out of date. One concern with reliance on this out of date and incomplete mapping product is specifically with update #8 listed in Coates et al 2016. The BLMs current maps include: the Town of Eureka, US Highway 50, State Route 278, the Eureka County landfill, the Falcon-to-Gondor major distribution power line, multiple ancillary power lines, multiple subdivisions with homes, paved roads and gravel roads, farms with alfalfa fields and irrigation systems, and hay barns, among other infrastructure, and pinyon-juniper woodlands. These arbitrary and incorrect habitat delineations could have serious implications for Eureka County and our socioeconomic viability if not verified by local information and ground-truthing. The allocation decisions associated with these flawed maps has resulted in direct harms and potential future harms to local government in its required administrative function and resulted in inconsistent implementation of the LUPA. Management Alignment Alternative: The BLM needs to better explain its alignment with State approved maps for the overall perimeter of Sage-grouse Management Category Areas (SGMCA) as well as management area categories within that perimeter: PHMA, GHMA, and OHMA. Please keep in mind that SGMCA is defined on Page 10 of the State Plan as "The spatial extent of sage grouse management in Nevada..." and SGMCA's were approved by the State through its Sagebrush Ecosystem Council with technical input from NDOW and the SETT. The management area categories within the SGMCA perimeter were developed by USGS (Coates et al 2016). Page 21 of 89 The BLM should adopt the SGMCA mapping approved by the Nevada Sagebrush Ecosystem Council in December 2015. This mapping was developed utilizing the analysis completed and described by Coates et al 2016, including additional refinement by the scientific experts associated with the Nevada Department of Wildlife and the Nevada Sagebrush Ecosystem Technical Team. The BLM should consult with both to better describe and document the refinements that were made between the Coates et al 2016 product and the maps adopted and dated December 2015. We agree with and support the statement made in Paragraph 2 and 3. The approach of groundtruthing is supported by both Coates et al 2014 and Coates et al 2016 in the following statements made in the Conclusion section: The power of this approach rests within the map output that can be downscaled back to the local level that may help

inform specific, "on the ground", habitat-management decisions. However, it is important to recognize that field data and other sources of information should be used in conjunction with inferences from this model. (Coates et al 2014) [emphasis added] In the third paragraph, consider revising "based on Stiver et al." to "such as Stiver et al." BLM must not limit themselves to just Stiver et al. 2015 when there may be other scientifically appropriate methods to use for ground truthing through RMPA implementation. See County Needs Attachment 2 2-7 Table 2-2, Issue 1, Modifying Habitat Management Area Designations Sub-issue 2, Habitat management Revise Topic from "Habitat management area designations flexibility" to "Future habitat management area designations refinement with new best available science" Again, BLM must select Alternative B based on the requirement to use best available science. For Alternative B, it is important that local government agencies are given a seat at the table in future updates. As noted above, BLM is required to coordinate and consult with local governments as well. And, it's just good business to do so. The local agencies often have local information that is imperative to the process. Also make it clear that any habitat category changes must be through a vote of the SEC. This requires a public process through NV Open Meeting Law. Right now, this section does not make it clear that the State Plan mandates Page 22 of 89 area designations flexibility changes be made through the SEC. To address these comments, please revise the language in the second paragraph to read "The review and refinement process would be scientifically based and occur through the Nevada Sagebrush Ecosystem Program process which would include review and input from the SETT, NDOW, BLM, USFS, and USFWS and local government agencies, especially related to local knowledge, and approval from the SEC." No-Action Alternative: Once again, we would stress that this alternative's reliance on Coates et al. 2014 relies on outdated information, and not "best available science" as described in the above comments. Management Alignment Alternative: We generally support this approach, and would emphasize the need to include two key factors in any mapping update: 1. Input from local government, including but not limited to: Counties, Conservation Districts and Local Area Work Groups (established specifically for local Sage-grouse Conservation Efforts); and, 2. Mapping updates should incorporate any new information derived from project-specific ground-truthing and/or exemption decisions made since the last update. While we support the streamlined process for incorporating such updates through "plan maintenance", there may be occasion where such changes are warranted through a more formal plan amendment process. As such, we suggest incorporating language from No-Action Alternative, that reads "Through plan maintenance or plan amendment/revision, as appropriate...". There should be a clear description of the conditions under which plan maintenance is appropriate for map revisions versus plan amendment/revision. For instance, Coates et al 2016 states, because only 6.5 and 8.5 percent area classified as habitat and management category changed between studies, the updated maps represent model refinements based on better input data rather than a complete mapping overhaul. (page 18) [Emphasis added] To address these comments, please revise the language in the second paragraph to read "The review and refinement process would be scientifically based and occur through the Nevada Sagebrush Ecosystem Program process which would include review and input from the SETT, NDOW, BLM, USFS, and USFWS and local government agencies, especially related to local knowledge, and approval from the SEC." Page 23 of 89 Add "when appropriate" to read "...through plan maintenance, when appropriate." It should also be clear that BLM is not pre-decisional in that every change in the management designations would be through plan maintenance; BLM must leave room for changes be made through a plan amendment when necessary (and plan maintenance is not appropriate).

"Wild fire and the period of time for recovery from fires has become a regulatory issue in Eureka County that has caused unreasonable economic hardship to Eureka County livestock producers.

Properly managed grazing provides a substantial advantage for native plant recovery following fire. Prohibition of grazing following wildfire is not necessary for the recovery of rangeland vegetation. Managed grazing is beneficial in preventing excessive damage to plants by wildfire and prohibition of grazing prior to a fire results in unnecessary damage to the plants" (p. 6-8). The DEIS includes provision to defer grazing after wildfires in all cases and does not fully recognize properly managed grazing as the best and primary tool to manage fuel loads before and immediately after fires. This must be included. Specifically, there needs to be inclusion of a methodology to allow for and streamline Temporary Non-Renewable (TNR) allocation of forage for fuels reduction in general and specifically including measures to allow for targeted cheatgrass control through TNR.

"Identify measurable accomplishments or benefits that will be obtained through future designation of restricted use areas; no designation of restricted use areas such as Roadless, ACEC, or others will be completed until it is clearly demonstrated that such designations will not be detrimental to existing property rights, recreation including hunting or fishing, livestock grazing management, wildlife habitat management, County administrative needs, and future mining or energy development" (p. 6-37). These criteria were not followed or met in designation of ACECs and restricted areas/uses in PPMA and PGMA.

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#### **G.4.4 Sagebrush Focal Area (SFA) Designations**

Removing Sagebrush Focal Area Designations PGC strongly supports BLM's October 11, 2017 decision to cancel this unwarranted withdrawal application, which if implemented, would have had no measurable benefits to GSG and its habitat while at the same time would have caused significant socio-economic hardships in the six SFA states (e.g., Idaho, Montana, Nevada, Oregon, Utah, and Wyoming). Because the 2016 Withdrawal DEIS contained important information on geology, mineral resources, and the beneficial socioeconomic impacts of mining, we are pleased that the 2018 DEIS is tiered to and incorporates this document by reference.

We also recommend that the 2018 FEIS incorporate by reference the October 2016 Mineral Potential Report and Sagebrush Mineral Resource Assessment that the U.S. Geological Survey ("USGS") prepared for BLM. Incorporating the October 2016 USGS Mineral Potential Report would cure the deficiencies in the 2015 FEIS, which did not include Affected Environment or Environmental Consequences for Geology and Minerals. It is not currently included in the references section in the 2018 DEIS or specifically incorporated by reference and needs to be added. The 2016 SFA Withdrawal DEIS presents overwhelming documentation of the miniscule impact that mineral activities within the SFAs would create over the next 20 years and the enormous economic harm that the proposed withdrawal would cause in Nevada that justifies BLM's selection of the Preferred Alternative in the 2018 DEIS to jettison the SFA withdrawals. As documented in the 2016 SFA Withdrawal DEIS, the footprint of mining and mineral exploration activities in the SFAs as designated in the 2015 LUPs was projected to amount to a



mere 2,620 acres across the six SFA states. BLM quantifies these impacts as affecting only about 0.026 percent of the 10 million-acre SFAs. (2016 SFA Withdrawal DEIS at 4-75). The 2016 SFA Withdrawal DEIS also includes important information about the scope of mining impacts under a No Action Alternative (i.e., without the SFA withdrawals), which is now BLM's Preferred Action in the 2018 DEIS: ". . .the total amount of mining related disturbance in sagebrush habitat under the No Action Alternative would be 9,554 acres, or approximately one-tenth of 1 percent of the total withdrawal area... These disturbances could impact vegetation communities on 0.1 percent of the SFAs with the majority of the impacts estimated to occur in Nevada and Idaho." (SFA Withdrawal DEIS at 4-71 and 4-72, bold emphasis added.)

The 2016 SFA Withdrawal DEIS clearly documents that mineral activities do not adversely impact GSG or its habitat and that the proposed withdrawal was unwarranted. In light of this information, BLM is completely correct and justified in excluding the SFA mineral withdrawal from its Preferred Alternative in the 2018 DEIS and must reject the No Action Alternative considered in the 2018 DEIS which would preserve the SFA withdrawals. PGC wants to emphasize that the lands formerly classified as SFA must be managed according to their actual habitat conditions based on site-specific habitat data. The SFA lands must not be automatically reclassified as Priority Habitat Management Areas ("PHMA") because the record in *Western Exploration, LLC v. U.S. Dep 't of the Interior*, 250 F. Supp. 3d 718, ("Nevada litigation") documents that the SFA in the 2015 LUPs include areas of non-habitat and areas that should be classified as General Habitat Management Areas ("GHMA") and Other Habitat Management Areas ("OHMA"). For example, during preparation of the FEIS, BLM ignored the advice from Nevada's wildlife experts at the Nevada Department of Wildlife ("NDOW") regarding the location of the most important GSG habitat areas: "Top Nevada BLM officials knew that roughly 26 percent (723,000 acres) of the 2.8 million-acre Nevada SFA was not priority habitat - it included lower priority habitat and 75,100 acres of non-habitat. They also knew from NDOW's comments.. .that the State's wildlife experts said the SFAs "do not fully represent the most important landscapes." NDOW expressed concerns about the reprioritization of management actions to the SFA given the lack of state input and that the "conservation priorities may be misplaced as a result of policy-based, rather than science-based, planning." Nevada litigation, Motion for Summary Judgment, Case 3: 15-cv-00491 -MMD-VPC, Document 67 at 6 - 7, 04/01/16.

The Nevada litigation record also reveals that the SFA designation did not reflect actual habitat conditions because BLM officials inappropriately "turned" lower priority habitat and non-habitat into SFAs: "The FEIS designated 2.8 million acres as SFA, which caused an additional 722,800 acres to be designated as PHMA, turned 436,000 acres of GHMA into PHMA, turned 211,100 acres of OHMA into PHMA, and turned 75,100 acres of non-habitat into PHMA." Nevada litigation, Order, Case 3:15-cv-00491-MMDVPC Document 126 at 37, 03/31/17. There are inconsistencies in the discussion of future management of the former SFA in the 2018 DEIS. The description in Table 2-2 on Page 2-8 states "Lands previously identified as SFA would be managed according to their underlying habitat management area designation (PHMA, GHMA, or OHMA.. )". However, Pages 4-12, through 4-19 include text that implies that SFA would be automatically designated as PHMA: "[SFA] would still be managed according to their underlying Greater Sage Grouse habitat management area and associated allocations and management decisions (e.g., PHMA)." DEIS at 4-12. The DEIS needs to clarify that the SFA would be managed according to actual habitat characteristics based on site-specific, on-the-ground habitat data. The blanket, one-size-fits-all restrictions on mineral exploration and development, grazing, renewable and conventional energy development, transmission lines and pipelines, and access and travel in the SFA are

inappropriate. Future land use restrictions on lands formerly designated as SFA must be applied surgically on a case-by-case basis based on actual, field-verified habitat conditions. Additionally, such restrictions, if warranted, cannot substantially interfere with claimants' rights under the Mining Law and FLPMA to explore for and develop minerals or to access and occupy public lands for mineral purposes.

PGC wants to emphasize that the lands formerly classified as SFA must be managed according to their actual habitat conditions based on site-specific habitat data. The SFA lands must not be automatically reclassified as Priority Habitat Management Areas ("PHMA") because the record in *Western Exploration, LLC v. U.S. Dep't of the Interior*, 250 F. Supp. 3d 718, ("Nevada litigation") documents that the SFA in the 2015 LUPs include areas of non-habitat and areas that should be classified as General Habitat Management Areas ("GHMA") and Other Habitat Management Areas ("OHMA"). For example, during preparation of the FEIS, BLM ignored the advice from Nevada's wildlife experts at the Nevada Department of Wildlife ("NDOW") regarding the location of the most important GSG habitat areas: "Top Nevada BLM officials knew that roughly 26 percent (723,000 acres) of the 2.8 million-acre Nevada SFA was not priority habitat - it included lower priority habitat and 75,100 acres of non-habitat. They also knew from NDOW's comments...that the State's wildlife experts said the SFAs "do not fully represent the most important landscapes." NDOW expressed concerns about the reprioritization of management actions to the SFA given the lack of state input and that the "conservation priorities may be misplaced as a result of policy-based, rather than science-based, planning." Nevada litigation, Motion for Summary Judgment, Case 3: 15-cv-00491 -MMD-VPC, Document 67 at 6 - 7, 04/01/16. The Nevada litigation record also reveals that the SFA designation did not reflect actual habitat conditions because BLM officials inappropriately "turned" lower priority habitat and non-habitat into SFAs: "The FEIS designated 2.8 million acres as SFA, which caused an additional 722,800 acres to be designated as PHMA, turned 436,000 acres of GHMA into PHMA, turned 211,100 acres of OHMA into PHMA, and turned 75,100 acres of non-habitat into PHMA." Nevada litigation, Order, Case 3:15-cv-00491-MMDVPC Document 126 at 37, 03/31/17. There are inconsistencies in the discussion of future management of the former SFA in the 2018 DEIS. The description in Table 2-2 on Page 2-8 states "Lands previously identified as SFA would be managed according to their underlying habitat management area designation (PHMA, GHMA, or OHMA..)". However, Pages 4-12, through 4-19 include text that implies that SFA would be automatically designated as PHMA: "[SFA] would still be managed according to their underlying Greater Sage Grouse habitat management area and associated allocations and management decisions (e.g., PHMA)." DEIS at 4-12. The DEIS needs to clarify that the SFA would be managed according to actual habitat characteristics based on site-specific, on-the-ground habitat data. The blanket, one-size-fits-all restrictions on mineral exploration and development, grazing, renewable and conventional energy development, transmission lines and pipelines, and access and travel in the SFA are inappropriate. Future land use restrictions on lands formerly designated as SFA must be applied surgically on a case-by-case basis based on actual, field-verified habitat conditions. Additionally, such restrictions, if warranted, cannot substantially interfere with claimants' rights under the Mining Law and FLPMA to explore for and develop minerals or to access and occupy public lands for mineral purposes.

Given the proposed removal of SFAs, the DEIS does not appear to address any new 'reasonably foreseeable development' based on this proposed change.

The County remains concerned that inclusion of SFAs in other counties will result in a lack of priority (money and effort) spent improving and conserving habitat in Churchill County.

The NvMA appreciates and strongly supports the removal of references to Sagebrush Focal Areas. The NvMA has long questioned the legality of past federal actions and the scientific basis for SFAs. We believe they are an artificial construct developed to improperly restrict mineral development. We also strongly support the formalization of the removal of all references to mineral withdrawals associated with SFAs.

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.

Removing Sagebrush Focal Area (SFA) Designations No-Action Alternative: The County is adamantly opposed to the No-Action Alternative and inclusion of the Sagebrush Focal Area Designations in any future management. Management Alignment Alternative: The County supports complete removal of the Sagebrush Focal Area Designation as proposed under this Alternative.

additional time should be allotted for public and SEC consideration, especially as to the adequacy and accuracy of the maps before abandoning this principle which focuses on the key elements of both connectivity and landscape scale view.

But on October 11, 2017, the DOI reversed course, cancelling the proposed withdrawal and terminating preparation of the Final EIS. 82 FR 47248. Despite the significant number of leks within the proposed withdrawal area, "BLM has determined that the lands are no longer needed in connection with the proposed withdrawal." *Id.* The 2018 Draft EIS states: "The BLM determined the proposal to withdraw 10 million acres was unreasonable in light of the data that showed that mining affected less than 0.1 percent of Greater Sage-Grouse-occupied range." *Id.* at 1-1. However, the 2018 Draft EIS ignored the first part of that statistic from the 2016 SFA Withdrawal DEIS: "The total number of leks that could be directly impacted by [a withdrawal in SFA] represent approximately 2.7 percent of all the leks, [and] the number of sage-grouse that could be impacted represent approximately 1.3 percent of all male sage-grouse populations across the withdrawal area..." *Id.* at 4-95. For a species in decline, preserving nearly 3 percent of the leks (where mating occurs) is significant. To preserve regulatory certainty that the Greater sage-grouse will remain viable, the science demands that BLM should again propose as part of the 2018 plan amendment that the Secretary withdraw lands in areas designated as SFAs in the 2015 RMP; at the very least, BLM must retain the SFAs or comparable protections, due to the additional protections afforded to them under the 2015 ARMPA. The 2018 Draft EIS mistakenly conflates - and equates - SFAs solely with withdrawals. Now that BLM has abandoned the withdrawal, the 2018 Draft EIS claims that "SFAs presented no additional conservation and management restrictions above PHMA with the exception of the mineral withdrawal recommendation discussed above." *Id.* at 4-12. This is demonstrably false, however, as the 2015 ARMPA provide numbers additional protections to greater sage-grouse above and beyond the mineral withdrawal, including: \* Exceptions to stipulations for fluid mineral leasing are authorized for PHMA, but prohibited in SFA; NV/CA ARMPA at 1-10, 2-29; \* Review and processing of grazing permits is prioritized in SFA over PHMA; *id.* at 1-11, 2-24; \* Field checks for grazing, focusing on the health of riparian areas and wet meadows, are prioritized in SFA over PHMA; *id.* at 1-11, 2-26; \* Fire and fuels management is prioritized in SFA over PHMA; *id.* at 2-18; \* Pre-

suppression of fire is prioritized in SFA over PHMA; *id.* at 2-19; \* Land health assessments are prioritized in SFA over PHMA; *id.* at 2-24; and \* Complete rangeland health assessments are prioritized for SFA over PHMA. *Id.* at 2-27. The 2018 Draft EIS contains no substantive analysis of how striking those habitat protections through eliminating SFAs would negatively impact the Greater sage-grouse and its habitat, thus violating NEPA. SFAs are "areas that represent recognized strongholds for GRS that have been noted and referenced as having the highest densities of GRS and other criteria important for the persistence of the species." NV/CA ARMPA at 1-6. These protections discussed above must be maintained in PHMA if SFAs will not be retained. 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.* FWS 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, including in the Nevada and Northeast California 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 where appropriate the prohibition on geothermal development will be specifically incorporated into and made a part of the PHMAs as appropriate to protect this most important habitat.

Invasive plants are well known to colonize areas of disturbance, including those caused by mining operations. Maintaining the SFA designation and withdrawing those lands from the mining law of 1872 will both prevent habitat fragmentation and reduce the spread of invasive plants. Reducing or eliminating these key threats by upholding the SFA designation is imperative to the future of this species.

The Nevada DEIS at ES-3 seeks additional information to ensure that the SFA mineral withdrawal has been cancelled and its cancellation justified, in addition to further information concerning whether the SFA area designations remain relevant in the absence of a mineral withdrawal. Further, the DEIS seeks information on whether the SFA habitat designation is even necessary to adequately maintain conservation of GRS habitat. *Id.* 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 2,767,552 acres in Nevada. 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 GRSG 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 GRSG 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 Nevada, remains apparent. Other restrictions tied to the designation of the SFAs, if legitimate to advance GRSG conservation, can be developed with a scalpel, as opposed to the overbroad and miscalculated Page Fourteen scope of proposed withdrawals advocated by the previous Administration. Accordingly, the LUP should be amended to eliminate the SFA allocations.

The previous land use plans were not crafted under a premise that balanced the Congressional directives under the 1872 Mining Law and FLPMA. The Nevada 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 GRSG LUPAs were "not a planning exercise, but an effort to develop a landscape level plan to conserve the GRSG." 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. The litigation Page Seventeen 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.<sup>10</sup> 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.

Specifically, the GRSG LUPA in (at least) Nevada includes the following Management Directions that demonstrate these flaws / consequences: Nevada MD LG 2: 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 SFA followed by PHMAs 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. The BLM may use other criteria for prioritization to respond to urgent natural resource concerns (e.g., fire) and legal obligations. Nevada MD LG 4: Complete land health assessments in PHMAs and GHMAs to identify whether or not GRSG habitat objectives (Table 2-2) are being met. The priority order for completing land health assessments in GRSG habitat is: 1. Allotments containing SFA that have never been evaluated 2. Allotments containing SFA that have not been re-evaluated in 10 or more years. 3. Allotments containing PHMA that have never been evaluated. 4. Allotments containing PHMA that have not been re-evaluated in 10 or more years. 5. Allotments containing GHMA that have never been evaluated 6. Allotments containing GHMA that have not been re-evaluated in 10 or more years. Issue #5, Recommendation 6: Any decision from this process should amend all Plans to remove any elements as related to permitted livestock grazing, and to defer GRSG management to the BLM via continued implementation of 43 C.F.R. Part 4100, subpart 4180 (see Issue #2). Issue 5: DEIS Comment 6: The DEIS at page 2-8 appears to appropriately remove MD LG 2 and MD LG 4 as to at least SFA areas (aka "No similar action" ). It is critical that BLM consider carry this recommendation forward in the FEIS, and implement a proposed action in the ROD that adopts the removal of MD LG 2 and MD LG 4. See also DEIS Comments 7, 8, below. Issue #5, Recommendation 7: 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. 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). Issue #5, Recommendation 8: BLM must remove any and all reference to SFAs. SFAs are an overreach and unnecessary as priority habitat designations provide adequate habitat protection. The LUPAs must be amended to address this overreach of elevating livestock grazing to a primary threat, and not prioritize permit renewals in priority habitat unless a hard trigger is tripped and a cause and effect relationship is established, as published in alternative E of the DLUP of the Idaho plan. Issue 5: DEIS Comments 7, 8: See DEIS Comment 6 above. The DEIS at page 2-8 appears to remove MD LG 2 and MD LG 4, among other Decision numbers, but the DEIS is hard to decipher whether the management alignment alternative just removes SFAs from those items, or deletes them in their entirety. BLM should remove MD LG 2 and MD LG 4 in the FEIS, and implement a proposed action in the ROD that adopts the recommendation.

The removal of Sagebrush Focal Areas (SFAs) Designation is a concerning issue we want to address. Under the No-Action Alternative, 2,767,552 acres would be designated at SFAs and the Greater Sage-grouse and its habitat would be shielded from harmful mining activity. Conversely, under the Bureau's Preferred Management Alignment Alternative, there is no such designation, and lands would be identified as PHMAs, GHMAs, or OHMAs instead. The Bureau wants to make it clear that SFA mineral withdrawal has been cancelled and that there is a justified reason for the cancellation. However, such a habitat designation is needed to adequately maintain conservation of the Greater Sage-Grouse. The Bureau's preferred habitat management area designation does not necessarily provide the strongest form of protection. Therefore, we believe a stronger form of protection can be created in according to the conservation alternative.

Elimination of SFA's in these plans will be detrimental to holistic, landscape scale management of the species.

The severe socioeconomic impact analyses and minimal habitat benefit analyses revealed in the DEIS for the proposed mineral withdrawal reinforce that the SFA designation was improper, and while the SFA proposed withdrawal has since been cancelled, the improper SFA designation remains in place under the No Action alternative and should be removed as suggested and analyzed in the Management Alignment Alternative. Such removal of the SFA designation still leaves appropriately mapped (if correctly identified) areas protected as PHMA which, as the BLM discloses and analyzes, is a more advantageous and effective way to manage the habitat from both a multiple-use standpoint to allow for responsible development with appropriate mitigation and also from a conservation perspective. Outright prohibitions such as those included under the No Action alternative do not achieve optimum multiple-use or conservation are inappropriate, unlawful and should be rejected.

the Management Alignment Approach should be adopted over the No Action alternative given that the criteria the agencies described for producing the SFA does not match the State's assessment of breeding bird densities or resistance and resilience mapping statewide, and it is unclear what criteria were applied to determine which landscapes qualify as being 'essential to conservation and persistence of the species.' The agencies blindly adopted the stronghold area/SFA from the October 2014 FWS memo with no adequate disclosure of what science or data supported the SFA boundaries. WEX strongly supports the BLM's attempt to address this issue through use of an updated map and clarification, explanation and commitment to considering ground-truthing, site-specific data and the best available science as analyzed under the Management Alignment Alternative.

Removing Sagebrush Focal Area (SFA) Designations: The County does NOT support the "No Action Alternative" for the following reasons. The County encompasses 9,626 square miles (6.2 million acres) in north central Nevada and many of those acres fall within the SFA designation as adopted in the 2015 I-UP. An analysis was performed for the Sagebrush Focal Area Withdrawal, which helps to illuminate some of the significant direct and indirect fiscal impacts to Nevada's communities. For example, the BLM noted that the social and economic implications of the restrictions, including a mineral withdrawal, may occur with disproportionately high and adverse effects among minority populations, low income populations, or Indian tribes. The County in particular stands to be harmed by the SFA, given that it closes roughly 633,000 acres in Humboldt County to renewable energy, and oil and gas, and threatens to reduce ranching operations. The SFA restrictions greatly impede county wildfire management efforts. Managed cattle grazing is a proven tool to manage fuel load during periods of high fire risk-yet another inconsistency that the BLM must consider. Wildfire grazing prescriptions have proven effective on a large-scale at low cost. If the SFA exclusion zone prevents or severely restricts grazing, a large effective management tool will disappear. The 2015 LUP unnecessarily interferes with grazing practices and disallows good grazing and agricultural management underway in the County. The SFA is grossly inconsistent with the multiple use principles in Humboldt County's Master Plan and related management plans and will cause significant hardships in the County. The County supports the "Management Alignment Alternative" to remove the SFA designation.

The County has a record of arguing against this designation and subsequent mineral withdrawal and would cite its previous correspondence to this effect (see paragraph 2 above). The Management Alignment Alternative would be much more consistent with the County's Master Plan by removing SFA designations.

I 1-8 Table I-2, Row 2, Removing SFAs Please add a reference to the District Court of Nevada's Order.

4-10 13-15 This section does not assist with the Issue previously described where BLM listed needing to "ensure it is clear the SFA mineral withdrawal has been cancelled." It is appropriate to make that clarification here. Consider inserting in this section "Given the subsequent information obtained through the associated Mineral Potential Report and Socioeconomic Impacts Analysis, the Oct. 4, 2017 Notice of Cancellation of Withdrawal Application and Withdrawal Proposal explained that "the BLM determined the proposal to withdraw 10 million acres was unreasonable in light of the data that showed that mining affected less than .1 percent of sage-grouse-occupied range."

The 2015 ARMPA is inconsistent with the Elko County Land Management Plan and violates FLPMA because it includes over 2.8 million acres in Nevada of Sagebrush Focal Areas ("SFAs") where certain land uses are categorically prohibited and where multiple use is eliminated or severely restricted. Lands within the SFA will be withdrawn from operation of the Mining Law so that these lands cannot be used for mineral exploration and development purposes. The SFA also prohibits wind and solar energy projects, imposes No Surface Occupancy restrictions on oil and gas and geothermal exploration and development, limits major and minor Rights-of-Way, and places unreasonable requirements that limit the use of these lands for livestock grazing. The SFA prohibitions and restrictions are incompatible with the foundational principles of the Elko County Conservation Plans, Section 6.5.1 the Elko County Plan, and FLPMA's multiple use and consistency mandates. Elko County bears the brunt of the SFA land use prohibitions and restrictions in Nevada because the SFA covers over 2 million acres in northern Elko County, which is roughly 72 percent of the 2.8 million acres of SFA in Nevada. Numerous private land parcels are located adjacent to or within the Elko County SFA. These parcels are private lands currently used for ranching purposes that are comprised of lands cultivated for alfalfa hay or small grains, stream-irrigated meadows used to grow native wild hay, and pastures with sufficient carrying capacity to support cattle. The future viable use of these private land parcels depends in large part on the landowners' ability to use the adjacent public lands for livestock grazing. Because streams and wet meadows are high-quality, seasonal habitat for greater sage-grouse, interfering with the continued use of private land parcels with streams and meadows will cause loss of some of the best brood-rearing and summer habitat. (See COT Report, Table 4-1 and Final EIS, Table 2.2 and Pages 2-39 and 2-57 and the 2014 Nevada Greater Sage-Grouse Conservation Plan Section 7.5 ("Nevada Conservation Plan")), which all emphasize the importance of riparian and wet meadow habitats. Unfortunately, the management directives for the SFA threaten to eliminate or reduce the authorized use of the adjacent public lands for livestock grazing by imposing unworkable and prescriptive one-size-fits-all habitat management objectives. Elko County estimates from GIS mapping that roughly 236,000 acres of Elko County private lands are adjacent to or engulfed by the SFA. The current use of these private land parcels for agriculture and ranching will be adversely affected by restrictions on grazing on adjacent public lands. Thus the SFA will diminish or even eliminate future economic agriculture and ranching uses on private property causing substantial economic harm to individual landowners and Elko County in general and potentially subject the federal government to regulatory takings claims. The SFA will create stranded inholdings of private land parcels surrounded by public land managed for the sole purpose of greater sage-grouse conservation. Cultivated fields, meadows, and pastures provide critically important brood-rearing habitat for the greater sage-grouse. So, in addition to harming landowners within and adjacent to the SFA, the potential diminished agricultural and ranching uses of the private land parcels due to restrictions on adjacent public lands could have a significantly adverse impact on up to 236,000 acres of greater sage-grouse habitat. Any reduction in the size or distribution of these crucial but limited seasonal greater sage-grouse habitats will harm the species.



The 2016 SFA Withdrawal DEIS clearly documents that mineral activities do not adversely impact GSG or its habitat and that the proposed withdrawal was unwarranted. In light of this information, BLM is completely correct and justified in excluding the SFA mineral withdrawal from its Preferred Alternative in the 2018 DEIS and must reject the No Action Alternative considered in the 2018 DEIS which would preserve the SFA withdrawals. WMC wants to emphasize that the lands formerly classified as SFA must be managed according to their actual habitat conditions based on site-specific habitat data. The SFA lands must not be automatically reclassified as Priority Habitat Management Areas ("PHMA") because the record in *Western Exploration, LLC v. U.S. Dep't of the Interior*, 250 F. Supp. 3d 718, ("Nevada litigation") documents that the SFA in the 2015 LUPs include areas of non-habitat and areas that should be classified as General Habitat Management Areas ("GHMA") and Other Habitat Management Areas ("OHMA"). For example, during preparation of the FEIS, BLM ignored the advice from 3 The 2016 SFA Withdrawal DEIS documents that the proposed 20-year withdrawal would cause a staggering aggregate adverse impact of \$14 billion in reduced economic output, \$2.4 billion in less labor compensation, and 34,000 fewer jobs in five of the six SFA states, with Nevada, Idaho, and Wyoming bearing the brunt of these impacts. 4 The 2,620 acres is comprised of 187 acres in Idaho, 81 acres in Montana, 2,285 acres in Nevada, 66 acres in Oregon, 1 acre in Wyoming, and 0 acres in Utah. (SFA Withdrawal DEIS at 2-10). Nevada's wildlife experts at the Nevada Department of Wildlife ("NDOW") regarding the location of the most important GSG habitat areas: "Top Nevada BLM officials knew that roughly 26 percent (723,000 acres) of the 2.8 million-acre Nevada SFA was not priority habitat - it included lower priority habitat and 75,100 acres of non-habitat. They also knew from NDOW's comments...that the State's wildlife experts said the SFAs "do not fully represent the most important landscapes." NDOW expressed concerns about the reprioritization of management actions to the SFA given the lack of state input and that the "conservation priorities may be misplaced as a result of policy-based, rather than science-based, planning." Nevada litigation, Motion for Summary Judgment, Case 3:15-cv-00491-MMD-VPC, Document 67 at 6 - 7, 04/01/16. The Nevada litigation record also reveals that the SFA designation did not reflect actual habitat conditions because BLM officials inappropriately "turned" lower priority habitat and non-habitat into SFAs: "The FEIS designated 2.8 million acres as SFA, which caused an additional 722,800 acres to be designated as PHMA, turned 436,000 acres of GHMA into PHMA, turned 211,100 acres of OHMA into PHMA, and turned 75,100 acres of non-habitat into PHMA." Nevada litigation, Order, Case 3:15-cv-00491-MMDVPC Document 126 at 37, 03/31/17. There are inconsistencies in the discussion of future management of the former SFA in the 2018 DEIS. The description in Table 2-2 on Page 2-8 states "Lands previously identified as SFA would be managed according to their underlying habitat management area designation (PHMA, GHMA, or OHMA...)". However, Pages 4-12, through 4-19 include text that implies that SFA would be automatically designated as PHMA: "[SFA] would still be managed according to their underlying Greater Sage Grouse habitat management area and associated allocations and management decisions (e.g., PHMA)." DEIS at 4-12. The DEIS needs to clarify that the SFA would be managed according to actual habitat characteristics based on site-specific, on-the-ground habitat data. The blanket, one-size-fits-all restrictions on mineral exploration and development, grazing, renewable and conventional energy development, transmission lines and pipelines, and access and travel in the SFA are inappropriate. Future land use restrictions on lands formerly designated as SFA must be applied surgically on a case-by-case basis based on actual, field-verified habitat conditions. Additionally, such restrictions, if warranted, cannot substantially interfere with claimants' rights under the Mining Law and FLPMA to explore for and develop minerals or to access and occupy public lands for mineral purposes.

I 1-2 P2 This section is not a correct characterization of the District Court Order. While designation of SFAs without the appropriate NEPA was a major issue the Order determined, the Order very clearly outlined the unlawfulness of designation of certain habitat designations without NEPA as well. For instance, the Order on p. 38 states that "[p]articlar lands, no matter how few, that prior to publication of the FEIS were not subject to any type of management decision became subject to the most extreme of management decisions in the final Plan Amendments." The Order then focuses on habitat designation examples specific to Eureka County. Eureka County has NO SFA within the County. The closest SFA is roughly 200 miles away from the specific habitat changes the Court cites. Please revise the language to include the Court's Order about changes in habitat designations not being subject to NEPA, not just SFA, were unlawful. Or simply revise the first sentence in this paragraph to read "...by failing to prepare a supplemental EIS for certain habitat designation in the Nevada..."

Table I-2, Row 2, Removing SFAs Please add a reference to the District Court of Nevada's Order.

Even though the Ely BLM District does not contain SFA designations, such designations in other BLM Districts will likely result in prioritizing critical/limited conservation efforts and funds (i.e. wildfire suppression and rehabilitation, wild horse gathers, etc.) away from the Ely District, which could be detrimental to both its Sage-grouse populations and land uses.

#### **G.4.5 Habitat Objectives**

**Modifying Habitat Objectives No-Action Alternative:** The County does not support this approach as it does not allow for incorporation of the best available science that has emerged since or will emerge after a ROD is signed. Additionally, the Habitat Objectives themselves are not achievable in all areas of GRSG range, particularly in those areas that have crossed an ecological threshold that prevents the site from being restored to pre-settlement ecological potential. Setting objectives that are not achievable violates the BLMs own planning handbook. I, The process does not include any explicit coordination with local agencies. BLM is required to also coordinate with local agencies. Local agencies often have imperative data and information for this process. **Management Alignment Alternative:** The County generally supports this Alternative and greatly appreciates the ability to incorporate best available science moving forward as well as the clarification regarding how objectives are to be viewed and implemented. The following suggested revisions are intended to strengthen this alternative. 1. The County would ask that the University of Nevada, Reno (UNR) College of Agriculture, Biotechnology and Natural Resources (CABNR) as well as UNR Cooperative Extension be added to the list for the science team as professionals from both entities possess important research experience and specific knowledge of the ecology found in the State of Nevada. 2. The County suggests adding two additional key components for developing site specific habitat objectives and those include: Disturbance Response Groups (DRGs) and the current ecological state of the site.

The language should be revised to make clear that adjustments should be made only if livestock grazing is a substantial causal factor in failing to meet rangeland health standards. As written, the language in the IMs provide for grazing adjustments regardless of the causal factor. In addition, as explained above, Habitat Objectives in Table 2-2 should not be rigidly applied as standards triggering adjustments to livestock grazing. BLM already has the authority under current grazing law to make immediate changes to livestock management if grazing management is deteriorating habitat. Additional thresholds that lack flexibility are unnecessary and unlawful.

Clarification of the habitat objectives table (2.2) can and should be achieved via policy & training. Measurable residuals at the end of the growing season must continue to be an objective. Improve livestock management through continued or increased emphasis on desired conditions rather than process/prescription.

Determination if GRSG habitat objectives are met (Table 2-2) The purported intent of Table 2-2 at page 2-18 of the LUPA in Nevada (as well as similar "Table 2-2" in the other LUPAs) is to set habitat objectives for sage-grouse habitat in various parts of the season, i.e. lek habitat, nesting/early brood rearing, late brood-rearing/summer, and winter. However, the LUPAs continually elevate these "objectives" to Standards, and in many cases, inflexible Standards. The variability between just these four states show that the best available science is not being used and applied in "Table 2-2". Specifically, the GRSG LUPA in (at least) Nevada include the following Objectives and Management Directions that demonstrate these flaws / consequences: Nevada Objective SSS 1: Manage land resource uses to meet GRSG habitat objectives, as described in Table 2-2. The habitat objectives will be used to evaluate management actions that are proposed in GRSG habitat. Managing for habitat objectives will ensure that habitat conditions are maintained if they are currently meeting objectives or if habitat conditions move toward these objectives in the event that current conditions do not meet these objectives. Nevada MD LG 5: If results from land health assessment indicate that GRSG habitat objectives (Table 2-2) are not met in SFA, PHMAs, or GHMAs and grazing is a causal factor, and until appropriate modifications (Nevada MD LG 1) are incorporated through the permit renewal process, implement management strategies that may include, but are not limited to, the following: 1. Provide periods of rest or deferment during critical growth periods of key vegetation species 2. Limit grazing duration and intensity to allow plant growth sufficient to meet GRSG habitat objectives (Table 2-2) 3. Employ herd management techniques to minimize impacts of livestock on breeding, nesting and brood-rearing habitat during the breeding season (March 1 to June 20; Lek - March 1 to May 15, and Nesting - April 1 to June 30) 4. Consider any temporary projects that can mitigate livestock impacts (e.g., temporary fencing or temporary water hauling locations; 5. Work with permittees to avoid concentrated turn-out locations for livestock within 4 miles of active and pending leks from March 1 to June 30 6. Avoid domestic sheep use and bedding areas and herder camps within 2 miles of active and pending leks from March 1 to June 30 7. Utilizing land features and roads on maps provided to the permittee to help delineate livestock use avoidance areas 8. Considering no grazing from May 15-Sept 15 in riparian areas and wet meadows 9. Removing livestock within 3-7 days for the remainder of ht grazing year once the allowable use levels are reached (BLM 199, Burton et. Al 2011, Cagney et. Al, 2010, Connelly et. Al 2000, France et. Al 2008, Hagen et. Al 2007, Holecheck 1988, Platts 1990, and Tanaka et. Al 2014): a. In riparian areas and wet meadows the allowable percent utilization is 35% woody species and a minimum stubble height of 4-6 inches for herbaceous riparian vegetation based on site b. In mountain big sage habitat, the allowable percent utilization is 40% herbaceous key species and/or 35% shrub key species c. In Wyoming Basin big sage habitat, the allowable percent utilization is 35% herbaceous key species and /or 35% shrub key species d. In black sage habitat, the allowable percent utilization is 35% herbaceous key species and/or 35% shrub key species. Nevada MD LG 6: Appropriate allowable utilization levels will be defined through the grazing permit renewal process. At least one alternative in the NEPA process will consider the utilization levels identified in (Nevada) MD LG 5. Nevada MD LG 8: Within PHMAs and GHMAs, incorporate terms and conditions into grazing permits to meet GRSG habitat objectives (Table 22), specific terms and conditions will be based on rangeland health assessments (and subsequent monitoring data). Nevada MD LG 10: In any allotment where land health standards were not met and livestock grazing was found to be a significant causal factor, compliance monitoring will be conducted annually

until GRSG habitat objectives (Table 2-2) are met. If compliance monitoring finds that the implemented management strategies identified in (Nevada) MD LG 5 are not achieving the desired results, a change in action will be required. Emphasis added. Issue #5, Recommendation 9: Any decision from this process would be to amend all Plans to remove any elements as related to permitted livestock grazing, and to defer GRSG management to the BLM via continued implementation of 43 C.F.R. Part 4100, subpart 4180. Issue 5: DEIS Comments 9: The DEIS, Table ES-3, at page ES-6, states that "Management Direction LG 5 (and references of these decisions in Management Decisions LG 6 and LG 10) within the existing ARMPA are inconsistent with 43 CFR 4160.1." This is read to assume that the DEIS agrees with our recommendation, i.e. the removal of such MD LG 5, 6, 8, 10. It is critical that BLM consider and analyze this issue in the FEIS, and implement a proposed action in the ROD that adopts the removal recommendation. In addition, we don't find that the DEIS addresses Nevada Objective SSS 1. It is critical that BLM consider carry forward our recommendation in the FEIS as to the removal of Objective SSS 1, and implement a proposed action in the ROD that adopts the removal (or significant modification) to Objective SSS 1. Issue #5, Recommendation 10: Variation in Table 2-2 needs to be addressed based on the best available science in all States. Table 2-2 needs to allow for variation not only on the ecological site but also: (a) state and transition models; (b) existing ecological condition; and (c) the ecological potential, given any state and transition. Issue 5: DEIS Comments 10: The DEIS at page 2-15 attempts to address this recommendation, stating that: "The Habitat Objectives table in the 2015 Final EIS would be revised to incorporate best available science in coordination with representatives from the SETT, USFWS, NDOW, CDFW, USFS, USGS, and BLM. The team would review and incorporate the best available science and would recommend adjustments based on regionally and locally derived data. As these habitat objects are updated, adjustments would be made by the BLM through plan maintenance. ..." The Habitat Objectives table in the 2015 Final EIS are desired conditions that are broad goals based on habitat selection that may not be achievable in all areas. Objectives should be based on sources such as ecological site descriptions, associated state-and-transition models. It is critical that BLM consider and analyze this issue in the FEIS, and implement a proposed action in the ROD that adopts the recommendation. Issue #5, Recommendation 11: Nevada Objective SSI, Nevada MD LG 5, Nevada MD LG 6, Nevada MD LG 8, and Nevada MD LG 10 must be deleted or materially modified so any suggested prescriptions therein don't trump any decision-making (including NEPA) and appeal process, as prescribed in 43 C.F.R. Part 4100, subpart 4160. There is a suggestion in the language that BLM may unilaterally make changes without conformance to any decision-making process, simply only theory it is a land use plan requirement. See 43 C.F.R. 4100.0-8 (wherein the "authorized office shall manage livestock grazing ... in accordance with applicable land use plans"). In addition, Nevada Objective SSI, Nevada MD LG 5, Nevada MD LG 6, Nevada MD LG 8, and Nevada MD LG 10 must be deleted or materially modified so any suggested monitoring is not mandatory per se. While we advocate for monitoring, we don't advocate for monitoring requirements that if not met, will result in premature and unwarranted litigation merely based upon the lack of monitoring, and not upon condition of the rangelands. In addition, Nevada Objective SSI, Nevada MD LG 5, Nevada MD LG 6, Nevada MD LG 8, and Nevada MD LG 10 must be deleted or materially modified so allowable use levels are not "defined" and otherwise mandatory per se. Management should be given the flexibility to implement a suite of actions to achieve applicable Standards and Objectives. Issue 5, DEIS Comment 11: See DEIS Comments 9.

Riparian issues - Nevada and Utah LUPAs. The LUPAs unwarrantedly elevate the impacts of livestock grazing in relation to Proper Functioning Condition or PFC. Specifically, the GRSG LUPA in (at least) Nevada includes the following Management Direction that demonstrates these flaws / consequences:

Nevada MD LG 12: Grazing management strategies for riparian areas and wet meadows will, at a minimum, maintain or achieve proper functioning condition (PFC) and promote GRSG brood-rearing habitat objectives (Table 2-2) within PHMAs and GHMAs. Issue #5, Recommendation 19: Any decision from this process would be amend all Plans to remove any elements as related to permitted livestock grazing, and to defer GRSG management to the BLM via continued implementation of 43 C.F.R. Part 4100, subpart 4180. See Issue #2. Issue 5: DEIS Comment 19: This recommendation is omitted for any discussion in the DEIS. It is critical that BLM consider and analyze this issue in the FEIS, and implement a proposed action in the ROD that adopts the recommendation. Issue #5, Recommendation 20: Rangeland health standards only require that significant progress is being made to achieve an applicable standard, like PFC; not that the standard be met. See 43 C.F.R. 4180.2(c). It is critical that any guidance language include "or, making significant progress towards" not just meeting PFC, as Section 4180.2(c) already requires. In addition, many "riparian areas" cannot make significant progress or cannot meet PFC with just grazing management, but require some artificial or mechanical means to restore an existing condition to allow the area any potential to achieve PFC. In addition, many other "riparian areas" cannot make significant progress or cannot meet PFC because they are subject, among other things: (1) to upstream activity beyond the management and control of the permittee and BLM; (2) to adjacent activity beyond the management or control of the permittee and/or BLM, like roads, recreational use, ATV use, etc.; (3) to livestock watering gaps or access points; (4) to normal or excess wild horse and burro use; or (5) to ditches and reservoirs authorized under pre-FLPMA Grants or FLPMA Rights-of-Way, wherein the purpose of the area is diverted for other, perhaps higher purposes, including, for example, municipal water supplies. The per se requirement to meet PFC is unwarranted and in many cases irrational. Issue 5: DEIS Comment 20: This recommendation is omitted for any discussion in the DEIS. It is critical that BLM consider and analyze this issue in the FEIS, and implement a proposed action in the ROD that adopts the recommendation.

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. 2. 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. 3. 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. Page 5 of 5 4. 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. 5. 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.

However, it is not correct to assume that one area occupied by one ROW provides suitable habitat for leks, early brood-rearing habitat, late brood-rearing habitat, and winter habitat. LCPD requests that habitat definitions be added to the RMPA/EIS so that the restrictions can be easily matched with the correct habitat types.

Modifying Habitat Objectives: The County does NOT support the "No Action Alternative" for the following reasons. The BLM must consider the grazing restrictions that may occur under Habitat Objectives Table 2-2 if implemented or interpreted incorrectly. Improper application of this Table will provide uncertainty with regard to seasonal livestock permits that have been active for decades and will also introduce management limitations to livestock operators (permittees), causing tangible harm to County residents. The economic impact is substantial to both livestock operators and the County since revenues are impacted when grazing is limited. The Humboldt County Master Plan, which provides the goals and objectives for the County, will be further compromised by Table 2-2, an impact which the BLM must consider. The goals set forth in that table must be considered relative to the ecological conditions and not as standards where, in some instances, they could never be attainable on certain lands. The County supports the "Management Alignment Alternative" with several suggested clarifications. Table 2-2 should be relabeled as Sage-Grouse Habitat "Goals" rather than "Objectives". Site specific objectives should be developed in consideration of site-specific ecological site descriptions, state and transition models and current ecological state of the subject site. The County appreciated inclusion of language already provided by the BLM in this regard. Further, the Table should be updated to be consistent with a similar table found in the State of Nevada Sage-grouse Conservation Plan. Any future adjustments should be based on best available science developed specific to the habitat and conditions found in Nevada, rather than other habitats located outside of the Great Basin.

I 1-9 Table 1-2, Row 7, Modifying Habitat Objectives NCA supports Bullet 1, and would suggest a minor addition, "...and current ecological state of the site." Add a bullet to read "Clarify that Habitat Objectives are actually desired outcomes expressed as goals (not truly objectives) consistent with BLM Planning Handbook (H- 1601-1) p. 12."

2-16 Table 2-2, Issue 7, Modifying Habitat Objectives No-Action Alternative: NCA does not support this approach as it does not allow for incorporation of the best available science that has emerged since or will emerge after a ROD is signed. Additionally, the Habitat Objectives themselves are not achievable in all areas of GRSG range, particularly in those areas that have crossed an ecological threshold that prevents the site from being restored to pre-settlement ecological potential. Setting objectives that are not achievable violates the BLMs own planning handbook. The process does not include any explicit coordination with local agencies. BLM is required to also coordinate with local agencies. Local agencies often have imperative data and information for this process. Management Alignment Alternative: NCA supports this alternative and greatly appreciates the ability to incorporate best available science moving forward as well as the clarification in paragraph 2 as to how objectives are to be viewed and implemented. NCA would ask that the University of Nevada, Reno (UNR) College of Agriculture, Biotechnology and Natural Resources (CABNR) as well as UNR Cooperative Extension be added to the list for the science team and professionals from both entities possess important professional knowledge as well as specific knowledge of the ecology found in the State of Nevada. NCA greatly appreciates and supports the inclusion of Paragraph 2 in this alternative, as this is the only way to properly develop site-specific and achievable objectives. NCA would suggest two additional key components for developing site specific habitat objectives and those include: Disturbance Response Groups (DRGs) and the current ecological state of the site. Please revise the second paragraph to read "Table 2-2 Habitat Objectives would be implemented following this guidance: Table 2-2 Habitat Objectives are desired habitat conditions that are broad goals based on habitat selection that may not be achievable in all areas. Site-specific objectives will be based on the site's ecological potential informed by ecological site descriptions and associated state-and-transition models and the site's current ecological state. The use of

Disturbance Response Groups may also be appropriate based on the scale of the particular project or application." NCA suggests adding a citation to the MOU that BLM and other federal agencies signed with NRCS regarding update and use of ESDs. The following references also support the use and application of these tools: BOLTZ, S., AND G. PEACOCK. 2002. Ecological sites: understanding the landscape. *Rangelands* 24:18-21. BRISKE, D.D., B.T. BESTELMEYER, T.K. STRINGHAM, AND P.L. SHAVER. 2008. Recommendations for development of resilience based state-and-transition models. *Rangeland Ecology & Management* 61:359-367. SOIL SURVEY DIVISION STAFF. 1993. Soil survey manual. Soil Conservation Service US Department of Agriculture Handbook 18. STRINGHAM, T.K., P. NOVAK-ECHENIQUE, P. BLACKBURN, C. COOMBS, D. SNYDER, AND A. WARTGOW. 2015. Final report for USDA ecological site description state-and-transition models, Major Land Resource Area 28A and 28B Nevada. University of Nevada Reno, Nevada Agricultural Experiment Station Research Report 2015-01. p. 1524. Available at: <http://www.cabnr.unr.edu/resources/MLRA.aspx>. STRINGHAM, T.K., P. NOVAK-ECHENIQUE, P. BLACKBURN, D. SNYDER, AND A. WARTGOW. 2015. Final report for USDA ecological site description state-and-transition models by disturbance response groups, Major Land Resource Area 25 Nevada. University of Nevada Reno, Nevada Agricultural Experiment Station Research Report 2015-02:572. Available at: <http://www.cabnr.unr.edu/resources/MLRA.aspx>. STRINGHAM, T.K., P. NOVAK-ECHENIQUE, D. SNYDER, S. PETERSON AND K. SNYDER. 2016. Disturbance Response Grouping of Ecological Sites Increases Utility of Ecological Sites and State-and-Transition Models for Landscape Planning in the Great Basin. *Rangelands* 38(6):371-378.

3-3 Bullets 2 & 3 Please include better language about conifer encroachment so that it is recognized and addressed as the primary threat it is and so that the Habitat Objectives can be adjusted accordingly based on the best available science. While the EIS does specify previously omitted science related to pinyon/juniper and sage grouse avoidance, the EIS fails to identify that this science demonstrates a higher threat of conifer encroachment than previously recognized. Most importantly, this science directly refutes the Habitat Objectives in the No Action Alternative and justifies changes. For instance, the No Action Alternative Habitat Objectives call for <3% phase I for general habitat and <5% phase I for winter habitat. Phase I is defined in the ARMPA as 0 to 25% cover of trees. Yet, Baruch-Mordo et al. (2013) found that grouse abandon their leks at only 4% cover. USGS found this important enough to include in their synthesis even though it was prior to 2015. Other forthcoming or newly available research confirms NACO's position. Additionally, not specifically discussed in the EIS is reference to Severson et al. (which is in the USGS reports and discussed). Severson et al. concluded that "Despite conventional wisdom that female grouse are strongly tied to the same nesting sites every year, sage grouse hens were quick to consider restored habitat nearby, and nested both in and near sagebrush stands cleared of juniper. Within two to four years after juniper cutting, sage grouse moved in to cut areas, and the probability of nesting in and near treated sites increased 22% each year after cutting. After four years, the number of sage grouse nesting in and near the restored areas increased 29% (relative to the control area). Additionally, birds were much more likely to nest in or near restored sites: for every 0.6 miles from a cut area, the probability of nesting decreased 43%. In short, removing junipers dramatically increased the availability of nesting habitat, and hens proved quite willing to take advantage of good habitat as it became available" (as reported in Sage Grouse Initiative, Conifer Removal Boosts Sage Grouse Success, Science to Solutions Series Number 12, at 4 (2017)) Finally, Sandford et al. also reported in the afore mentioned Sage Grouse Initiative 2017: "[N]est success declined with every 0.6 miles farther away" from areas where trees were removed. "In one documented instance, a marked female nested within a treatment even before mechanical harvesters had completed the cut, and then successfully hatched a brood; Sandford et al. 2015" . . . "Most hens (86%) kept broods close to restored

habitats and avoided areas with trees, and hens that used areas cleared of conifers were most likely to successfully fledge their broods."

The BLM's sage-grouse plans are based on the best available science and responsibly balance energy development, recreation, grazing, and other activities on public lands. Major changes to the plans would undermine the progress that has been made to carefully ensure continued productivity of sagebrush habitat and allow for responsible development

TNC recommends that BLM provide Instruction Memoranda or other guidance to field offices to assist in implementation of the tables which clearly state that habitat objectives are to be based on the site's ecological potential and local variability. The lack of clear guidance has led to misunderstandings regarding decisions which should be based on site-specific conditions. This guidance should clarify that: ? No lands are closed to grazing in the grouse plans.<sup>73</sup> ? Achieving habitat objectives for vegetation (such as grass or forb height) will be evaluated based on a specific site's ability to meet those conditions, using the best available science. TNC also recognizes that two recent studies have raised serious questions about the link between grass- height and nesting success.<sup>74</sup> TNC recommends following the best available science to address this emerging finding. Clarify the process for adjusting the Habitat Management Boundaries All the 2018 DEIS except the one for Oregon include provisions for adjustment of sage-grouse habitat management boundaries.<sup>75</sup> 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 71 *Id.*, p. 2-4; see also, NTT Report at 15 "Manage for vegetation composition and structure consistent with ecological site potential and within the reference state to achieve sage-grouse seasonal habitat objectives"). This portion of the NTT Report is referenced favorably in FWS 2015 Greater Sage-grouse Listing Decision, 80 Federal Register at 59872. 72 Bureau of Land Management Idaho and Southwestern Montana. Greater Sage-Grouse Approved Resource Management Plan Amendment (September 2015), Table 2-2, pp. 2-5 to 2-6 (Idaho BLM plan). [https://eplanning.blm.gov/epl-front-office/projects/lup/31652/63338/68680/IDMT\\_ARMPA\\_web.pdf](https://eplanning.blm.gov/epl-front-office/projects/lup/31652/63338/68680/IDMT_ARMPA_web.pdf) 73 See e.g., Idaho BLM Plan, Table 2-1, p. 2-3; Wyoming BLM plan, Table 2-1, p. 26. 74 Gibson et, al., Evaluating vegetation effects on animal demographics: the role of plant phenology and sampling bias. *Ecology and Evolution* (2016). 6(11), 3621-3631. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4848082/>; Smith JT, Tack JD, Doherty KE, et al. Phenology largely explains taller grass at successful nests in greater sage- grouse. *Ecol Evol.* 2017;00:1-9. <https://doi.org/10.1002/ece3.3679> (Viewed in total, evidence for a ubiquitous biological effect of grass height on sage-grouse nest success across time and space is lacking). 75 See Bureau of Land Management. Idaho Greater Sage-Grouse Draft Resources Management Plan Amendment and Environmental Impact Statement (May 2018) at pp. 2-7, 2-26-27; Bureau of Land Management. Nevada and Northeastern California Greater Sage-Grouse Draft Resources Management Plan Amendment and Environmental Impact Statement (May 2018) at pp. 2-6-7; Bureau of Land Management. Northwest Colorado Greater Sage- Grouse Draft Resources Management Plan Amendment and Environmental Impact Statement (May 2018) at pp. 1- 9, Appendix H.4.3; Bureau of Land Management. Utah Greater Sage-Grouse Draft Resources Management Plan Amendment and Environmental Impact Statement (May 2018) at pp.at 2-7, 2-31-32, Appendix K (2018 Utah DEIS); Bureau of Land Management. Wyoming Greater Sage-Grouse Draft Resources Management Plan Amendment and Environmental Impact Statement (May 2018) at p. 2-5. Detailed Comments on NV-CA DEIS The Nature Conservancy 22 of 23 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.



Table 2.2 of the 2015 RMPA is not consistent with the Nevada State Plan descriptions of habitat at the site level. The DRMPA does not, but the RMPA should, make clear that the objective landscape habitat descriptions are as described in the State Plan, and that Table 2-2 of the 2015 RMPA is deleted.

ES-3.1 ES-4 Table ES-2 For "Modifying Habitat Objectives", Bullet 1, this sentence should include "...as well as the current ecological state of the site".

2 2-15 & 16 Table 2-2, Issue 7, Modifying Habitat Objectives No-Action Alternative: NACO does not support this approach as it does not allow for incorporation of the best available science that has emerged since or will emerge after a ROD is signed. See County Needs Attachment for specific examples, with special attention towards the information regarding Pinyon and Juniper encroachment mapped as habitat from Churchill and Lander Counties. Additionally, the Habitat Objectives themselves are not achievable in all areas of GRSG range, particularly in those areas that have crossed an ecological threshold that prevents the site from being restored to pre-settlement ecological potential. Setting objectives that are not achievable violates the BLMs own planning handbook. The process does not include any explicit coordination with local agencies. BLM is required to also coordinate with local agencies. Local agencies often have imperative data and information for this process. Management Alignment Alternative: NACO generally supports this alternative and greatly appreciates the ability to incorporate best available science moving forward as well as the clarification in paragraph 2 as to how objectives are to be viewed and implemented. The following suggested revisions are intended to strengthen this alternative. NACO would ask that the University of Nevada, Reno (UNR) College of Agriculture, Biotechnology and Natural Resources (CABNR) as well as UNR Cooperative Extension be added to the list for the science team and professionals from both entities possess important professional knowledge as well as specific knowledge of the ecology found in the State of Nevada. While NACO appreciates having the ability to incorporate changes through "plan maintenance," for the same reasons stated in several locations above NACO suggests adding "or through a plan amendment as appropriate." NACO greatly appreciates and support the inclusion of Paragraph 2 in this alternative as this is the only way to properly develop site-specific and achievable objectives. NACO suggests adding two additional key components for developing site specific habitat objectives and those include: Disturbance Response Groups (DRGs) and the current ecological state of the site. Please revise the second paragraph to read "Table 2-2 Habitat Objectives would be implemented following this guidance: Table 2-2 Habitat Objectives are desired habitat conditions that are broad goals based on habitat selection that may not be achievable in all areas. Site-specific objectives will be based on the site's ecological potential informed by ecological site descriptions and associated state-and-transition models and the site's current ecological state. The use of Disturbance Response Groups may also be appropriate based on the scale of the particular project or application." NACO also suggests adding a citation to the MOU that BLM and other federal agencies signed with NRCS regarding update and use of ESDs. The following references also support the use and application of these tools: \* BOLTZ, S., AND G. PEACOCK. 2002. Ecological sites: understanding the landscape. *Rangelands* 24:18-21. \* BRISKE, D.D., B.T. BESTELMEYER, T.K. STRINGHAM, AND P.L. SHAVER. 2008. Recommendations for development of resilience based state-and-transition models. *Rangeland Ecology & Management* 61:359-367. \* SOIL SURVEY DIVISION STAFF. 1993. Soil survey manual. Soil Conservation Service US Department of Agriculture Handbook 18. \* STRINGHAM, T.K., P. NOVAK-ECHENIQUE, P. BLACKBURN, C. COOMBS, D. SNYDER, AND A. WARTGOW. 2015. Final report for USDA ecological site description state-and-transition models, Major Land Resource Area 28A and 28B Nevada. University of Nevada Reno, Nevada Agricultural Experiment Station Research Report 2015-01. p. 1524. Available at:

<http://www.cabnr.unr.edu/resources/MLRA.aspx>. \* STRINGHAM, T.K., P. NOVAK-ECHENIQUE, P. BLACKBURN, D. SNYDER, AND A. WARTGOW. 2015. Final report for USDA ecological site description state-and-transition models by disturbance response groups, Major Land Resource Area 25 Nevada. University of Nevada Reno, Nevada Agricultural Experiment Station Research Report 2015-02:572. Available at: <http://www.cabnr.unr.edu/resources/MLRA.aspx>. STRINGHAM, T.K., P. NOVAK-ECHENIQUE, D. SNYDER, S. PETERSON AND K. SNYDER. 2016. Disturbance Response Grouping of Ecological Sites Increases Utility of Ecological Sites and State-and-Transition Models for Landscape Planning in the Great Basin. *Rangelands* 38(6):371-378.

NACO suggests adding two additional key components for developing site specific habitat objectives and those include: Disturbance Response Groups (DRGs) and the current ecological state of the site. Please revise the second paragraph to read "Table 2-2 Habitat Objectives would be implemented following this guidance: Table 2-2 Habitat Objectives are desired habitat conditions that are broad goals based on habitat selection that may not be achievable in all areas. Site-specific objectives will be based on the site's ecological potential informed by ecological site descriptions and associated state-and-transition models and the site's current ecological state. The use of Disturbance Response Groups may also be appropriate based on the scale of the particular project or application." NACO also suggests adding a citation to the MOU that BLM and other federal agencies signed with NRCS regarding update and use of ESDs. The following references also support the use and application of these tools: \* BOLTZ, S., AND G. PEACOCK. 2002. Ecological sites: understanding the landscape. *Rangelands* 24:18-21. \* BRISKE, D.D., B.T. BESTELMEYER, T.K. STRINGHAM, AND P.L. SHAVER. 2008. Recommendations for development of resilience based state-and-transition models. *Rangeland Ecology & Management* 61:359-367. \* SOIL SURVEY DIVISION STAFF. 1993. Soil survey manual. Soil Conservation Service US Department of Agriculture Handbook 18. \* STRINGHAM, T.K., P. NOVAK-ECHENIQUE, P. BLACKBURN, C. COOMBS, D. SNYDER, AND A. WARTGOW. 2015. Final report for USDA ecological site description state-and-transition models, Major Land Resource Area 28A and 28B Nevada. University of Nevada Reno, Nevada Agricultural Experiment Station Research Report 2015-01. p. 1524. Available at: <http://www.cabnr.unr.edu/resources/MLRA.aspx>. \* STRINGHAM, T.K., P. NOVAK-ECHENIQUE, P. BLACKBURN, D. SNYDER, AND A. WARTGOW. 2015. Final report for USDA ecological site description state-and-transition models by disturbance response groups, Major Land Resource Area 25 Nevada. University of Nevada Reno, Nevada Agricultural Experiment Station Research Report 2015-02:572. Available at: <http://www.cabnr.unr.edu/resources/MLRA.aspx>. STRINGHAM, T.K., P. NOVAK-ECHENIQUE, D. SNYDER, S. PETERSON AND K. SNYDER. 2016. Disturbance Response Grouping of Ecological Sites Increases Utility of Ecological Sites and State-and-Transition Models for Landscape Planning in the Great Basin. *Rangelands* 38(6):371-378.

3-2 8 Change "measures" to "indicators." Indicators inform, measures measure. 3 3-2 Bullet 2 NACO has concern with the following statement, "the authors found strong selection and positive survival for high horizontal cover and total shrub cover during nesting and late brood-rearing across all sites" and replace with "selection and positive survival relationships with vegetation (grass and shrub) cover during nesting and late brood-rearing across still exist. Evidence for a ubiquitous positive relation between grass height and nest success was either greatly diminished (Gibson and others, 2016a) or not supported (Smith and others, 2017b), although some studies that corrected for phenology still support this relation (Smith and others, 2017b; Coates and others, 2017a). Indicator values for grass height need to be examined to ensure they have not been derived from studies using vegetation data collected at different times for successful and unsuccessful nests without applying correction factors and are geographically

appropriate." The second bullet mischaracterizes Gipson et al (2016) and links Gipson to the conclusion that "the authors found strong selection and positive survival for high horizontal cover and total shrub cover during nesting and late brood-rearing across all sites." Yet, the USGS points out many studies that do not necessarily make this conclusion. USGS explicitly states that "Indicator values for grass height contained in the habitat objectives tables of the 2015 BLM land use plans...may need to be examined to ensure they have not been derived from studies using vegetation data collected at different times for successful and unsuccessful nests without applying correction factors (Gibson and others, 2016a) and that science findings are geographically appropriate." Examples referenced and discussed by USGS include Gipson et al. (2016) and Smith et al. (2017). Gibson et al. (2016), concluded that "the correlation between grass height and nest success could instead be due to a built in bias in timing of when vegetation is measured around hatched and failed nests. If habitat measurements are made immediately after researchers determine fate of a nest (either failure or hatch), measurements may be taken weeks later at successful nests than at failed nests, which allows grasses more time to grow. Because the nesting season occurs in the spring during green-up - when grasses can grow more than a half an inch a week - it appears that hatched nests are surrounded by taller grass. Dr. Gibson's study suggested this timing bias is the reason that so many studies have concluded that tall grass is important for concealing nests from predators" (as discussed in Sage Grouse Initiative, Taking the Bias Out of Grass Height Measurements, Science to Solutions Series Number 15, at 4 (2017)). Smith et al. (2017) "re-analyzed data from three independent studies that previously showed a correlation between grass height and nest success. Smith and his team reevaluated data from studies in the Powder River Basin of southeast Montana and northeast Wyoming (Doherty study), Smith's own research in central Montana, and a site in northeast Utah. When combined with Gibson's research in Nevada, the studies encompassed 1,204 sage grouse nests over 24 study site years from across the range of sage grouse. In Gibson's study, measurements of vegetation were made at the expected hatch date for all nests, regardless of their actual outcome. This minimized any difference between failed and hatched nests in when vegetation was measured. Gibson then used a linear regression to predict vegetation height at the date of nest fate, simulating the biased methods common in other sage grouse nesting studies. For his study, Smith used the data that was collected at nest fate - the biased way - and applied the reverse correction to obtain grass heights as though they had been sampled using unbiased methods. Smith found that, when uncorrected, all of the datasets revealed a strong correlation between grass height and nest success. However, following the simple correction to account for bias, there was no longer any association between grass height and nest success in two of the three studies, while the association was slightly reduced in strength but still apparent in the third Powder River Basin. At hatch date, median grass heights at hatched and failed nests were within just 0.05 inches of one another across all re-analyzed datasets. Overall, the research strongly affirmed Gibson's initial findings and suggests that the height of grass is not nearly as crucial to sage grouse nesting success as previously thought" (also as discussed in Sage Grouse Initiative, Taking the Bias Out of Grass Height Measurements, Science to Solutions Series Number 15, at 4 (2017))

3 3-3 Bullets 2 & 3 Please include better language about conifer encroachment so that it is recognized and addressed as the primary threat it is and so that the Habitat Objectives can be adjusted accordingly based on the best available science. While the EIS does specify previously omitted science related to pinyon/juniper and sage grouse avoidance, the EIS fails to identify that this science demonstrate a higher threat of conifer encroachment than previously recognized. Most importantly, this science directly refutes the Habitat Objectives in the No Action Alternative and justifies changes. For instance, the No Action Alternative Habitat Objectives call for <3% phase I for general habitat and <5% phase I for winter habitat. Phase I is defined in the ARMPA as 0 to 25% cover of trees. Yet, Baruch-Mordo et al. (2013) found that grouse abandon their leks at only 4% cover. USGS

found this important enough to include in their synthesis even though it was prior to 2015. Other forthcoming or newly available research confirms NACO's position. Additionally, not specifically discussed in the EIS is reference to Severson et al. (which is in the USGS reports and discussed). Severson et al. concluded that "Despite conventional wisdom that female grouse are strongly tied to the same nesting sites every year, sage grouse hens were quick to consider restored habitat nearby, and nested both in and near sagebrush stands cleared of juniper. Within two to four years after juniper cutting, sage grouse moved in to cut areas, and the probability of nesting in and near treated sites increased 22% each year after cutting. After four years, the number of sage grouse nesting in and near the restored areas increased 29% (relative to the control area). Additionally, birds were much more likely to nest in or near restored sites: for every 0.6 miles from a cut area, the probability of nesting decreased 43%. In short, removing junipers dramatically increased the availability of nesting habitat, and hens proved quite willing to take advantage of good habitat as it became available" (as reported in Sage Grouse Initiative, Conifer Removal Boosts Sage Grouse Success, Science to Solutions Series Number 12, at 4 (2017)) Finally, Sandford et al. also reported in the aforementioned Sage Grouse Initiative 2017: "[N]est success declined with every 0.6 miles farther away" from areas where trees were removed. "In one documented instance, a marked female nested within a treatment even before mechanical harvesters had completed the cut, and then successfully hatched a brood; Sandford et al. 2015" . . . "Most hens (86%) kept broods close to restored habitats and avoided areas with trees, and hens that used areas cleared of conifers were most likely to successfully fledge their broods."

ES-3.1 ES-3 Table ES-2 For "Modifying Habitat Management Area Designations" it should be made clear here and throughout the document that the mapping is based on habitat and use modeling that is continually evolving through incorporation of new data and information. This better sets the context for the need to "adjust" HMA Categories now and into the future. ES-3.1 ES-4 Table ES-2 For "Modifying Habitat Objectives", Bullet 1, this sentence should include "...as well as the current ecological state of the site".

The BLM must consider the grazing restrictions that may occur under Habitat Objectives Table 2-2 if implemented or interpreted incorrectly.

BLM ought to broaden the stakeholders with whom it coordinates during this process. As with the Adaptive Management Plan process, we urge the BLM to consult the University of California and University of Nevada in evaluation of best available science and to include local land and resource users within the process of modifying habitat objectives.

Site specific objectives should be developed in consideration of site-specific ecological site descriptions, state and transition models and current ecological state of the subject site.

#### **G.4.6 Adaptive Management**

Adaptive Management Based on the discussion at the July 17, 2018 Sagebrush Ecosystem Council meeting, it is clear that BLM's adaptive management procedures are not effective at preventing or minimizing wildfire risks in northern Nevada. Several people commented that the fire risks in the area that was burned in the July 2018 Martin Fire in Humboldt and Elko Counties, Nevada were well known and included areas of cheatgrass invasion where targeted, managed grazing could have reduced the flammable fuel load comprised of annual grasses. The area also had a significant buildup of woody-fuel comprised of sagebrush that provided GSG habitat. The Martin Fire burned approximately 26 million

acres of GSG habitat which was comprised of 12 million acres of PHMA, 8 million acres of GHMA, and 6 million acres of OHMA. Most of the burned acres in this fire affect BLM-administered lands. Because wildfire is the greatest threat to GSG and its habitat in Nevada, BLM's adaptive management procedures should focus more on pre-fire measures that reduce wildfire risks. The adaptive management provisions in Appendix D of the 2018 DEIS are not proactive because they focus on problems that have already happened (e.g., population declines and habitat loss) but they do not minimize risks due to wildfire which cause devastating habitat loss. PGC disagrees with BLM's position that "Adaptive management, with specific triggers (signals), provide additional certainty that the regulatory mechanisms included in the WPA are robust and able to respond to a variety of conditions and circumstances quickly and effectively to conserve Greater Sage-Grouse habitat and populations." (DEIS at D-1).

Because wildfire is the greatest threat to GSG and its habitat in Nevada, BLM's adaptive management procedures should focus more on pre-fire measures that reduce wildfire risks. The adaptive management provisions in Appendix D of the 2018 DEIS are not proactive because they focus on problems that have already happened (e.g., population declines and habitat loss) but they do not minimize risks due to wildfire which cause devastating habitat loss. PGC disagrees with BLM's position that "Adaptive management, with specific triggers (signals), provide additional certainty that the regulatory mechanisms included in the WPA are robust and able to respond to a variety of conditions and circumstances quickly and effectively to conserve Greater Sage-Grouse habitat and populations." (DEIS at D-1). Unfortunately, as proven in the case of the Martin Fire, BLM's adaptive management policies are not effective at preventing catastrophic wildfire and the concomitant enormous loss of GSG habitat. The adaptive management measures need to be revised to provide BLM with the necessary flexibility and nimbleness to implement site-specific measures to reduce identified wildfire risks. If this means that some fuel reduction is warranted in GSG habitat areas in order to reduce wildfire risks, BLM should be authorized to implement appropriate measures to minimize the buildup of flammable fuels. Fuel reduction activities that impact selected habitat areas is a far preferable outcome to losing over 26 million acres of habitat as occurred in the Martin fire. Additionally, there are a number of provisions in the adaptive management protocols in Appendix D that cannot be applied to mineral projects because they are not consistent with claimants' rights pursuant to FLPMA and the U.S. Mining Law. Appendix D needs to be modified to clarify that the following adaptive management triggers (DEIS at D-6) do not apply to mining projects: Delaying issuance of new permits and authorizations; Delaying issuance of new or pending ROWs outside of designated existing corridors; Increasing enforcement efforts on travel restrictions; Limiting noise and/or light pollution; Temporary closures; and Eliminating allocation exception decisions in areas that have tripped a hard trigger. These measures have the potential to substantially interfere with a claimant's rights under FLPMA and the U.S. Mining Law. Consequently, they cannot be applied indiscriminately to mineral exploration and development projects. It may be possible to mitigate concerns about travel and noise and light pollution at some mineral projects based on project-specific circumstances. However, permit delays and temporary closures are not consistent with FLPMA and the U.S. Mining Law, which provide for ingress and egress and use and occupancy of public lands for mineral purposes. They are also inconsistent with the Executive and Secretarial Orders discussed in Section 11B.

Habitat analysis can be impacted by several factors including weather and the availability of qualified assessors. In Appendix D, page 4, what are the implications if triggers are not identified within the stated time frame?

In Appendix D, page 5, local partners must be included in the causal factor analysis and management response. This may include mining operators on public lands, grazing permittees and county resource advisors.

Adaptive Management No-Action Alternative: The Adaptive Management Framework described in the No-Action Alternative and contained in Appendix J of the current LUPA is not Adaptive Management as described by the DOI's own guidance document; see Figure 1.1 below from DOI, 2009. Figure Diagram of the adaptive management process. This is particularly true of the hard trigger response that automatically implements a host of allocation decisions that may or may not be warranted based on the cause of reaching a hard trigger. Once the hard trigger responses are implemented there is no iterative implementation or path for reversing those automatic implementations. The scale of the response is also not well defined. The BLM should reject the No-Action Alternative, and ensure that all Adaptive Management Process components listed in Figure 1.1 above are incorporated into the Management Alignment Alternative, and Appendix D of that document. Management Alignment Alternative: The County supports the BLM's adoption of the State's Adaptive Management Plan as approved by the Sagebrush Ecosystem Council at its July 17, 2018 meeting.

BLM must reaffirm its commitment to implementing and enforcing a transparent adaptive management strategy. Our concerns for proposed changes to the adaptive management strategy are twofold: (1) BLM appears to be watering down the commitment to implementing immediate corrective actions for "hard triggers;" and (2) BLM is preparing to adopt the State of Nevada's adaptive management strategy, in lieu of the strategy set forth in the BLM plan, without any sort of detailed analysis or public input.

First, the 2015 ARMPA established criteria for addressing future degradation of Greater sage-grouse habitat and populations. When a specific habitat area, or a specific population, experiences a significant decline, the RMP "triggers" certain land management responses. A soft trigger would be reached if, when an authorized project is implemented, the results of population monitoring reveal there is a decrease in male attendance at a lek in the project area, as compared to adjacent or trend leks. This would initiate a project design response and require modification of, or additional mitigation to, the project. ... Hard triggers represent a threshold indicating that immediate action is necessary to stop a severe deviation from GRSG conservation goals and objectives, as set forth in the BLM and Forest Service plans. NV/CA ARMPA at J-4. In response to triggering events, the 2015 ARMPA directed BLM managers to take specific action in response to degradation of habitat. For example, for oil and gas development, there are normally two exceptions for NSO in PHMA. But in the event of a "hard trigger," no further exceptions to NSO in PHMA would be allowed. Id. at J-8. Those hard triggers created certainty in the plans that BLM would immediately address significant degradation of habitat through specific and certain action. But in the Draft EIS, BLM is inserting uncertainty into the decision-making process for "hard triggers." For example, BLM states that "[t]ripping a soft and/or hard trigger (signal) will initiate a local-state-federal interagency dialogue to evaluate causal factors and recommend adjustments to implementation level activities to reverse the trend." NV/CA Draft EIS at D-1. This statement suggests that immediate, corrective action will not be taken, which is required under the 2015 ARMPA. Further, while the 2015 ARMPA contained a specific list of actions that BLM would take when "hard triggers" were reached, the Draft EIS lacks such a list. Consequently, it is unclear what, if any, immediate action BLM would take in response to "hard triggers." Second, in the Draft EIS, BLM states that it "would consider alignment with the State's [adaptive management] strategy when it is completed." NV/CA Draft EIS at 2-9. There is no further information provided about the state's strategy, however. Thus, to the extent that BLM does

move forward with consideration of the state's strategy, it must do so through a plan amendment and open and transparent public process. BLM may not utilize plan maintenance, given that BLM has not previously evaluated the state's strategy and "[s]uch maintenance [would not be] limited to further refining or documenting a previously approved decision incorporated in the plan." 43 C.F.R. § 1610.5-4.

2-8 Table 2-2 Adaptive Management It is imperative that local partners and stakeholders are involved in the causal factor analysis. These individuals represent and exemplify the most accurate, time-tested, on-the-ground working knowledge, and year-in year-out experience regarding the areas in question.

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.

We would like to highlight the Adaptive Management presented in the draft, as well. Soft and hard triggers would be used to monitor disturbances under the No-Action Alternative. Once a soft trigger is reached under this alternative, the Bureau would identify the causal factor and apply adaptive management to alleviate the causes of the decline in populations or habitat quality. Also, the Greater Sage-Grouse populations and its habitat would be monitored annually, and if the causal factor is not readily discernible, an interdisciplinary team would identify the appropriate mitigation or management actions in a timely manner. Now if a hard trigger is reached under the No-Action Alternative, the WAFWA Management Zone Greater Sage-Grouse Conservation Team would determine the cause, project level responses, and investigate the appropriate response. Then a plan amendment process may be initiated as a response. On the other hand, the Preferred Management Alignment Alternative completely revises soft and hard population triggers in accordance USGS's Hierarchical Population Monitoring of Greater Sage-Grouse in Nevada and California-Identifying Populations of Management at the Appropriate Spatial Scale. Also, the Bureau's Adaptive Management will incorporate elements of the Nevada's Conservation Plan, and the established triggers will be removed when recovery criteria has been met. The revision, and potential removal, of the triggers under the preferred alternative can leave the Greater Sage-Grouse and its habitat vulnerable to the consequences of mineral development. The Bureau's preferred alternative does not possess a strong enough threshold to gage how the Greater Sage-Grouse is doing in the area. As a result, this will weaken the Bureau's response to any declines in the population and habitat. American Bird Conservancy views an Adaptive Management that includes triggers and is run in accordance with the conservation alternative as a way to improve protection of the Greater Sage-Grouse and its habitat.

WEX greatly appreciates and strongly supports the BLM's inclusion of adaptive management processes which provide flexibility for multiple land uses as presented in the Management Alignment Alternative. Replacement of predetermined hard trigger responses with a clear causal factor analysis process to determine appropriate management responses is more effective and more consistent with FLPMA. Revising and simplifying the allocation exception process also is consistent with FLPMA to help ensure a balance management for multiple-use and due consideration of site specific information, existing disturbance and accommodation of responsible development. Unlike the improper and unlawful outright prohibitions in the land designations included in the 2015 NVLMP and now the No Action Alternative, the land use designation included under the Management Alignment Alternative provide for

consideration of proper multiple-use issues, site specific information and appropriate mitigation measures under the allocation exception process.

Adaptive Management: The County does NOT support the "No Action Alternative" for the following reasons. Simply put, the process included in Appendix D of the 2015 LUP is NOT Adaptive Management. The No Action Alternative is inconsistent with the Department of Interior's (DOI's) Adaptive Management Implementation Policy (522 DM 1), as well as DOI's Adaptive Management Technical Guide published in 2009). The process is not iterative, does not include a diverse set of interested stakeholders (i.e. local government) and has no clear means of removing 'triggered" allocation decisions. As such, the County could realize great harm in implementation of this process as additional regulations and restrictions could be placed on the County itself, as well as the public land uses and resources that it heavily relies upon to support its customs, culture and economy as described in the County Master Plan. As such, the No Action Alternative is inconsistent with both the DOI's own guidance and the County's Master Plan.

The County supports the "Management Alignment Alternative" with several suggested clarifications. The County appreciates that this alternative better follows DOI guidance, as well as the process described in its 2009 Adaptive Management Technical Guide. The County suggests a stronger emphasis of inclusion of local partners (County government, conservation districts, NGOs and affected land users) for any causal factor analysis, Adaptive Management process and/or planning effort. The County agrees that a causal factor analysis should be completed before implementation of any additional land use regulations or restrictions. The County also questions the use of "Habitat Soft and Hard Triggers" that are included in the DEIS and suggests removal of these triggers unless a more robust, scientific justification can be provided for their use. Finally, the County questions how Adaptive Management will be implemented in BSI-J and/or Lek Cluster areas that fall outside of mapped habitat adopted by the Nevada Sagebrush Ecosystem Council in 2015. The BSI-JS and Lek Clusters should be reconfigured to match the 2015 state-approved mapping.

I 1-8 Table 1-2, Row 3, Adaptive Management We appreciate the effort of the BLM to be more consistent with DOI Guidance on Adaptive Management, and also the inclusion of "local partners" throughout the process. Add a bullet to read "Utilize collaborative and consensus based processes with stakeholders, appropriate state and local agencies, and authorized land uses when developing and implementing management responses to any signal/trigger met or surpassed."

Chapter 2 2-8 and 29 Table 2-2, Issue 3, Adaptive Management No-Action Alternative: The Adaptive Management Framework described in No-Action Alternative and contained in Appendix J of the current LUPA is NOT Adaptive Management as described by the DOI's own guidance document 2009. This is particularly true of the Hard Trigger response that automatically implements a host of allocation decisions that may or may not be warranted based on the cause of reaching a hard trigger. Once the hard trigger responses are implemented there is no iterative implementation or path for reversing those automatic implementations. The scale of the response is also not well defined. Particular aspects of the Adaptive Management Approach not included that are currently under No-Action Alternative, and as described in DOI 2009 include: Assessment of Problem (particularly on Hard Trigger Response as there is no causal factor analysis); Design (particularly on Hard Trigger Response as responses are "hard wired" in at the RMP level); Monitor; Evaluate; and, Adjust As such, the BLM should reject No-Action



Alternative, and ensure that all Adaptive Management Process components from DOI 2009 are incorporated into Management Alignment Alternative, and Appendix D of this document.

2-8 Table 2-2, Issue 3, Adaptive Management NCA appreciates BLMs deference to the State's development of an updated Adaptive Management Strategy. NCA is especially supportive of a recently added trigger in the State Plan dealing with excessive fuel loading. NCA requests that the Adaptive Management Strategy of the State be fully implemented including addressing excessive fuel loading to aid in proactively addressing the wildfire threat to habitat.

Appendix D D-5 & 6 Step 2 & 3 The following questions should be added to the list: What is the appropriate casual factor analysis area and response area? Is recovery of the habitat and/or population(s) achievable? What responses (management actions), not included in the LUPA, may accelerate recovery and what subsequent NEPA actions need to be taken to ensure timely implementation? What are the appropriate (implementable at an appropriate scale and on an appropriate timeframe) responses (management actions) and the anticipated results of such responses? It should be noted that DOI 2009 clearly states that the 'modeled' or 'anticipated' outcome of management actions should be clearly articulated in order to monitor and evaluate if such anticipated results are achieved. What is the monitoring protocol, responsibilities and reporting requirement associated with each response? What are the anticipated adaptive management changes to the initial responses if they don't achieve desired outcomes?

Appendix D D-5 & 6 Step 3 This step starts out by saying that "...the BLM will also identify the appropriate trigger responses that will be applied to the lek cluster and/or BSU that has tripped a trigger." This approach is not consistent with the stakeholder approach described in DOI 2009. As such, NCA suggests revising this language to read "...the stakeholder group assembled to complete the casual factor analysis will identify the appropriate responses that will be applied and which of those are within the BLMs authority under the LUPA, which may require tiered or supplemental NEPA analysis, and which of those may fall under the stakeholder's authority to implement".

Appendix D D-6 Step 3 The BLM identifies a list of response actions that it "could" evaluate. Again, this list should be developed with the stakeholder group, and the following actions should be added to the list: Implementation of emergency burn rehabilitation and/or emergency hazard fuels reduction; Development of a Grazing Allotment Management Plan; Development of a targeted grazing plan; Prioritize habitat improvement projects and associated implementation funding; Work with partners to identify and implement appropriate predator control measures (particularly if such efforts are warranted while habitat recovers from a catastrophic event); Emergency gather of Wild Horses and Burros; Work with existing water right holders to make water available for rehabilitation effort, or to develop range improvements to enhance and protect critical water resources.

Appendix D D-6 Step 3 A response plan should be developed for either a soft or hard trigger unless the stakeholder team assembled to develop the causal factor analysis determines that such a plan is not warranted. If a plan is warranted, it should include information pertinent to all phases of an adaptive management approach (see DOI, 2009), but, in particular, there needs to be inclusion of the anticipated response to response actions, a monitoring component for each response and a discussion of how response will be adjusted based on monitoring.

Appendix D D-6 Step 4 The scale of response should be identified by the stakeholder team assembled to develop the causal factor analysis. While the BLM may be responsible for implementing some of the responses identified by the stakeholder team, other stakeholders may also have implementation responsibilities (i.e. a grazing permittee developing an AUM, a wildlife agency providing implementation funding for a rehabilitation project, etc.). Appendix D D-6 & 7 Step 5 NCA would advocate for biological monitoring to be completed and that all monitoring (biological and/or habitat) should be collaborative among the stakeholder team to encourage buy-in and accountability. Appendix D D-7 Longevity of Trigger Responses This should be identified in development of the Response Plan by the stakeholder group based on the casual factor analysis and response plan.

ADAPTIVE MANAGEMENT Appendix D is apparently a re-write of Appendix J in the 2015 FEIS. Sadly, the re-write is internally inconsistent and seems less concerned with evolving science than the 2015 version. The following examples show this move from a process anchored in scientific research to a reliance on experts, and less trust/engagement of the public:

- As stated in the text: In Appendix J (2015) hard triggers could be determined by the appearance of collective soft triggers, whereas in Appendix D (2018) only accelerated criteria are used for hard triggers.
- Appendix D (2018) does not refer to the methodologies for collecting data on population that were provided in Appendix J (2015). Instead of data collection as described in Appendix E (2015), responsibility for establishing population counts are delegated to the state agencies and the National Operations Center.
- For habitat data (sagebrush coverage), text in Appendix D (2018) specifically refers to “imagery” though it is well documented that there are many difficulties in interpreting satellite imagery accurately and this specification suggests that new technologies won’t be acceptable, if developed.
- Appendix J (2015) refers to the cutting-edge work being done on genetic studies and accounting for the use of alternative leks by Greater sage-grouse, but Appendix D (2018) does not. Fedy and Aldredige 2011 cited in Appendix J (2015) is not mentioned in Appendix D (2018).

Appendix D (2018) eliminates the concepts of “seasonal habitat” and “space-use models” incorporated into the analyses recommended in Appendix J (2015).

The number of biologically significant units (BSU) have been reduced from 17 in Appendix J (2015) to only 7 in Appendix D (2018). While this may be an appropriate change, there is no reference to indicate who changed the units or why. Neither Appendix J (2015) or Appendix D (2018) have provided reference lists. For Appendix D (2018) there are four references (fewer than the seven in Appendix J). The following citations need full references to make the appendix of use to the public: Coates et al. 2017; DOI 2008; Stiver et al. 2015; and BLM 2015. The following references were dropped from Appendix J (2015) that likely would add significant science to the process: Coates et al. 2014 (updated by 2017?); and Connelly 2004; DOI 2008; Fedy and Aldridge 2011; Stiver 2006 (updated by 2015?); and USFWS 2013. Coates et al. 2017 is mentioned numerous (5) times and appears to be the backbone of Appendix D (2018). However, nowhere in the appendix is the reader given a title or co-authors to help determine which of the 7 papers authored by Coates in 2017 are being invoked (at least four have Greater sage-grouse in the title). The reference list for the 2018 EIS in general may have the proper reference but again, Coates was involved in numerous publications (BTW the reference list does not have Coates et al. 2017a though it is referred to in the text, pages 3-2 and 3-3). There is no mention of the EIS reference list in this appendix text to direct the reader to consult it. Previous efforts to identify sources mentioned within the EIS (2015) have found that the reference list is incomplete or confusing (see discussion on Noise below). A professional organization should realize that appendixes should

stand on their own as they are often separated from the body of the original document. This is poor documentation and unacceptable for transparency to the public to which the BLM claims to aspire.

Adaptive management: adaptive management is totally dependent on the adequate collection and evaluation of data on the effectiveness of agency actions and restoration projects before any changes can be made. The draft EIS fails to disclose what data has been collected on agency efforts to implement GRSG conservation measures in the 2015 plan and subsequent LUP amendments and to evaluate their effectiveness. It appears that the BLM has no idea whether its current GRSG conservation actions are effective, or are failing, or how they need to be changed. Therefore, the draft EIS has no scientific data-based rationale for any amendments to the 2015 plan. In conclusion, I must agree with the 21 GRSG experts in a 6/8/18 letter to Secretary Zinke that the proposed LUP amendments would weaken current sage-grouse conservation measures before those measures have been fully implemented and tested for effectiveness. The best action that BLM could take is to abandon amending the GRSG conservation plans and Land Use Plans or to select the No Action Alternative to end this wasteful process. Instead, I'd strongly urge the BLM to put its resources into fully implementing the 2015 plans, adequately monitoring agency management and restoration projects for effectiveness and basing future adaptive management on at least five years of data which clearly shows what GRSG habitat management and restoration actions are successful in meeting agency goals and objectives and which are failures and need to be changed.

BLM's adaptive management procedures should focus more on pre-fire measures that reduce wildfire risks. The adaptive management provisions in Appendix D of the 2018 DEIS are not proactive because they focus on problems that have already happened (e.g., population declines and habitat loss) but they do not minimize risks due to wildfire which cause devastating habitat loss. WMC disagrees with BLM's position that "Adaptive management, with specific triggers (signals), provide additional certainty that the regulatory mechanisms included in the LUPA are robust and able to respond to a variety of conditions and circumstances quickly and effectively to conserve Greater Sage-Grouse habitat and populations." (DEIS at D-1).

The adaptive management measures need to be revised to provide BLM with the necessary flexibility and nimbleness to implement site-specific measures to reduce identified wildfire risks. If this means that some fuel reduction is warranted in GSG habitat areas in order to reduce wildfire risks, BLM should be authorized to implement appropriate measures to minimize the buildup of flammable fuels.

Several of the provisions in the adaptive management protocols in Appendix D cannot be applied to mineral projects because they are not consistent with claimants' rights pursuant to FLPMA and the U.S. Mining Law. Appendix D needs to be updated to clarify that the following adaptive management triggers (2018 RMP DEIS in D-6) do not apply to mining projects: 1. Delaying issuance of new permits and authorizations; 2. Delaying issuance of new or pending ROWs outside of designated existing corridors; 3. Increasing enforcement efforts on travel restrictions; 4. Limiting noise and/or light pollution; 5. Temporary closures; and 6. Eliminating allocation exception decisions in areas that have tripped a hard trigger.

Adaptive Management We appreciate the effort of the BLM to be more consistent with DOI Guidance on Adaptive Management, and also the inclusion of "local partners" throughout the process. Add a bullet to read "To the extent practical, utilize collaborative and consensus-based processes with stakeholders,

appropriate state and local agencies, and authorized land uses when developing and implementing management responses to any trigger met or surpassed."

2-8 and 2- 9 Table 2-2, Issue 3, Adaptive Management No-Action Alternative: The Adaptive Management Framework described in No-Action Alternative and contained in Appendix J of the current LUPA is NOT Adaptive Management as described by the DOIs own guidance document, see Figure 1.1 below from DOI 2009. This is particularly true of the Hard Trigger response that automatically implements a host of allocation decisions that may or may not be warranted based on the cause of reaching a hard trigger. Once the hard trigger responses are implemented there is no iterative implementation or path for reversing those automatic implementations. The scale of the response is also not well defined. Particular aspects of the Adaptive Management Approach not included that are currently under No-Action Alternative, and as described in DOI 2009 include: ? Assessment of Problem (particularly on Hard Trigger Response as there is no casual factor analysis); ? Design (particularly on Hard Trigger Response as responses are "hard wired" in at the RMP level); Page 24 of 89 ? Monitor; ? Evaluate; and, ? Adjust As such, the BLM should reject No-Action Alternative, and ensure that all Adaptive Management Process components listed in Figure 1.1 above are incorporated into Management Alignment Alternative, and Appendix D of this document. Management Alignment Alternative: We support BLM's adoption of the State's Adaptive Management Plan as approved by the Sagebrush Ecosystem Council at its July 17, 2018 meeting and working with us to further refine this process to be true Adaptive Management.

"Development of Allotment Management Plans (AMPs), as an objective, will include completion of technically sound inventories; ecological status inventory (ESI) is a minimum, with other techniques as appropriate such as use pattern mapping as a measure of animal distribution, actual use records, detailed weather records, stream channel morphology, woodland features including age structure and density of trees, and other studies using standardized techniques. So-called "rapid assessment" techniques are permitted and in fact encouraged in Eureka County as a way to identify specific technical studies that are needed. Rapid assessment includes such techniques as the DOI Rangeland Health approach and the Riparian Functional Condition" (p.6-8). o

The DEIS does not propose the implementation of any of these techniques through allotment specific AMPs. While there is discussion about implementation of AMPs in the DEIS, the ability to manage according to specific AMPs is undermined by the proposal of blanket restrictions, requirements, and actions across the entire landscape. There must be a focus on individual allotments through properly developed AMPs and associated resource inventories.

BLM must clarify which partners will be engaged in the Adaptive Management Habitat Analysis and to what extent those partners will be engaged Throughout Appendix D (outlining the Adaptive Management Plan), the RMPA/DEIS references "coordination with appropriate federal, state, and local partners (including local area conservation groups)," but Appendix D fails to clarify which entities will be considered for such partnership. At a minimum, these partnerships should include impacted land users such as ranchers as well as local extension agents from the University of California Cooperative Extension and University of Nevada Cooperative Extension. While these groups may already be considered for inclusion as "local partners (including local area conservation groups)," this should be clarified within the RMPA/DEIS to ensure that these stakeholders are not excluded from the incredibly-consequential Adaptive Management Planning process. Additionally, the RMPA/DEIS ought to clarify

whether the "appropriate federal, state, and local partners (including local area conservation groups)" detailed in Step 1 of the Trigger Responses and Causal Factor Analysis ("Assessment of Greater Sage-Grouse Population and Habitat Baseline Conditions") are the same as the "appropriate federal, state, and local partners (including local area conservation groups)" detailed in Steps 2 and 3 of the process. All steps of the Trigger Responses and Causal Factor Analysis ought to be conducted in cooperation with the same or similar partners to ensure consistency throughout the analysis and to ensure that experts and impacted producers are represented throughout the process. Finally, the RMPA/DEIS should be amended to ensure that those same "appropriate federal, state, and local partners (including local area conservation groups)" are consulted in determining whether reversal of trigger responses is appropriate under Section D.7 of the Adaptive Management Plan.

Greater attention needs to be given to the area of implementing adaptive management which considers the risk of fuel load levels. Proactive on-the-ground management should be applied to reduce the levels of massive wildfire destruction. Per Table 3-4 in the plan amendment, over 109,000 acres of greater sage-grouse habitat burned between 2015-2017. Livestock grazing should be viewed as an effective tool to improve range conditions or manage for fire as scientific support is growing for the value of properly-managed grazing related to pre- and post-fire management.

#### **G.4.7 Mitigation**

Mitigation As shown in Table 2-2 (DEIS at 2-10), the net conservation gain mitigation standard, which requires compensatory mitigation, is included in both the No Action and the Management Alignment Alternative/Preferred Alternative in the DEIS. In conjunction with the Management Alignment Alternative/Preferred Alternative, BLM is specifically seeking public comment on "whether the implementation of a compensatory mitigation standard on public lands is appropriate and consistent with applicable legal authorities" (DEIS at 2-17). PGC finds that compensatory mitigation on public lands is not consistent with FLPMA, which does not authorize compensatory mitigation. In fact, FLPMA is silent on the issue of mitigation. The statute does not include the word "mitigate" and mentions "mitigation" only once in FLPMA Section 603 pertaining to Wilderness Study Areas specifically in the context of the management directives for the Fossil Forest Research Natural Area.

Much of the surface disturbance associated with a mining operation can be effectively reclaimed to provide future habitat. Surface disturbance at exploration projects can typically be fully reclaimed. On-site reclamation of mining-related disturbances is a form of required mitigation. However, it is not compensatory mitigation as contemplated in the 2018 DEIS. If BLM concludes there are specific circumstances in which compensatory mitigation is authorized for certain public land uses, the FEIS should clarify that compensatory mitigation does not apply under any circumstances to activities conducted pursuant to the U.S. Mining Law and authorized under the 43 CFR Subpart 3809 regulations. Although PGC appreciates BLM's efforts to align the amended GSG LUP with the State of Nevada's 2014 GSG Conservation Plan, the State's net benefit (net conservation gain) standard and compensatory mitigation requirement are elements of the State's Plan that cannot be applied to projects on public lands. The Management Alignment/Preferred Alternative in the 2018 DEIS includes the State's net conservation gain/compensatory mitigation requirement. Because FLPMA does not authorize compensatory mitigation, the Preferred Alternative in the 2018 FEIS and the 2018 amended LUP must clarify that BLM does not have the authority to require compensatory mitigation on public lands. Additionally, Appendix F of the 2018 DEIS, "Nevada and Northeastern California Mitigation Strategy" requires substantial modification to eliminate the references to compensatory mitigation. It must also

explicitly state that compensatory mitigation does not apply to mineral activities on public lands. Appropriate mitigation measures for public land uses other than mining should be determined on a project-by-project basis based on site-specific factors, must be consistent with FLPMA's multiple use land use policies, and must not involve unauthorized compensatory mitigation. PGC believes that acquiescing to the State of Nevada and incorporating the Nevada net conservation gain/compensatory mitigation policies violates federalism principles. While the states may manage sage grouse, the states have no legal authority to dictate how federal lands are to be managed or to impose conditions like compensatory mitigation on federal land users. FLPMA does not authorize BLM to accept or substitute state standards that are inconsistent with federal policies such as landscape-scale land management and net conservation gain. BLM's mitigation authority is strictly and explicitly limited to the FLMPA mandate to prevent onsite UI-JD at projects on BLM-administered lands. It has absolutely no authority to require or sanction offsite compensatory mitigation for necessary and due impacts associated with authorized uses of public lands.

However, PGC remains concerned about the aspects of the Management Alignment Alternative that are based on the landscape-scale management and mitigation principles embraced in the following documents: The National Technical Team ("NTT") Report; The Conservation Objectives Team ("COT") Report; The October 2014 SFA Memo from the U. S. Fish and Wildlife ("FWS") Director to the BLM Director and the U.S. Forest Service Chief; The September 2014 U.S. FWS Mitigation Framework; The November 2014 USGS Lek Buffer Study; and The September 2015 Crist et al USGS Open File Report. Because all of these documents were developed to implement the Obama Administration's landscape-scale land use and mitigation policies, they are no longer consistent with current policy and the law as Congress clarified in its rejection of BLM's Planning 2.0 Rule. Consequently, BLM must eliminate any future reliance on the findings or recommendations in these documents. This is another compelling reason why the No Action Alternative, which uses these documents as a foundation, is not selectable. However, it also means that elements of the Management Alignment Alternative in the 2018 DEIS that are based on the above-listed documents must be eliminated from BLM's Preferred Alternative in the 2018 FEIS and the amended LUP. Specifically, the one-size-fits-all, landscape-scale land use restrictions based on the NTT Report such as uniform lek buffers, seasonal restrictions, noise restrictions, disturbance caps, and required design features need to be eliminated and replaced with project-specific conditions based on actual site habitat conditions. Additionally, as discussed in detail in Section IX, these land use restrictions cannot substantially interfere with a mining claimants' rights pursuant to the U.S. Mining Law (20 USC 21 a et seq as amended) and FLPMA Section 302(b) to explore and develop its mining claims or to enter and occupy public lands for mining purposes. As discussed in Section V, FLPMA does not authorize compensatory mitigation for unavoidable impacts to GSG. Thus, BLM's Preferred Alternative in the 2018 FEIS cannot include compensatory mitigation on public lands in the Nevada LUP despite the compensatory mitigation provisions in the State of Nevada's 2014 State GSG Conservation Plan. Although PGC appreciates BLM's efforts to work closely with the State of Nevada to align the amended LUP with the Nevada State Plan, this is one aspect of the Nevada State GSG Conservation Plan that must not be incorporated into BLM's 2018 GSG LUP amendments.

PGC finds that compensatory mitigation on public lands is not consistent with FLPMA, which does not authorize compensatory mitigation. In fact, FLPMA is silent on the issue of mitigation. The statute does not include the word "mitigate" and mentions "mitigation" only once in FLPMA Section 603 pertaining to Wilderness Study Areas specifically in the context of the management directives for the Fossil Forest Research Natural Area. FLPMA Section 302 (43 U.S.C § 1732(b)) establishes the environmental

protection standard that public land uses must prevent unnecessary or undue degradation ("I-JUD"). It does not require or authorize compensation or offsite mitigation for unavoidable onsite impacts (e.g., necessary and due impacts) associated with the use of public lands. In the case of mineral activities conducted pursuant to the Mining Law, FLPMA specifically prohibits impairment of a claimant's rights under the Mining Law of 1872: "Except as provided in section 314, section 603, and subsection (f) of section 601 of this Act and in the last sentence of this paragraph, no provision of this section or any other section of this Act shall in any way amend the Mining Law of 1872 or impair the rights of any locators or claims under that Act, including, but not limited to, rights of ingress and egress. In managing the public lands the Secretary shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands." 43 U.S.C. § 1732(b) 3 The statement: "The mitigation standard (net conservation gain) would be retained in the Management Alignment Alternative (and the No-Action Alternative) is repeated throughout Chapter 4 of the DEIS. Pursuant to this FLPMA directive and the U.S. Mining Law, BLM's discretionary authority is limited to preventing I-JUD, making the WD standard the only mitigation standard consistent with claimants' rights under the U.S. Mining Law as amended by FLPMA. BLM does not have the authority to require mineral project proponents to provide mitigation, including compensatory and/or offsite mitigation that exceeds the UI-JD standard. UI-JD must be determined on a project-specific basis to determine which impacts are avoidable (i.e., unnecessary and undue) and which impacts are unavoidable (i.e., necessary and due) in order to develop the mineral project. Consequently, there is no one-size-fits-all mitigation standard or uniform ratio that is applicable to mineral projects. The requirement to provide compensatory mitigation impairs a claimant's Mining Law rights to access, use, and occupy public lands for mineral purposes. BLM's 43 CFR Subpart 3809 surface management regulations for locatable minerals. In the preamble to the November 2000 revision to these regulations (65 Fed. Reg. 70012, November 21, 2000), BLM clearly stated that it has no authority to require offsite or compensatory mitigation, although BLM may accept compensatory mitigation if a project proponent voluntarily offers same. Moreover, nothing in FLPMA, any other federal statute, or the regulations, allow BLM to implement the net conservation gain standard. 43 CFR §§ 3809.414, .420, and .421 implement FLPMA's I-JUD environmental protection standard. In the context of GSG habitat, BLM may require a mining claimant to avoid and minimize impacts to GSG habitat so long as avoiding and minimizing impacts does not materially interfere with or compromise the claimant's rights under the Mining Law. If habitat is co-located with mineralization, it is not possible to avoid impacting the habitat in order to pursue mineral exploration and development activities. In this case, the impact to habitat is necessary and due and does not require mitigation. The reclamation requirements in the 43 CFR Subpart 3809 regulations provide for mitigation of impacts to GSG habitat wherever possible. Specifically, the definition of reclamation at 43 CFR § 3809.5 includes "rehabilitation of wildlife habitat." In order to comply with this definition, 43 CFR § 3809.401 (b)(3)(v) requires mineral operators to prepare reclamation plans that include a plan for wildlife habitat rehabilitation. Operators must also provide detailed baseline information about wildlife habitat (43 CFR § 3809.401 (c)) within their project boundary that BLM uses to prepare the NEPA analysis and to determine an appropriate post-mining wildlife rehabilitation plan. Much of the surface disturbance associated with a mining operation can be effectively reclaimed to provide future habitat. Surface disturbance at exploration projects can typically be fully reclaimed. On-site reclamation of mining-related disturbances is a form of required mitigation. However, it is not compensatory mitigation as contemplated in the 2018 DEIS. If BLM concludes there are specific circumstances in which compensatory mitigation is authorized for certain public land uses, the FEIS should clarify that compensatory mitigation does not apply under any circumstances to activities conducted pursuant to the U.S. Mining Law and authorized under the 43 CFR Subpart 3809 regulations. Although PGC appreciates BLM's efforts to align the amended GSG LUP with the State of Nevada's

2014 GSG Conservation Plan, the State's net benefit (net conservation gain) standard and compensatory mitigation requirement are elements of the State's Plan that cannot be applied to projects on public lands. The Management Alignment/Preferred Alternative in the 2018 DEIS includes the State's net conservation gain/compensatory mitigation requirement. Because FLPMA does not authorize compensatory mitigation, the Preferred Alternative in the 2018 FEIS and the 2018 amended LUP must clarify that BLM does not have the authority to require compensatory mitigation on public lands. Additionally, Appendix F of the 2018 DEIS, "Nevada and Northeastern California Mitigation Strategy" requires substantial modification to eliminate the references to compensatory mitigation. It must also explicitly state that compensatory mitigation does not apply to mineral activities on public lands. Appropriate mitigation measures for public land uses other than mining should be determined on a project-by-project basis based on site-specific factors, must be consistent with FLPMA's multiple use land use policies, and must not involve unauthorized compensatory mitigation. PGC believes that acquiescing to the State of Nevada and incorporating the Nevada net conservation gain/compensatory mitigation policies violates federalism principles. While the states may manage sage grouse, the states have no legal authority to dictate how federal lands are to be managed or to impose conditions like compensatory mitigation on federal land users. FLPMA does not authorize BLM to accept or substitute state standards that are inconsistent with federal policies such as landscape-scale land management and net conservation gain. BLM's mitigation authority is strictly and explicitly limited to the FLMPA mandate to prevent onsite UI-JD at projects on BLM-administered lands. It has absolutely no authority to require or sanction offsite compensatory mitigation for necessary and due impacts associated with authorized uses of public lands.

Based on BLM IM 2018-039, we now need additional direction and information from the BLM on compensatory mitigation for projects that might adversely impact greater sage-grouse in Nevada.

We request clarification as to how BLM will be able to endorse and encourage the use of the CCS for compensatory mitigation, if it is no longer required by BLM. Additionally, current language in the DEIS commits BLM to quantifying impacts of anthropogenic disturbances utilizing the CCS Habitat Quantification Tool (HQT). Will the use of the HQT for quantifying disturbance impacts and voluntary mitigation still be supported by BLM?

The DEIS requests input on mitigation and we believe this certainly warrants clarification as to how the IM relates to the proposed amendments in the DEIS, but also should be analyzed through supplemental NEPA.

The County requests that the BLM be clear in terms of when it can require mitigation (as well as what mitigation standards it can implement) and when it can't require mitigation. The County supports some standard means for quantifying both impacts and mitigations in Sage-grouse habitat.

Once the quantification method is clear and set, the BLM should indicate how impacts and mitigations will be "balanced" (i.e. no loss of 'functional acres' as determined through application of the HQT), at least for those allocation decisions where the BLM can require mitigation, The County understands that the BLM cannot require use of the State of Nevada's Conservation Credit System (CCS), which is unfortunate as it appears to be the only consistent means of determining appropriate mitigation.

Nevada requires mitigation in Priority Habitat Management (PHMA), General Habitat Management Areas (GHMA) and Other Habitat Management Areas (OHMA), which is different than BLM



requirements. The NvMA suggests the BLM modify Appendix F to refer to Greater Sage Grouse (GRSG) habitat to include all three habitat types to better align with Nevada's Conservation Plan.

The NvMA supports continued implementation of specific mitigation banking agreements, such as those entered into between BLM and Barrick and Newmont and believes that the land use plan amendment should explicitly acknowledge those existing agreements.

The NvMA supports BLM use of Nevada's Habitat Quantification Tool (HQT) to identify impacts to greater sage grouse and their habitat and encourages the agency to identify Nevada's Conservation Credit System (CCS) as the methodology of choice in the development of mitigation options, except where BLM has entered into a separate agreement to account for sage grouse impacts and mitigation, such as the current programs being implemented by Barrick and Newmont.

Under Appendix F, the NvMA is greatly concerned about mitigation actions conducted on public lands and the ability of the federal land managers to protect those lands from anthropogenic disturbances (i.e. roads, power lines, etc.). The BLM must develop a process of easements, rights-of-way or other land use restrictions to ensure the long-term durability of mitigation projects.

Under Appendix F, provisions should be made to ensure coordination with the State of Nevada on federal mitigation activities conducted outside of the CCS. It is critical that all parties be aware of ongoing mitigation activities at both the federal and state levels.

For consistency, in Appendix F the HQT should be referenced and used in all mitigation projects unless those projects are covered by a separate mitigation or banking agreement.

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.

Mitigation No-Action Alternative: The No Action Alternative remains ambiguous in its definition and application of "Net Conservation Gain" and has no consistent way of quantifying impacts and applying mitigation. As such, the County opposes the No-Action Alternative. Management Alignment Alternative: The BLM must clarify, for consistency sake, if it is implementing an "avoid, minimize and compensate" or "avoid, minimize and mitigate", and better define what it means in terms of the difference between "compensate" and "mitigate" and how these would be applied. The State is very clear in terms of requiring mitigation of all anthropogenic disturbance as determined through the CCS. Since the BLM has stated it cannot require mitigation in all circumstances, and that it cannot require use of the CCS, then the BLM needs to be clearer in terms of how it is "aligning" with the State Plan. The County supports utilizing the State's Habitat Quantification Tool (HQT) as a consistent means of tracking changes to habitat quantity and quality. The BLM references the State's "net conservation gain" standard, but to fully align with the State, the BLM must also adopt the State's definition where "Net conservation gain is defined as the State's objective to maintain the current quantity and quality of sage-grouse habitat within the Service Area at the statewide level by protecting existing sage-grouse habitat or by mitigating for loss due to anthropogenic disturbances. Mitigation requirements are determined by the Conservation Credit System. This objective will be measured by the credit to debit ratio." Currently, it is unclear as to whether the BLM is proposing to adopt this definition and apply this standard. We request that the BLM

clarify this. The statement, from Table 2-2, page 2-10 of the Management Alignment Alternative, that "...mitigation would be considered subject to the federal regulations governing the authorization..." is very ambiguous, whereas the State is very clear in their Plan that "Mitigation will be required for all anthropogenic disturbances impacting sage-grouse habitat within the Service Area." Clarification needs to be provided in terms of how the BLM plans to align with the State Plan in circumstances where ...federal regulations governing the authorization..." do NOT allow for or mandate 'mitigation' following avoidance and minimization, and such authorizations should be clearly disclosed. For consistency sake, NACO supports the use of the State's HQT and/or CCS to determine mitigation that meets the State's objective, stated in the State Plan, to " ...maintain the current quantity and quality of sage-grouse habitat..." when it is determined that additional mitigation, in addition to avoidance and minimization actions, would be required in order to actually "maintain the current quantity and quality of GRSG habitat".

Net conservation gain principle, tied to compensatory mitigation, is a bedrock principle of our SGMP that must not be altered. The preferred alternative description states it shall remain as objective of compensatory mitigation, yet in the same paragraph, red flags are raised that there was inadequate public comment opportunity on the concept and that compensatory mitigation itself may not be appropriate or legal.

There must not be exemptions to mitigation. Please clarify with more specifics and definitions as to what are "exemptions criteria".

Language must be added acknowledging BLM's already existing authority to require mitigation in case specific circumstances. Please recognize the requirement in the state plan: "Mitigation will be required for all anthropogenic disturbances (that cannot be avoided) impacting SG habitat within the SGMA."

BLM should align with the NV Plan language to a.) "Avoid, Minimize, Mitigate", rather than the proposed "Avoid, Minimize and Compensate". b.) Require mitigation in all 3 habitat types (PHMA, GHMA & OHMA -- O: other), as expressed in the NV plan, rather than just the first

Also the Federal Register Notice of July 30, 2018 regarding the U.S. Fish and Wildlife Services withdrawal of Mitigation Policy and Compensatory Mitigation Policy needs clarification for the "Mitigation" section of the Preferred Alternative.

The RMPA should expressly recognize the BEA as an approved methodology for quantifying impacts and voluntary compensatory mitigation. As noted above, following the Nevada Governor's Consistency review, BLM added language to the LUPA expressly acknowledging that actions taken under the BEA were consistent with the LUPA. That language is included in the discussion of mitigation in the Table 2-2 (Comparison of Alternatives) in the Draft RMPA/EIS on page 2-11. The current plan states that BLM will "authorize locatable mineral development activity, by approving plans of operation and apply mitigation and best management practices that minimize the loss of PHMAs and GHMAs or that enhance Greater Sage-Grouse habitat by applying the 'avoid, minimize and compensatory mitigation' process through an applicable mitigation system, such as the Nevada Conservation Credit System and the Barrick Nevada Sage-Grouse Bank Enabling Agreement (March 2015)." Draft RMPA/EIS at p. 2-11 (emphasis added). In the description of the Management Alignment Alternative in the same table, the Draft RMPA/EIS discusses coordination with the Nevada SETT and the Nevada Conservation Credit System but does not explicitly reference the BEA. Barrick requests that language from the LUPA referring to the BEA be

retained in the ARMPA or that new language be added, similar to the language in the current LUPA, to acknowledge that, where applicable, BLM will rely on the BEA to calculate impacts and compensatory mitigation. Specifically, BLM should add the following language to the end of that section: Within the area covered by the Barrick Nevada Sage-Grouse Bank Enabling Agreement (March 2015), BLM will calculate impacts and evaluate voluntary proponent-developed mitigation options in accordance with that Agreement.

**Defer to Nevada's Sage Grouse Conservation Plan** The purpose of the Management Alignment Alternative, as described in the DEIS, is to "better align BLM management direction with the State of Nevada's Conservation Plan and conservation strategies . . ." DEIS at page 2-3. LNC supports this objective and the changes proposed to the RMP (and listed on DEIS page 2-3) to move the BLM plan closer to the Nevada plan. However, more changes may be necessary to align the BLM's plan with the Nevada plan. In LNC's view, deferring to the Nevada plan means that BLM would eliminate required design features, lek buffer zones, disturbance caps and other management restrictions in the current LUPA from project-level approval decisions. These measures could still be considered by project proponents and implemented, where appropriate to minimize impacts, but would not be mandatory. Based on site-specific conditions, implementing design features or other avoidance or mitigation measures would reduce compensatory mitigation obligations, but could not be used as a basis for denying project approval. While the draft plan retains the "net conservation gain" requirement, we expect that the final plan will remove that standard based on the July 24, 2018 BLM Instruction Memorandum regarding Compensatory Mitigation. LNC continues to support voluntary compensatory mitigation and believes that the revised resource management plan should acknowledge and encourage, but not require, such mitigation for impacts to greater sage-grouse habitat.

BLM has ample authority to use the entire mitigation hierarchy, including by imposing compensatory mitigation. As a preliminary matter, BLM should not implement IM 2018-093, because it incorrectly interprets NEPA, FLPMA, and various other federal laws and rules, and departs dramatically from long-standing agency practice.

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. 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.<sup>19</sup> 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".<sup>20</sup> 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 Endangered Species Act, 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.

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."<sup>27</sup> 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 must prepare a supplemental EIS to evaluate the impacts of Instruction Memorandum (IM) 2018-093, which prohibits BLM from adopting the "net conservation standard" and requiring compensatory mitigation. Supplemental EISs are required for "substantial changes in the proposed action that are relevant to environmental concerns" or "significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." 40 C.F.R. § 1502.9(c)(1)(i), (ii). Because IM 2018-093 is a paradigm shift on mitigation and eliminates one of the pillars upon which the 2015 ARMPAs and "not warranted" determination stand, BLM must now prepare a supplemental EIS. Turning to the NV/CA Draft EIS, IM 2018-093 requires "substantial changes" to the proposed action that must be thoroughly evaluated in a supplemental EIS. BLM included the "net conservation gain" standard in the Management Alignment Alternative at the behest of the states of California and Nevada: "With respect to compensatory mitigation in particular, at the request of the States, the Management Alignment Alternative in this Draft RMPA/EIS includes the net conservation gain standard for compensatory mitigation that the BLM incorporated into its plans in 2015." NV/CA Draft EIS at 2-17. Accordingly, BLM predicated specific proposed actions on compliance with the "net conservation gain" standard, including: \* Exceptions to Fluid Minerals Stipulations - permitted if impacts "could be offset through use of the mitigation hierarchy (avoid, minimize, mitigate) to achieve a net conservation gain. . .", *id.* at E-4; \* Nevada and NE California Mitigation Strategy - predicated on the use of compensatory mitigation when impacts "remain . . . or cannot be rectified through reclamation. . .", *id.* at F-1; and 26 *Western Exploration, LLC v. U.S. Department of the Interior*, at 34 (citations omitted). 27 43 U.S.C. § 1702(c). \* Exceptions for Land Disposal - permitted if the proposal "can achieve a net conservation gain through the use of compensatory mitigation." *Id.* at 2-13. Because IM 2018-093 prohibits BLM from "imposing" compensatory mitigation through "environmental impact statements" and "resource management plans," BLM is arguably obligated to delete these proposed actions from the EIS. These changes are neither "minor" nor "qualitatively within the spectrum of alternatives" evaluated in the Draft EIS. See Council on Environmental Quality, 40 Most Questions Asked Concerning CEQ's NEPA Regulations at 22, available at <https://www.energy.gov/sites/prod/files/G-CEQ-40Questions.pdf>. They go to the very heart of the conservation strategy set forth in the ARMPAs and ratified by the "not warranted" determination. See, e.g., 80 Fed. Reg. at 59,881 ("Requiring mitigation for residual impacts

provides additional certainty that, while impacts will continue at reduced levels on Federal lands, those impacts will be offset to a net conservation gain standard."). Additionally, IM 2018-093 represents the very sort of "significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts" that demand further analysis. This is because the Draft EIS incorporates the "net conservation gain" standard throughout the Management Alignment Alternative, and the only other alternative evaluated - the no action - would retain the current version of the NV/CA ARMPA, which also contains the standard. Thus, the Draft EIS neither envisions nor evaluates eliminating entirely the "net conservation gain" standard and compensatory mitigation. Further, to the extent that BLM could rely on the range of alternatives originally evaluated for the ARMPA (which it cannot, as discussed above), those alternatives are of no help. None of those alternatives disclaimed the authority to impose "compensatory mitigation" as a means of offsetting unavoidable impacts on sage-grouse. In fact, each of the action alternatives incorporated the Regional Mitigation Strategy, NV/CA ARMPA at 2-92, carved out a robust role for compensatory mitigation: "If impacts from BLM/Forest Service 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[.]" Id. at App. I-1. And the no-action alternative does not save BLM from needing to complete a supplemental EIS, because the RMPs preceding the ARMPAs also authorized the use of compensatory mitigation. See, e.g., BLM, Winnemucca RMP 2-107 (May 2015) ("Mitigation may be achieved avoidance, minimization, rectification, reduction, and compensation.");<sup>28</sup> BLM, Ely District ROD and ARMP A.2-5 (Aug. 2008) ("The plan of development must demonstrate no significant impact will occur through mitigation of impacts, compensation (in accordance with BLM policy), and restoration of the land to pre-disturbance condition.");<sup>29</sup> BLM, Tonopah RMP and ROD 8 (Oct. 1997) ("Off-site mitigation may be negotiated during a plan operations review for locatable mineral actions when an irretrievable loss of critical or crucial habitat is unavoidable, or a significant long-term adverse impact will occur.").<sup>30</sup> In conclusion, IM 2018-093 requires "substantial changes" to the Draft EIS's Management Alignment Alternative that are not evaluated in the Draft EIS, the 2015 ARMPAs, or the RMPs preceding the ARMPAs. Accordingly, BLM must now prepare a supplemental EIS to evaluate the elimination of the "net conservation gain" standard and the new prohibition on compensatory mitigation.

BLM has the authority to incorporate, implement, and enforce state sage-grouse mitigation programs that meet a recognized set of principles. Governor Sandoval requested that BLM "[a]dopt the mitigation policy in the Nevada Plan and the [Conservation Credit System] as the preferred approach to incentivize avoidance, minimization, through the use of required design features and require mitigation for residual direct and indirect impacts that cannot be avoided." Letter from Gov. Brian Sandoval, to Secretary Ryan Zinke 2 (Nov. 30, 2017). Accordingly, the NV/CA Draft EIS proposes to "apply the mitigation hierarchy . . . in the State of Nevada's Greater Sage-Grouse Conservation Plan" and retain the "net benefit (net conservation gain)" standard adopted by the State of Nevada. NV/CA DEIS at 2-10. The recent issuance of IM 2018-093 calls this commitment into question.

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).<sup>35</sup> 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.<sup>36</sup>

Yet, it is not clear how BLM would be able to adopt and enforce state mitigation plans, such as the Nevada plan, as part of this sage-grouse management plan, which is essential for maintaining the "regulatory certainty" required by the 2015 "not warranted" determination. Therefore, in addition to completing the necessary supplemental NEPA to evaluate the impacts of the new guidance on the Nevada/Northeast California Plan, as discussed above, 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 and will allow BLM to provide the necessary "regulatory certainty" to avoid the need for an ESA listing.

2-13 Table 2-2 Allocation Exception Compensatory mitigation should only be sought after all other options are exhausted as it relates to disposal lands or previous Congressional

Process, Section vi. authorizations. Those costs should be born by the managing agency as part of the disposal and mitigation process.

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 LUP 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 UUD standard as a direct expression of Congress. GRSG conservation-range wide-can comfortably be implemented to compensate for reasonable land use within important GRSG habitat without confronting FLPMA's delicate balancing of land use and land stewardship.

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 off site 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 Page Nineteen 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 GRSG conservation.

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.

Finally, we would like to note the Mitigation Strategy issue. The two alternatives for the strategy presented in the draft are similar, but there's one major different. The Mitigation Strategy in the Preferred Management Alignment Alternative aligns more with the State of Nevada's mitigation strategy. This means that when determining the impacts, the Bureau would use Nevada's Habitat Quantification Tool (HQT) to ensure consistency in tracking and reporting to habitat quality and quantity. Also, mitigation options would be assessed using the HQT under this alternative. This is different from the No-Action Alternative that relied heavily on just Nevada's Conservation Credit System to gage compensatory mitigation. While the inclusion of the HQT is a step in the right direction in setting a better mitigation strategy, adding elements of the conservation alternative would create a more protective Mitigation Strategy and allow the Bureau and parties to properly respond to problems facing the Greater Sage-Grouse.

The DEIS includes references to both "avoid, minimize, mitigate" which WEX agrees is an appropriate consideration under the mitigation hierarchy (subject to rights under the Mining Law and VERs) and also to "avoid, minimize, compensate" which is unsupported by law and inconsistent with the national policy to eliminate compensatory mitigation (which also is unsupported by law and can constitute an interference with property rights and reasonable investment backed expectations). Accordingly, WEX respectfully requests that the final decision remove reference to "avoid, minimize, compensate."

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."

we request that in accordance with the office of the Solicitor's M-37046 memo, language be added in the EIS that acknowledges BLM's authority to require mitigation in case-specific circumstances, under already existing authorities, and depending on the type of authorizing action. The SETT also requests that the BLM recognize the requirement the State has regarding mitigation in the Sage Grouse Management area found in the Consolidated State Plan on page 18, "Mitigation will be required for all anthropogenic disturbances impacting sage-grouse habitat within the SGMA."

SEP requests language stating that when proponents express a desire to perform compensatory mitigation, the SETT will be notified and given ample opportunities to liaise with the BLM and the project proponents at the earliest stages of project development.

The processes developed in the bullets seem to fit in under the "avoid" and "minimize" processes and not as exemptions to mitigation. Request more clarifying language.

How will reinforcement of timely, durable, and additional mitigation be upheld; particularly the durability component on proponent-driven mitigation on public lands? The SETT recommends further development of the concept. Durability of habitat over the term of disturbance is a significant component of the CCS. Clarification on this concept will need to be developed when addressing proponent-driven mitigation.

The SETT recommends the establishment of protocols and responsibility for reporting on compensatory mitigation projects that occur outside the CCS.

The SETT requests additional language clarifying how the intent, method of analyzation, or who and how an "upward adjustment of the valuation" will be conducted.

Use of the HQT to quantify outcomes should be incorporated on all compensatory mitigation projects to enable a comparative analysis of net conservation gain

The SETT recommends addressing how net conservation gain will be accomplished or reported if projects with valid existing rights move forward with mitigation efforts that are not commensurate with direct, indirect, cumulative, and permanent impacts.

How would net conservation gain be demonstrated in proponent driven projects?

The SETT requests the following statement is inserted as a new bullet at the end of this list: "Although Federal agencies have yet to allow CCS credit projects to be sited and developed on public lands to serve as compensatory mitigation, the BLM will continue to work with the SETT to ensure fulfillment of this objective in the near future."

Mitigation: The County does NOT support the "No Action Alternative" for the following reasons. The County requests that the BLM address the "net conservation gain" standard, which is currently being implemented in some instances under the 2015 LUP, even though Secretary Zinke revoked the policy by rescinding Secretarial Order 3330. The County has found the net conservation gain standard to be a moving target and is consistent. While the 2015 LUP requires compensatory mitigation, the policy the LUP was based upon was unlawful and now has been repealed. The County supports the "Management Alignment Alternative" with several suggested clarifications. The BLM needs to better define "net conservation gain" and how this will be measured on a consistent basis. If this cannot be done, then the "net conservation gain" requirement should be removed all together. The BLM should also disclose what it can and cannot require in terms of mitigation for each allocation type and/or process (i.e. mineral exploration and development versus renewable energy development). If the BLM doesn't have the authority to require mitigation for certain land uses, then it must disclose that. Further, the BLM must disclose its authorities for requiring compensatory mitigation for given allocations and identify the most consistent means of accomplishing this. The County supports a mitigation standard that is both



consistent and clear regarding its application so that the industry has some level of regulatory certainty when considering projects located on public lands. If the State's Habitat Quantification Tool is the best means of consistently measuring impacts, then it should be implemented to the greatest practical extent. The County believes that any mitigation actions taken should prioritize and focus on control and reduction of excess fuels and invasive / noxious weeds as a means of reducing fire potential and severity.

I 1-8 Table I-2, Row 5, Mitigation NCA supports bullet I NCA requests a revision of the second bullet so that it reads, "Provide consistency in application of mitigation, quantification and tracking of mitigation actions."

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.

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.

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.<sup>51</sup> 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 48 McKinney and Wilkinson. *Achieving Conservation and Development: Applying the Mitigation Hierarchy*. (April 2015). <https://www.nature.org/ourinitiatives/applying-the-mitigation-hierarchy.pdf> 49 Id. 50 2016 Work Group Mitigation Report, p. 7. 51 See, e.g., 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 at p. 23 ("Restoring sagebrush communities can be difficult, costly and slow... [Q]uestions remain concerning where treatments should be sited within a landscape to best achieve desired conditions in the long term as well as their effects on habitat selection and demography"). Detailed Comments on NV-CA DEIS The Nature Conservancy 14 of 23 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 should review the legal basis, or lack thereof, for the net conservation gain standard adopted in the 2015 plans.

Because the net conservation gain mitigation policy was first formulated and imposed upon the regulated community by the previous Administration, the current BLM needs to uniformly establish compensatory mitigation standards across state lines and in compliance with federal law.

The anomalous nature of the net conservation gain standard is perhaps best illustrated in Appendix F to the DRMP/DEIS, Section F.5 Glossary, in which compensatory mitigation is defined as compensating for

residual impacts by replacing or providing substitute resources or environments whereas net conservation requires compensation that results in a net increase to the quantity and quality of the habitat. The latter concept is outside the plain meaning of the mitigation hierarchy as defined at 40 CFR § 1508 and thus lacks statutory or regulatory authority for imposition on the regulated community. The net conservation gain standard should be eliminated from the Nevada FEIS/RMP.

Maintain a strong "net conservation gain" standard. Sage-grouse habitat in Nevada is almost entirely found on federally-managed public lands, and in order to offset development and properly manage these lands, BLM must have a strong science-based plan that includes this standard so as to give the species a chance at long-term recovery.

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.

In light of the recent BLM IM No. 2018-093 on compensatory mitigation, additional information and direction will now be required by BLM. Based on BLM IM 2018-039, we now need additional direction and information from the BLM on compensatory mitigation for projects that might adversely impact greater sage grouse in Nevada.

The removal of compensatory mitigation requirements from the RMPS DEIS has not been identified as a potential update to the RMPA through the cooperators and public NEPA process, only that alternatives to compensatory mitigation would be considered.

We request clarification as to how BLM will be able to endorse and encourage the use of the CCS for compensatory mitigation if it is no longer required by BLM.

Will the use of the HQT for quantifying disturbance impacts and voluntary mitigation still be supported by BLM?

We hope the BLM will better address wildfire, adaptive management and compensatory mitigation in the FEIS.

Therefore, throughout Appendix F, and throughout the whole of the RMPA, the phrase "net conservation gain" should be replaced with "no net loss of habitat."

MITIGATION The Instruction Memo IM2018-093 released July 24, 2018 seems to contradict mitigation planning provided in the EIS and specifically in Appendix F: Mitigation Strategy. We need clarification if

the IM specifically delegates mitigation to the state offices or if the strategy in Appendix F will be reissued. Mitigation is an important part of a proponent's planning to account for impacts and improve the environment as a result of a proposed project. Mitigation is not, and never has been, inexpensive. Uncertainty over mitigation adds time and cost and, therefore, makes some projects uneconomic. In general, uncertainty impacts our ability to attract investors because costs are not clear. Any policy that is unclear or that invites lawsuits (whether or not the court agrees with the plaintiff's argument) inserts more uncertainty. Uncertainty should be avoided. While Appendix F clearly defines relevant terms, there are no references to assist the public in understanding the scientific basis or for further research, especially into state programs mentioned in the text

Management Alignment Alternative: The first paragraph must clarify, for consistency sake, if the BLM is implementing an "avoid, minimize and compensate" or "avoid, minimize and mitigate", and better define what it means in terms of the difference between "compensate" and "mitigate" and how these would be applied. The State is very clear in terms of requiring mitigation of all anthropogenic disturbance as determined through the CCS. Since the BLM has stated it cannot require mitigation in all circumstances, and that it cannot require use of the CCS, then the BLM needs to be clearer in terms of how it is "aligning" with the State Plan. In paragraph 2, NACO supports utilizing the State's Habitat Quantification Tool (HQT) as a consistent means of tracking changes to habitat quantity and quality. The BLM references the State's "net conservation gain" standard, but to fully align with the State, the BLM must also adopt the State's definition where "Net conservation gain is defined as the State's objective to maintain the current quantity and quality of sage-grouse habitat within the Service Area at the statewide level by protecting existing sage-grouse habitat or by mitigating for loss due to anthropogenic disturbances. Mitigation requirements are determined by the Conservation Credit System. This objective will be measured by the credit to debit ratio." Currently, it is unclear as to whether the BLM is proposing to adopt this definition and apply this standard. Please clarify. Paragraph 3 is very ambiguous in terms of the statement that "...mitigation would be considered subject to the federal regulations governing the authorization..." whereas the State is very clear in that "Mitigation will be required for all anthropogenic disturbances impacting sage-grouse habitat within the Service Area." Clarification needs to be provided in terms of how the BLM plans to align with the State Plan in circumstances where "...federal regulations governing the authorization..." do NOT allow for or mandate 'mitigation' following avoidance and minimization, and such authorizations should be clearly disclosed. In paragraph 4, for consistency sake, NACO supports the use of the State's HQT and/or CCS to determine mitigation that meets the State's objective to "...maintain the current quantity and quality of sage-grouse habitat..." when it is determined that additional mitigation, in addition to avoidance and minimization actions, would be required in order to actually "maintain the current quantity and quality of GRSB habitat".

3.5 3-8 P 1 & 2 Are all the disturbances described in Section 3.5 unmitigated? Or are some of these disturbances on track for required but have yet to be implemented mitigation? If so, this section should clarify that at least some of this disturbance will be mitigated.

APPENDIX F: Nevada and Northeastern California Mitigation Strategy Chapter Page Paragraph / Line / Figure / Table Comment Appendix F All All See previous comment related to mitigation Appendix F F-1 16 Change "net conservation gain" to "equivalent number of functional habitat acres", or adopt the State's definition of "net conservation gain". Note: the above comment applies in many locations throughout Appendix F whenever "net conservation gain" is used. Please make all the appropriate

changes. The "net conservation gain" as defined in the EIS is not consistent with the definition and application in the State Plan. While the State Plan does use the term "net conservation gain" the definition and practical application of this standard is different than the EIS definition of "The actual benefit or gain above baseline conditions." (EIS p. 7-75) The State Plan states that "Net conservation gain is defined as the State's objective to maintain the current quantity and quality of sage-grouse habitat within the SGMA at the statewide level by protecting existing sage-grouse habitat or by mitigating for loss due to anthropogenic disturbances" (emphasis added, p. 12). The State Plan also clarifies that net conservation gain is "accomplished through the Conservation Credit System" (p. 13). And, "residual adverse impacts are required to be offset by mitigation requirements as determined through the CCS" (emphasis added, p. 68). The CCS creates mitigation credits and debits based on "functional acres" and ensures that disturbed functional acres are replaced. This all clarifies that while the State Plan calls this "net conservation gain," in application is actually "no net loss" in functional habitat. Appendix F F-1 9-10 Specifically include "local governments" as one of the cooperating agency examples. Appendix F F-2 28-30 Revise to read "Where applicable, BLM would require use of the State of Nevada's Habitat Quantification Tool (HQT) to ensure consistency in tracking/reporting changes and mitigating impacts in habitat quality and quantity by providing equivalent number of functional habitat acres."

Strengthen and clarify protections for the most important habitat, including restoring no surface occupancy stipulations for oil and gas leasing and protections from geothermal development.

The BLM plan must also maintain a strong standard to avoid damage to habitat and to restore habitat where impacts are unavoidable.

In this case, the impact to habitat is necessary and due and does not require mitigation.

In both the No Action Alternative and the Management Alignment/Preferred Alternative, compensatory mitigation on public lands is not consistent with FLPMA, which does not authorize compensatory mitigation. FLPMA Section 302 (43 U.S.C §1732(b)) establishes the environmental protection standard that public land uses must prevent unnecessary or undue degradation. It does not require or authorize compensation or mitigation for unavoidable impacts (e.g., necessary and due impacts) associated with the use of public lands.

Further, for mineral activities conducted pursuant to the U.S. Mining Law, FLPMA specifically prohibits impairment of a claimant's rights under the Mining Law of 1872 43 U.S.C. § 1732(b). Pursuant to FLPMA and the U.S. Mining Law, BLM's discretionary authority is limited to prevent unnecessary or undue degradation, making the unnecessary or undue degradation standard the only mitigation standard consistent with claimants' rights under the U.S. Mining Law as amended by FLPMA. BLM does not have the authority to require mineral project proponents to provide mitigation, including compensatory mitigation, that exceeds the unnecessary or undue degradation standard.

Unnecessary or undue degradation must be determined on a site-specific basis to determine which impacts are avoidable (i.e., unnecessary and undue) and which impacts are unavoidable (i.e., necessary and due) in order to develop the mineral project. As a result, a one-size-fits-all mitigation standard or uniform ratio is not applicable to mineral projects. The FEIS should specify that compensatory mitigation does not apply to activities conducted pursuant to the U.S. Mining Law and authorizations under the 43 CFR Subpart 3809 regulations.

2 2-10 Table 2-2, Issue 4, Mitigation No-Action Alternative: The No Action Alternative remains ambiguous in its definition and application of "Net Conservation Gain" and has no consistent way of quantifying impacts and applying mitigation. As such, we oppose the No-Action Alternative. Management Alignment Alternative: The first paragraph must clarify, for consistency sake, if the BLM is implementing an "avoid, minimize and compensate" or "avoid, minimize and mitigate", and better define what it means in terms of the difference between "compensate" and "mitigate" and how these would be applied. The State is very clear in terms of requiring mitigation of all anthropogenic disturbance as determined through the CCS. Since the BLM has stated it cannot require mitigation in all circumstances, and that it cannot require use of the CCS, then the BLM needs to be clearer in terms of how it is "aligning" with the State Plan. In paragraph 2, we support utilizing the State's Habitat Quantification Tool (HQT) as a consistent means of tracking changes to habitat quantity and quality. The BLM references the State's "net conservation gain" standard, but to fully align with the State, the BLM must also adopt the State's definition where "Net conservation gain is defined as the State's objective to maintain the current quantity and quality of sage-grouse habitat within the Service Area at the statewide level by protecting existing sage-grouse habitat or by mitigating for loss due to anthropogenic disturbances. Mitigation requirements are determined by the Conservation Credit System. This objective will be measured by the credit to debit ratio." Currently, it is unclear as to whether the BLM is proposing to adopt this definition and apply this standard. Please clarify. Page 25 of 89 Paragraph 3 is very ambiguous in terms of the statement that "...mitigation would be considered subject to the federal regulations governing the authorization..." whereas the State is very clear in that "Mitigation will be required for all anthropogenic disturbances impacting sage-grouse habitat within the Service Area." Clarification needs to be provided in terms of how the BLM plans to align with the State Plan in circumstances where "...federal regulations governing the authorization..." do NOT allow for or mandate 'mitigation' following avoidance and minimization, and such authorizations should be clearly disclosed. In paragraph 4, for consistency sake, we support the use of the State's HQT and/or CCS to determine mitigation that meets the State's objective to "...maintain the current quantity and quality of sage-grouse habitat..." when it is determined that additional mitigation, in addition to avoidance and minimization actions, would be required in order to actually "maintain the current quantity and quality of GRS habitat".

3.5 3-8 P 1 & 2 Are all the disturbances described in Section 3.5 unmitigated? Or are some of these disturbances on track for required but have yet to be implemented mitigation? If so, this section should clarify that at least some of this disturbance will be mitigated. Going forward, the BLM should not only track "disturbances" but also track disturbances that have been and will be mitigated versus those that have not. See County Needs Attachment

APPENDIX F: Nevada and Northeastern California Mitigation Strategy Chapter Page Paragraph / Line / Figure / Table Comment Appendix F All All See previous comments related to mitigation Appendix F F-1 16 Change "net conservation gain" to "equivalent number of functional habitat acres", or adopt the State's definition of "net conservation gain". Note: the above comment applies in many locations throughout Appendix F whenever "net conservation gain" is used. Please make all the appropriate changes. The "net conservation gain" as defined in the EIS is not consistent with the definition and application in the State Plan. While the State Plan does use the term "net conservation gain" the definition and practical application of this standard is different than the EIS definition of "The Page 45 of 89 actual benefit or gain above baseline conditions." (EIS p. 7-75) The State Plan states that "Net conservation gain is defined as the State's objective to maintain the current quantity and quality of sage-grouse habitat within the SGMA at the statewide level by protecting existing sage-grouse habitat or by

mitigating for loss due to anthropogenic disturbances" (emphasis added, p. 12). The State Plan also clarifies that net conservation gain is "accomplished through the Conservation Credit System" (p. 13). And, "residual adverse impacts are required to be offset by mitigation requirements as determined through the CCS" (emphasis added, p. 68). The CCS creates mitigation credits and debits based on "functional acres" and ensures that disturbed functional acres are replaced. This all clarifies that while the State Plan calls this "net conservation gain," in application is actually "no net loss" in functional habitat. Appendix F F-1 9-10 Specifically include "local governments" as one of the cooperating agency examples. Appendix F F-2 28-30 Revise to read "Where applicable, BLM would require use of the State of Nevada's Habitat Quantification Tool (HQT) to ensure consistency in tracking/reporting changes and mitigating impacts in habitat quality and quantity by providing equivalent number of functional habitat acres."

The Board would appreciate the BLM adopting the State's definition of "Anthropogenic Disturbance" that does NOT include range improvements.

There is no legal authority to require such compensatory mitigation. The BLM enabling legislation does not require net conservation gains.

Pilot projects should continue to be implemented to fine tune mitigation options. Suggest changing to the mitigation standard to make it appropriate and consistent with applicable legal authorities. Mitigation would be most appropriate in priority habitat and general management areas, when BLM is authorizing facilities or activities that result in loss of habitat that would have long-term (i.e., greater than 5 years) negative impact on greater sage-grouse or their habitats. The County suggests this mitigation requirement be phased in over the next 25 years as sage grouse habitat mitigation science evolves. In the meantime, the goal should be to develop pilot projects for compensatory mitigation in each County in Nevada and partner on developing achievable standards for mitigation.

#### **G.4.8 Exceptions/Variations from Non-Fluid Mineral Sage-Grouse Restrictions**

Allocation Exception Process BLM acknowledges that ". . . landscape level mapping may not accurately reflect on-the-ground conditions." (DEIS at 2-6) and states "[ ] Need for adjusting habitat management areas (HMAs) so that they reflect the best available science" (DEIS at ES-3). PGC is concerned that the Allocation Exception Process is too narrow and rigid to give BLM the necessary flexibility to use best available science (e.g., field-verified data) and to make project-specific decisions in GSG habitat based on actual, field-verified habitat data. The allocation exception process needs to state clearly that one of the circumstances which always requires an allocation exception is when a project applicant provides on-the-ground habitat data collected by a qualified biologist using BLM-approved data collection protocols that documents different habitat conditions than on Figure 1-2b. BLM should be required to base project decisions on actual field-verified habitat conditions rather than on the habitat management classifications shown on Figure 2-1b. Therefore, whenever BLM has field-verified habitat data that have been provided by a project proponent, the State of Nevada, or otherwise obtained by BLM, BLM must use this information in making land use decisions. In these circumstances, the landscape management area classification map (e.g., Figure 2-1b) cannot be used as the basis for BLM's decision. The restrictions that apply to the PI-IMA management classification must not be required on lands that are GHMA, OHMA, or non-habitat based on field-verified habitat conditions. Similarly, the restrictions that apply to GHMA must not be required on lands that are OHMA or non-habitat based on field-verified habitat conditions. Because BLM is compelled to use best available science, granting an allocation exception should be the

standard operating procedure that does not require the State Director's authorization. BLM District Managers should be authorized to grant allocation exceptions whenever BLM is provided with field-verified habitat data that conflicts with Figure 2-1 b. As stated elsewhere, the land use restrictions in the amended 2018 GSG LUP cannot substantially interfere with a claimant's rights under the U.S. Mining Law including the rights of ingress and egress, and reasonable use and occupancy for mineral exploration and development purposes.

The following discussion of the Allocation Exception Process as presented in Table 2-2 is poorly worded and confusing: "Verify use of landscape-scale mapping of PHMA, GHMA, and OHMA in regards to the application of allocations and stipulations." (DEIS at ES-3 and 2-12). As written, this appears to contradict the DEIS provisions pertaining to modifying habitat management area designations based on field-verified habitat data and diminish or even eliminate the need for an exception process. To make the allocation exception process consistent with the procedures outline to modify habitat management area designations PGC suggests this sentence needs to be re-written to say: "Use field-verified habitat data whenever available to make project-specific decisions and to apply allocation exceptions and stipulations." Similarly, the sentence on Table 2-2 stating "In PI-IMA and GHMA, the State Director may grant an exception to the allocations and stipulations described in Section 2-5 if one of the following applies..." is circular and confusing because Table 2-2 is the only content in Section 2.5.

In EIS Table 2-2, page 2-12, better definition is needed as to exception criteria under the Management Alignment Alternative. This should include a definition of impacts too small to address under the criteria, a definition of habitat fragmentation, and inclusion of all mining exemption criteria in addition to valid existing rights.

Allocation Exception Process No-Action Alternative: The County does not support this approach as it is inconsistent with the Nevada Sage-grouse Conservation Plan as well as the county's needs. It is also inconsistent among allocations and does not clearly provide exceptions for the following: county emergency response; issues related to public health and safety; and, standard administrative functions performed by local government for public benefit. Management Alignment Alternative: The County generally supports this Alternative and greatly appreciates the inclusion of items iii., iv., v., and vi, from Table 2-2, pages 2-13 to 213.

The 2018 Draft EIS dramatically expands the use of exceptions to all "allocations and stipulations described in Section 2-5" for PHMA and GHMA, including habitat management area designations (2-6), adaptive management (2- 8), mitigation (2-10), and habitat objectives (2-15). *Id.* at 2-12. This arbitrary and ill-defined process completely undermines the regulatory certainty that Greater sage-grouse require in order to avoid an ESA listing. See generally 80 Fed. Reg. at 59,858-59,942 (repeatedly referencing the importance of allowing only "limited" exceptions to allocations and stipulations). Under the "allocation exception process," BLM may grant an exception to the ARMPA's "allocations and stipulations" if just one of several criteria are met. However, as explained below, those criteria are vaguely worded and would allow BLM to issue blanket exceptions for nearly any activity regardless of impacts on Greater sage-grouse.

The State Director may grant an exception if the location is "determined to be unsuitable" by a "qualified biologist with Greater Sage-Grouse experience." 2018 DEIS at 2-12, E-2. But that criteria leaves unsaid for whom the biologist works. There is no requirement that the biologist represent the public or federal government's interest in protecting the greater sage-grouse from listing, or that any kind of consultation

take place with the Nevada Division of Wildlife (NDOW). A narrow exception in the 2015 RMP specified that the analysis must be conducted by a "field biologist or other GRSG expert from each respective agency." NV/CA ARMPA at G-10. That requirement that the biologist work for a government agency is conspicuously missing from the 2018 Draft EIS. For example, the biologist may work for, or serve under contract with, a project proponent. Also, as more studies are conducted regarding greater sage-grouse habitat, science is finding more populations and suitable habitat than previously known. Preemptively designating an area as "unsuitable" for Greater sage-grouse habitat is contrary to the Coates' studies that continue to find habitat where it had not previously been thought to exist. 2. The State Director may grant an exception if the "proposed action would be authorized to address public health and safety concerns, specifically as they relate to local, state, and national priorities." NV/CA Draft EIS at 2-12. While we do not oppose projects that truly improve public health and safety, the use of the word "priorities," under the guise of "health and safety," appears as an open invitation or loophole for road building and vegetation management throughout Greater sage-grouse habitat. Any "health and safety" exception should state that the project must specifically demonstrate a direct, imminent, and tangible link to the health and safety of human individuals. The plan should explicitly prohibit use of the exception to build or maintain roads, or treat vegetation, that would benefit extractive industries or grazing interests with negligible improvement to public safety. 3. The State Director may grant an exception for "renewals or re-authorizations of existing infrastructure in previously disturbed sites or expansions of existing infrastructure that have de minimis impacts or do not result in direct, indirect, or cumulative impacts on Greater Sage-Grouse and its habitat." NV/CA Draft EIS at 2-13. First, the second "or" should be an "and" in order to prevent collectively minor, but cumulatively significant, impacts from de minimis activities. Second, the exception also should define de minimis and not allow any expansion of existing facilities in PHMA. Finally, no exception should be granted if the expansion of existing infrastructure will exceed applicable density and disturbance caps, unless doing so will achieve a "net conservation gain" for the species. 4. The State Director may grant an exception for "a routine administrative function conducted by State or local governments, including prior existing uses, authorized uses, valid existing rights and existing infrastructure (i.e. rights-of-way for roads) that serve such a public purpose." NV/CA Draft EIS at 2-13. We do not disagree with appropriate exceptions for valid existing rights, which already are recognized in the current plan. 2015 RMP at I-13. However, this exception goes well beyond valid existing rights by recognizing "existing uses," an extremely broad term that could introduce a wide range of harmful activities into sage-grouse habitat, particularly in regard to road use, construction, and maintenance. As such, BLM must remove this overbroad exemption from protections for the greater sage-grouse. Valid existing rights already are covered by the current 2015 ARMPA. 5. The State Director may grant an exception for lands identified for retention in the plan, but "identified for disposal through previous planning efforts. . . ." 2018 DEIS at 2-13. Lands identified for retention in the plan include PHMA and GHMA. Id. at 2-5. Disposal of these lands should be disallowed, absent a clear and compelling need to override the national importance of retaining these lands in federal ownership. Finally, BLM must evaluate proposed exceptions through an open and transparent public process. This should include opportunities for the public to review and comment on proposed exceptions, as well as the opinions of expert agencies. The views of expert agencies, as well as the public, must also be given due weight during the evaluation process.

BLM must limit, not broaden, waivers, exceptions, and modifications for fluid minerals stipulations. We have a number of concerns for proposed changes to the application and scope of proposed changes to waivers, exceptions, and modifications to fluid minerals stipulations: \* First, under the 2015 ARMPA, BLM must apply a "no surface occupancy" (NSO) stipulation to new oil and gas leases in PHMA - and the



BLM may not grant waivers or modifications to those stipulations (only a limited exception is allowed). By contrast, the 2018 Draft EIS contains a broader range of exceptions, including if the habitat is determined to be unsuitable by a "qualified biologist." NV/CA Draft EIS at E-4. Our concerns for the use of this approach ("qualified biologists") are discussed above in the section on the "allocation exception process." \* Second, the 2015 ARMPA did not permit waivers or modifications to NSO stipulations in PHMA, due to the importance of limiting surface disturbance and ensuring consistent application across PHMA. NV/CA ARMPA at N-4-5. But the 2018 Draft EIS proposes to allow waivers and modifications "if the Authorized Officer, in consultation with the appropriate state agency (NDOW and/or CDFW), determines that the entire leasehold is within unsuitable habitat ... and would not result in direct, indirect, or cumulative impacts on Greater Sage-Grouse and/or its habitat," the BLM may waive the entire stipulation. Id. at E-4. Waiving the stipulation for an "entire leasehold" would remove the certainty FWS relied upon when determining that the 2015 RMP would protect the greater sage-grouse and its habitat. \* Third, BLM is proposing to eliminate the important role played by expert agencies, including FWS, NDOW, and California Department of Fish and Wildlife (CDFW), in reviewing and sanctioning proposed exceptions. Under the 2015 ARMPA, BLM "may not grant an exception unless the applicable state wildlife agency, the USFWS, and the BLM unanimously find that the proposed action" would not have direct, indirect, or cumulative impacts on sage-grouse or would result in a "net conservation gain." NV/CA ARMPA at N-4-5. However, in spite of the stated purpose and need of this amendment process - i.e., "to enhance cooperation with the states" - BLM is now proposing to cut NDOW and CDFW (not to mention FWS) out of the review and approval process for proposed exceptions. Their existing roles must be retained. \* Fourth, BLM is not requiring any sort of public notice or opportunity for review/comment in connection with proposed waivers, exceptions, and modifications. BLM should only make exceptions, waivers, and modifications through a transparent process, with advance notice to the public and an opportunity to comment. Further, BLM must track waivers, exceptions, and modifications and regularly share this information with the public.<sup>37</sup> In sum, the 2018 Draft EIS wrongly contends that the proposed changes to waivers, exceptions, and modifications "would not have impacts on Greater Sage-Grouse and its habitat." NV/CA Draft EIS at ES9. BLM has no basis for that statement because the Draft EIS contains no analysis of the direct, indirect, and cumulative impacts of all the waivers, exceptions, and modifications that BLM will issue one-at-a time over a series of years. For example, while limited waivers may not jeopardize critical habitat, a series of waivers over the years could destroy the connectivity of an entire habitat range. Decisions on habitat must be made while looking at the landscape as a whole, using data and science and through consultation with expert agencies and the public, to make the best decisions to preserve the species. Preserving the sagebrush landscape, as well as the Greater sage-grouse species, requires consistent planning for the entire landscape and certainty that agreed upon conservation measures will be faithfully implemented - which, as confirmed by FWS's "not warranted" determination, is best accomplished through an RMP with narrowly-tailored waivers, exceptions, and modifications and with built-in safeguards, including mandatory consultation with expert agencies and the public. 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.

<sup>37</sup> We recognize that, in the Draft EIS, BLM suggests that proposed waivers, exceptions, and modifications will be evaluated in "[t]he environmental analysis document prepared for site-specific proposals", which would typically involve some degree of public participation. NV/CA Draft EIS at E-3.

However, this is not a binding commitment to conducting those analyses or engaging the public, and recent policy changes, particularly for oil and gas leasing and development, have eliminated public review and comment opportunities. See, e.g., BLM Instruction Memorandum 2018-034. Thus, in the Final EIS, BLM must commit to providing such opportunities for proposed waivers, exceptions, and modifications.

6-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, in addition to the specific changes recommended above, we recommend that the Colorado EIS 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. For NSO stipulations or stipulations in PHMAs, waivers exceptions and modifications will only be granted following a 30-day public notice and comment period.

1- Moreover, American Bird Conservancy would like to address the Allocation Exception Process. Under the No-Action Alternative, there were different kinds of allocation standards for different resource developments in PHMAs outside of SFA. For geothermal, salable minerals, oil and gas, and wind energy, there needs to be a conservation net gain whenever there is development. This goes for land tenure and recreational development, as well. In some instances there needs to be scientific support for the allocation of the lands, and if the development does not meet an exception, PHMAs are closed off to it.

2- Now under the Preferred Management Alignment Alternative, the allocation standards are different. First, there are no separate guidelines for the different forms of development for allocation. Instead, the State Director may grant an exception to the allocation if proposed development meets ones on of the flimsy criteria required for authorization. Second, the criteria does not emphasize the need for conservation net gain. Unlike the No-Action Alternative that required a clear conservation gain for the Greater Sage-Grouse, the Bureau's preferred alternative's lack of emphasis on a net conservation gain for allocation weakens conservation efforts for the Greater Sage-Grouse and its habitat. It would allow third parties to come into PHMAs and GHMAs and disregard the need to preserve the grouse when it attempts to develop the lands. Redefining the guidelines under the Allocation Exception Process with elements of the conservation alternative would hold third parties up to a higher standard when they decide to encroach into Greater Sage-Grouse habitats.

The BLM should restore No Surface Occupancy stipulations as mandatory for sage-grouse habitat when leasing for energy development

The SETT recommends more specifics and definitions pertaining to the exceptions criteria.

1- For example, "location of the proposed authorization" does this include the project footprint or the analysis area as well?

2-What are the criteria for "lacks ecological potential to become suitable habitat"?

3- Is the HQT to be used to determine direct, indirect, and cumulative impacts?

4-What is the definition of "habitat fragmentation"?

5- How would de minimis impacts be determined?

6- The SETT requests further clarification, potentially in an appendix.

Allocation Exception Process: The County does NOT support the "No Action Alternative" for the following reasons. Both the above comments on SFAs and the following comments document the County's concerns with being able to carry out emergency and administrative functions under the 2015 LUP. The County is concerned with being able to carry out both emergency and regular administrative functions that are important to the health and safety of our citizens. Such services often need to be carried out in a timely manner (i.e. emergency repairs) and/or during the optimal time of year (i.e. standard maintenance). The 2015 LUP and associated restrictions on travel, access to public lands including existing infrastructure, other limitations are of great concern to the County and must be resolved through this planning effort. The County supports the "Management Alignment Alternative" for the following reasons. The County fully supports the exceptions for actions that address public health and safety concerns (Item 'ii.' on Page 2-13 under "Management Alignment Alternative"), as well as actions that are routine administrative functions (Item 'v.' on Page 2-13 under "Management Alignment Alternative"). Such exceptions must be provided in a timely manner and/or programmatically through an MOU or other mechanism to ensure timely response time to emergency situations, as well as implementation of normal maintenance actions at the most appropriate time of year. This approach is more consistent with the County's Master Plan and required provision of services than is the No Action Alternative.

The exemption process should apply equally to MD RE 3 that otherwise excludes without exception wind energy development in priority habitat. Doing so would bring wind energy development under the authority of the State Director to grant exceptions where impacts from the proposed action could be offset through the use of the mitigation hierarchy. There is no reasoned basis to apply that exception process only to wind energy facilities for onsite power generation and not to all wind energy facilities in priority habitat.

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.

1-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.

2- In such cases, FWS should have the opportunity to submit information for consideration prior to granting waivers, exceptions and modifications.

3-Finally, it is critical that BLM track boundary adjustments, 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 plans' requirements are being applied and the potential impact of such changes 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 to ensure sufficient protection for sage-grouse habitat.

Language that permits widespread exceptions to protections should be removed; this is a path to poorly planned development, leading to fewer birds and less habitat.

#### **G.4.9 Seasonal Timing Limitations**

As discussed in Section IX, VERs granted by the U.S. Mining Law at 30 U.S.C. § 22 and FLPMA at 43 U.S.C. § 1732(b) provide rights of ingress and egress for the purpose of exploring for or developing minerals. The travel management restrictions and seasonal and spatial use and occupancy constraints in the GSG LUPs cannot substantially interfere with these ingress and egress rights. Consequently, the travel restrictions applicable to PHMA and GHMA shown on Figure 2-13b cannot apply to travel that is necessary for mineral purposes under the U.S. Mining Law. The 2018 FEIS and LUP need to make it clear that the restrictions shown on Figure 2-13b cannot be applied as 24/7 access restrictions precluding travel that is necessary for mineral exploration and development. On a project- and site-specific basis, certain time of day or seasonal restrictions of a limited duration may be appropriate. However, these restrictions cannot create significant barriers to mineral activities.

3.2 Seasonal Restrictions Perhaps even more difficult for WREC than the inconsistencies within lek buffers are the overly harsh and unrealistic application of seasonal restrictions. While Table ES-2 Executive Summary and Table 1-2 in Chapter 1 in the RMPA/EIS state that changes to seasonal restrictions would create alignment with state regulations from Nevada and California, the actual changes under Alternative B are minimal. The current Plan and Alternative A call for the following seasonal restrictions: 1. In breeding habitat within 4.0 miles of active and pending greater sage-grouse leks from March 1 through June 30: a. Lek - March 1 to May 15 b. Lek hourly restrictions - 6 p.m. to 9 a.m. 2. Brood-rearing habitat from May 15 to September 15 a. Early - May 15 to June 15 b. Late - June 15 to September 15 3. Winter habitat from November 1 to February 28 POWER ENGINEERS, INC. PAGE 3 Unfortunately, while likely intended for application with site-specific data, all of these seasonal restrictions are being placed on all areas of PHMA by local BLM field offices on recent WREC right-of-way (ROW) applications. This leaves WREC a seasonal window of September 16 to October 31 to conduct any and all construction activities or operation and maintenance activities. While the Executive Summary and Chapter 1 lead the reader to believe these overly-restrictive dates were alleviated under Alternative B, this is not the case. Alternative B would apply these same restrictions and only allows for modification of seasonal restriction dates if the project serves to protect or enhance greater sage-grouse and their habitats (i.e., habitat improvement projects). By not altering the seasonal restrictions in the RMPA/EIS, seasonal restrictions being placed on WREC ROW applications will continue to allow only six weeks throughout the entire year when activities can take place in PHMA. This is overly restrictive and should be remedied in the Final RMPA/EIS. WREC does not, nor have they ever, opposed seasonal restrictions when the best available data supports their applications. Additionally, it is known that sage-grouse occupy different seasonal habitat throughout the year as indicated by the various seasonal restrictions. However, it is not correct to assume that one area occupied by one ROW provides suitable habitat for leks, early brood-rearing habitat, late broodrearing habitat, and winter

habitat. WREC requests that habitat definitions be added to the RMPA/EIS so that the restrictions can be easily matched with the correct habitat types, thus alleviating their overly restrictive applications.

The NvMA supports the changes in seasonal timing restrictions as outlined in the Management Alignment Alternative since it provides additional flexibility and opportunity for state input.

Inconsistencies still exist concerning the establishment of seasonal land restrictions and other decision-making activities in Nevada as they relate to the interaction between the federal land managers and Nevada's Sagebrush Ecosystem Technical Team.

Seasonal Timing Restrictions No-Action Alternative: The County does not support the approach included in this Alternative as there is no exception for the following: emergency response; issues related to public health and safety; and, standard administrative functions performed by local government for public benefit. There is also no ability to provide an exception for activities within a 4-mile buffer of leks, even if topographic, vegetative or existing infrastructure are resulting in no impact to the lek. Management Alignment Alternative: The County generally supports this portion of the Alternative and greatly appreciates the added ability to modify or remove seasonal timing restrictions based on factors that would allow needed activity while not having long-term negative impacts to GRSG. Neither the No-Action nor Management Alignment Alternative have any language recognizing that these timing restrictions are to avoid visibility and audibility impacts to sage-grouse. The exceptions do not seem to account for the primary factor influencing visibility and audibility: topography.

2 2-12 and 13 Table 2-2 Allocation Exception Process, Section iii, iv and v. The process as described in the proposed action needs to be streamlined as to address emergency scenarios as well as routine and regular maintenance of existing infrastructure, (roads). -As is described in Seasonal Timing Restrictions.

The Management Alignment Alternative introduces additional reasons for waiving or modifying existing seasonal restrictions for activities that are disruptive to the Greater Sage-Grouse near leks, nesting habitat, brood-rearing habitat, or winter habitat. The wording allowing for modifications and waivers for seasonal restrictions is broadly worded and likely to be broadly interpreted. The Management Alignment Alternative amendments will increase disturbance in crucial habitats during critical seasonal periods.

We currently graze the sagebrush lands and refrain from grazing the Bitner meadow until approximately mid-August so the sage grouse can raise their chicks on the meadow with minimal disturbances. The seasonal timing restrictions in Table 2-2 under the No-Action Alternative are overly restrictive for grazing if applied to the entire allotment. The seasonal dates should be specific to each allotment and flexible to match the current year's weather/climate conditions. Prescribed grazing of the meadow according to yearly conditions allows the meadow to have new growth for livestock as well as all wildlife the following year.

LCPD's concerns with Alternative B and seasonal restrictions include a lack of defined areas where these seasonal restrictions should be put in place.

Alternative B would apply these same restrictions and only allows for modification of seasonal restriction dates if the project serves to protect or enhance greater sage-grouse and their habitats (i.e., habitat improvement projects). By not altering the seasonal restrictions or defining specific areas where they are to be applied, seasonal restrictions may allow only six weeks throughout the entire year when

activities can take place in PHMAs. This is overly restrictive and should be remedied in the Final RMPA/EIS.

Seasonal Timing Restrictions: The County does NOT support the "No Action Alternative" for the following reasons. The inflexibility of timing restrictions on use of roads, as well as regular maintenance and emergency repairs, within a certain distance of leks or seasonal habitat creates unnecessary harms (especially combined with the erroneous mapping). The same can be said for other existing County infrastructure (i.e. radio towers, gravel pits, etc.). The County supports the "Management Alignment Alternative" for the following reasons. Exemptions from Seasonal Timing Restrictions for County activities including matters of normal administrative function and emergency or human safety matters are necessary for the County to provide regular services in order to serve and protect its citizens. While the County supports inclusion of Item 'ii.', page 2-15 under the "Management Alignment Alternative", we would further request a provision for regular administrative functions similar to the Allocation Exception Process, Item 'v.' on page 2-13.

2-2-15 Table 2-2, Issue 6, Seasonal Timing Restrictions No-Action Alternative: NACO does not support this approach as there is no 1-exception for the following: county emergency response; issues related to public health and safety; and, standard administrative functions performed by local government for public benefit.

2-There is also no ability to provide an exception for activities within a 4-mile buffer of leks, even if topographic, vegetative or existing infrastructure are resulting in no impact to the lek. Management Alignment Alternative: NACO generally supports this alternative and greatly appreciates the added ability to modify or remove seasonal timing restrictions based on factors that would allow needed activity while not having long-term negative impacts to GRSG. 3-Neither the No-Action nor Management Alignment Alternative have any language recognizing that all these timing restrictions are to avoid visibility and audibility impacts to sage-grouse. The exceptions do not seem to account for the primary factor influencing visibility and audibility: topography. Please add to the end of the sentence in (i)(b) in Alt B "or local data, topography, and other factors reduce visibility and audibility impacts to sage grouse."

Consequently, the travel restrictions applicable to PHMA and GHMA shown on Figure 2-13b cannot apply to travel that is necessary for mineral purposes under the U.S. Mining Law. The 2018 FEIS and LUP need to make it clear that the restrictions shown on Figure 2-13b cannot be applied as 24/7 access restrictions precluding travel that is necessary for mineral exploration and development. On a project- and site-specific basis, certain time of day or seasonal restrictions of a limited duration may be appropriate. However, these restrictions cannot create significant barriers to mineral activities.

2-15 Table 2-2, Issue 6, Seasonal Timing Restrictions No-Action Alternative: We not support this approach as there is no exception for the following: emergency actions; issues related to human health and safety; and, standard administrative functions performed by local government for public benefit. There is also no ability to provide an exception for activities within a 4-mile buffer of leks, even if topographic, vegetative or existing infrastructure are resulting in no impact to the lek. Management Alignment Alternative: We generally support this alternative and appreciate the added ability to modify or remove seasonal timing restrictions based on factors that would allow needed activity while not having long-term negative impacts to GRSG. However, neither the No-Action nor Management Alignment Alternative have any language recognizing that all these timing restrictions are to avoid

visibility and audibility impacts to sagegrouse. The exceptions do not seem to account for the primary factor influencing visibility and audibility: topography. Please add to the end of the sentence in (i)(b) in Alt B "or local data, topography, and other factors reduce visibility and audibility impacts to sage grouse." We also request addition of an item iii that would read the same as v from the section on Allocation Exception Process in regard to carrying out normal administrative functions of the benefit of the public.: iii. The proposed action would be determined a routine administrative function conducted by State or local governments, including prior existing uses, authorized Page 27 of 89 uses, valid existing rights and existing infrastructure (i.e. rights-of-way for roads) that serve such a public purpose.

The Board would appreciate the BLM adopting flexibility to seasonal timing restrictions that relate to grazing, in order to allow for common-sense management that provides for both public land grazing and Sage-grouse conservation.

#### **G.4.10 Lek Buffers**

**Lek Buffer Zones** The lek buffer zone restrictions in Appendix B of the 2018 DEIS are an improvement over Appendix B in the 2015 FEIS/LUPs, because the 2018 version of Appendix B does not include compensatory mitigation. Nonetheless, the lek buffers are rigid, distance-based, one-size-fits-all measures premised on landscape-scale land use planning concepts as presented in the 2014 USGS report entitled "Conservation Buffer Distance Estimates for Greater Sage-Grouse - A Review" (Open File Report 2014 - 1239). The current lek buffer zones restrict infrastructure related to energy development within 3.1 miles of leks, tall structures within 2 miles of leks, low structures within 1.2 miles of leks, surface disturbance that alters vegetation within 3.1 miles of leks, and projects creating noise to at least 0.25 miles from leks. (Appendix B at B-1). These restrictions have the potential to put millions of acres of land off-limits to multiple use. BLM should eliminate the lek buffer zone restrictions outlined in Appendix B because they are premised on landscape scale land use policies that this administration and Congress have revoked. PGC recognizes that it may be appropriate to limit or even preclude certain activities near active leks during the active breeding season. However, the 2018 DEIS applies these restrictions throughout the year. Once the lek breeding season is over for the year, the lek buffer zone restrictions should not apply. Consistent with the provisions for modifying habitat management area designations based on field verified habitat data, implementing the lek buffer zone restrictions should require current lek occupation data, which should be defined as best available science in the context of imposing a lek buffer zone. Other site characteristics including landscape features (e.g., topography) which shield a project from a nearby lek and lessen or even eliminate any impacts from the proposed land use activities must be considered in the lek buffer zone determination. At many sites the resulting buffer zone could be much smaller than the current one-size-fits all approach. Additionally, any restrictions that are warranted to protect occupied leks during the breeding season must respect claimants' rights under the U.S. Mining Law. For exploration programs this may mean limiting the hours of operation or short-term seasonal restrictions during the active lekking season if impacts from the drilling activities are not reduced by topography. For an active mining operation, it may not be feasible to eliminate direct or indirect impacts to leks. FLPMA Section 302(b) authorizes such unavoidable impacts for mining activities pursuant to the U.S. Mining Law. BLM is not authorized to prohibit such activities or to require mitigation.

The lek buffer zone restrictions in Appendix B of the 2018 DEIS are an improvement over Appendix B in the 2015 FEIS/LUPs, because the 2018 version of Appendix B does not include compensatory mitigation. Nonetheless, the lek buffers are rigid, distance-based, one-size-fits-all measures premised on

landscape-scale land use planning concepts as presented in the 2014 USGS report entitled "Conservation Buffer Distance Estimates for Greater Sage-Grouse - A Review" (Open File Report 2014 - 1239). The current lek buffer zones restrict infrastructure related to energy development within 3.1 miles of leks, tall structures within 2 miles of leks, low structures within 1.2 miles of leks, surface disturbance that alters vegetation within 3.1 miles of leks, and projects creating noise to at least 0.25 miles from leks. (Appendix B at B-1). These restrictions have the potential to put millions of acres of land off-limits to multiple use. BLM should eliminate the lek buffer zone restrictions outlined in Appendix B because they are premised on landscape-scale land use policies that this administration and Congress have revoked. PGC recognizes that it may be appropriate to limit or even preclude certain activities near active leks during the active breeding season. However, the 2018 DEIS applies these restrictions throughout the year. Once the lek breeding season is over for the year, the lek buffer zone restrictions should not apply. Consistent with the provisions for modifying habitat management area designations based on field verified habitat data, implementing the lek buffer zone restrictions should require current lek occupation data, which should be defined as best available science in the context of imposing a lek buffer zone. Other site characteristics including landscape features (e.g., topography) which shield a project from a nearby lek and lessen or even eliminate any impacts from the proposed land use activities must be considered in the lek buffer zone determination. At many sites the resulting buffer zone could be much smaller than the current one-size-fits all approach. Additionally, any restrictions that are warranted to protect occupied leks during the breeding season must respect claimants' rights under the U.S. Mining Law. For exploration programs this may mean limiting the hours of operation or short-term seasonal restrictions during the active lekking season if impacts from the drilling activities are not reduced by topography. For an active mining operation, it may not be feasible to eliminate direct or indirect impacts to leks. FLPMA Section 302(b) authorizes such unavoidable impacts for mining activities pursuant to the U.S. Mining Law. BLM is not authorized to prohibit such activities or to require mitigation.

The County supports the clarification as to the application of lek buffers and encourages the BLM to allow regular administrative services and emergency services within lek buffer areas when required to provide expected services to the citizens of this County.

The Nevada DEIS concedes a lack of clarity with respect to the imposition of Lek buffers as an element of the LUPA. Nevada DEIS at ES-5 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 Nevada GRSG LUPA for lek buffer uniformity, and 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. See Appendix B. Instead, lek buffers must be developed in conjunction with local knowledge of GRSG seasonal movements and population responses to management actions. For the Nevada 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. Page Twenty-One 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 Nevada DES refers to the rights under the mining laws and the disjointed methodology in which the Nevada DEIS uses shorthand



descriptions to characterize the scope and sources of rights under the 1872 Mining Law. Consideration should be given to include LUP revisions that allow for reconciliation of potential conflicts and implementation of existing surface management regulations (43 CFR Subpart 3809) in order to appropriately complement baseline land use planning with appropriate analysis of project impacts at the project specific level.

EPA recommends that the Final EIS clarify the basis for determining that project specific analyses should rely on the lower end of the lek buffer distances as the default.

New development should be prioritized outside these important population areas and strong buffers maintained around sage-grouse leks.

This inconsistency between restricting development within three miles of a lek (GRSG-GEN-GL-010-Guideline) and the blanket restriction of all development within PHMAs (GRSG-LR-SUA-ST-014-Standard) still exists under both Alternative A and Alternative B in the Draft RMPA/EIS and must be rectified.

Indirect impacts, particularly from raven predation, that capitalize on powerlines can significantly affect nest success as females are moving on and off nests/leks. The SETT requests the BLM incorporate the new research to extend to some point beyond 2 miles.

I 1-9 Table I-3, Row I, Modifying Lek Buffers NCA asserts that any use of lek buffers and associated modifications must be included for analysis in this EIS, not left for clarification through plan maintenance, because lek buffers were not fully analyzed in the previous EIS nor provided for public review and consideration. Based on the Administrative Record from the previous EIS, lek buffers were initially discussed during August 2014 agency meetings. The USGS was directed to do a "quick literature search to harvest the latest research results on buffers to contrast with what we currently have in our administrative draft proposed plans." WO\_0000196. In September 2014, Deputy Assistant Secretary Jim Lyons acknowledged the failure to use "best available science" in analyze lek buffers in the DEIS. WO\_0001457. Additionally, a DOI biologist expressed concerns that "the way the buffers have been written into the document as [required design features] really makes them management measures not analyzed in the drafts" and "avoiding the NEPA process by including un-analyzed management actions in an appendix". WO\_0048001. Finally, the Solicitor's office had concerns about the new studies requiring an SEIS: "It will be important for the agency to have a record showing how it evaluated the USGS studies and why it determined that a supplemental analysis was not warranted." GBR\_0010440, GBR\_0010453. If BLM believes this issue was properly analyzed with no supplemental analysis previously, BLM needs to cite to the previous analysis and document it here.

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USGS OFR 20141239 report recognized that the area around a lek that is sensitive for sage grouse is not always a simple "radii" buffer and that "logical and scientifically justifiable departures...based on local data and other factors may be warranted when implementing buffer protections..." (p. 2). The USGS report states that "We do not make specific management recommendations but instead provide summarized information, citations, and interpretation of findings available in scientific literature. We also recognize 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" (p. 1, emphasis added). The report clarifies that that impacts to leks are due to "influence of roads and infrastructure with topography and habitat conditions (visibility and audibility)..." (p. 6). In simple terms, even if within a lek buffer, if a human disturbance cannot be seen nor heard by sage grouse on the lek because of topography and other natural conditions, that area of the lek buffer could be clipped from the buffer. In the previous Administrative Record, the principal author of the USGS lek buffer report recognized the importance of locality in cautioning that the results of his literature search conducted for BLM to justify the new lek buffers did not provide a "simple, one-size-fits-all solution that was based solely on science" explaining that many of the complications are not "specified biologically" explaining that "scientific results will not provide all answers needed to" render the BLM's desired outcome: In the end, trying to balance political and conservation desires and needs with what we understand to be the basic biological requirements of the species of concern (Sage-grouse in this case) is the hard work...our collective ability to "respect biological requirements" for conservation while allowing for nuances based on social impetus (e.g., NSO or closure of seasonal habitats in one state versus strict use of buffers and seasonal closures/limits in another state could both be viable options for protection of nesting habitat) that can incorporate local understanding and social needs is the task at hand." WO\_0035879. As referenced in the Administrative Record, there was addition of the new and universally applicable 1.2-mile buffer zone for fences that was not supported by the USGS report. In an April 2015 e-mail between Michael Bean, Sarah Greenberger, and Jim Lyons: "...the USGS report identifies only certain types of fences in certain types of terrain as a collision risk. By imposing a buffer requirement for all types of fences in all types of terrain, the BLM will impose a restriction for which the report offers no basis...If we want to anchor our plans in the USGS report, then the way to do that is to require that new fences (of the types described in the report) be placed at least 1.2 miles from leks in flat or rolling terrain . . . that is probably better than the alternative of lumping all fences together, regardless of type and location." WO 29247, WO 29250 (emphasis added). Despite the acknowledgement that the universal 1.2-mile buffer requirement for all fences does not adhere to the recommendations of the 2014 USGS study, it continues to be a requirement that has no scientific basis. The USGS Report does not recommend uniform or prescriptive lek buffer distances and instead presents a range of lek-buffers. The USGS report does not support the categorical 1.2-mile buffer requirement for all fences.

Appendix B are inadequate to protect leks so as to require the addition of temporal buffers that, in some instances, greatly expand the buffers in breeding habitat. The final EIS/RMP should eliminate temporal buffers as redundant to spatial buffers. Furthermore, the concept of "pending leks" should be eliminated as inconsistent with other state BLM plans such as the Idaho plan that has no definition for or concept of "pending leks."

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fences that was not supported by the USGS report. In an April 2015 e-mail between Michael Bean, Sarah Greenberger, and Jim Lyons: "...the USGS report identifies only certain types of fences in certain types of terrain as a collision risk. By imposing a buffer requirement for all types of fences in all types of terrain, the BLM will impose a restriction for which the report offers no basis...If we want to anchor our plans in the USGS report, then the way to do that is to require that new fences (of the types described in the report) be placed at least 1.2 miles from leks in flat or rolling terrain . . . that is probably better than the alternative of lumping all fences together, regardless of type and location." WO 29247, WO 29250 (emphasis added). Despite the acknowledgement that the universal 1.2-mile buffer requirement for all fences does not adhere to the recommendations of the 2014 USGS study, it continues to be a requirement that has no scientific basis. In discussing roads, the USGS Report includes the following observations: "...it is important to recognize that . . . not all roads have the same effect...the influence of individual roads or networks of roads on sage-grouse habitat use and demographic parameters remains a research need. This is a good example of the challenge associated with making clear interpretations of the effect area (and therefore, a definitive buffer distance) for these types of infrastructure" (pp. 5-8). The USGS Report does not recommend uniform or prescriptive lek buffer distances and instead presents a range of lek-buffers. The USGS report does not support the categorical 1.2-mile buffer requirement for all fences. Site specific factors need to be taken consideration such as line of site between the lek and project, topographical relief, quality of site-specific habitat, current bird activity, probability of sagegrouse nesting within the entire radius area, duration of the project/use and project/use intensity.

APPENDIX B: Lek Buffer-Distances (Evaluating Impacts on Leks) Chapter Page Paragraph / Line / Figure / Table Comment I 1-9 Table I-3, Row I NACO made previous comments regarding lek buffers under Table I-3, Row I, Modifying Lek Buffers, which are incorporated by reference here. The comments below must be considered in the context of our previously made comments. See County Needs Attachment Appendix B B-1 3-4 Revise to read "...appropriate (e.g. state wildlife agency plans, local agency plans, and local information) ..." Appendix B B-1 4-7 Revise to read "...using the general lek buffer-distances and guidance identified in the USGS..." Appendix B B-1 8 Change "basis" to "guideline" Appendix B B-1 14 Revise to read "low structures (e.g., fences, rangeland structures) within 1.2 miles of leks in flat or rolling terrain;" As previously noted, a universally applicable 1.2-mile buffer zone for fences and rangeland structures is not supported or recommended by the USGS report. The USGS report notes this 1.2 mi buffer in flat or rolling terrain only. Appendix B B-1 15-16 It is important to clarify what is meant by "surface disturbance." This does not include diffuse activities and permitted livestock grazing. Also, it should be clear that encroaching or infilling PJ removal (which is altering or removing "natural" vegetation) is not surface disturbance. Appendix B B-1 19-21 Revise to read "Justifiable departures to decrease or increase from these distances from the lek where impacts are anticipated, based on local information and data, best available science, landscape features, co-location with existing infrastructure or disturbance creating no net increase in impact, and other existing protections or factors reducing visibility and audibility (e.g., land use allocations, state regulations) may be appropriate." See County Needs Attachment Appendix B B-2 1-5 Revise to read ... "landscape features, co-location with existing infrastructure or disturbance creating no net increase in impact, and other existing protections or factors reducing visibility and audibility (e.g., land use allocations, state regulations)..." Appendix B B-2 18-19 Revise to read "...GHMA, and with input from the state wildlife agency and appropriate local agencies." See County Needs Attachment.

BLM should eliminate the lek buffer zone restrictions outlined in Appendix B because they are premised on landscape scale land use policies that this administration and Congress have revoked. WMC recognizes that it may be appropriate to limit or even preclude certain activities near active leks during the active breeding season. However, the 2018 DEIS applies these restrictions throughout the year. Once the lek breeding season is over for the year, the lek buffer zone restrictions should not apply. Consistent with the provisions for modifying habitat management area designations based on field verified habitat data, implementing the lek buffer zone restrictions should require current lek occupation data, which should be defined as best available science in the context of imposing a lek buffer zone. Other site characteristics including landscape features (e.g., topography) which shield a project from a nearby lek and lessen or even eliminate any impacts from the proposed land use activities must be considered in the lek buffer zone determination. At many sites the resulting buffer zone could be much smaller than the current one-size-fits all approach.

Along with compensatory mitigation, lek buffers are included in the category of, one-size-fits-all measures premised on landscape-scale land use planning concepts. Lek buffer zone restrictions should be developed based on field-verified data on a case by case basis that takes topography into account. Coeur understands that it may be appropriate to limit or even restrict certain activities near active leks during the active breeding season; however, the 2018 RMP DEIS states that these restrictions will be year-round. Once it has been determined that the lek breeding season is over for the year, lek buffer zone restrictions should not apply. FLPMA Section 302(b) authorizes such unavoidable impacts for mining activities pursuant to the U.S. Mining Law; therefore, BLM is not authorized to prohibit such activities or to require mitigation.

Table 1-3, Row 1, Modifying Lek Buffers We still assert that any use of lek buffers and associated modifications must be included for analysis in this EIS, not left for clarification through plan maintenance, because lek buffers were not fully analyzed in the previous EIS nor provided for public review and consideration. Based on the Administrative Record from the previous EIS, lek buffers were initially discussed during August 2014 agency meetings. The USGS was directed to do a "quick literature search to harvest the latest research results on buffers to contrast with what we currently have in our administrative draft proposed plans." WO\_0000196. In September 2014, Deputy Assistant Secretary Jim Lyons acknowledged the failure to use "best available science" in analyze lek buffers in the DEIS. WO\_0001457. Additionally, a DOI biologist expressed concerns that "the way the buffers have been written into the document as [required design features] really makes them management measures not analyzed in the drafts" and "avoiding the NEPA process by including un-analyzed management actions in an appendix". WO\_0048001. Finally, the Solicitor's office had concerns about the new studies requiring an SEIS: "It will be important for the agency to Page 12 of 89 have a record showing how it evaluated the USGS studies and why it determined that a supplemental analysis was not warranted." GBR\_0010440, GBR\_0010453. If BLM believes this issue was properly analyzed with no supplemental analysis previously, BLM needs to cite to the previous analysis and document it here. See County Needs Attachment 1 1-9 Table 1-3, Row 1, Modifying Lek Buffers Regardless of whether BLM analyzes lek buffers in this EIS or wishes to pursue this as a clarification issue, we support the change from "apply lek buffers" to "utilize the lek buffer distances." Based on the discussion below, at a minimum, the new language for SSS 2(D) and SSS 3(C) should be revised to read "In undertaking BLM management actions [in PHMA and GHMA], and consistent with valid and existing rights and applicable law in authorizing third-party actions, the BLM will utilize the general lek buffer-distances and guidance identified in the USGS' Open File Report 2014-1239 to establish the evaluation area around leks that will be used to

analyze impacts during project specific NEPA, including logical and scientifically justifiable departures based on local data, topography, and other factors, in accordance with Appendix B. This EIS must document that the cited USGS OFR 2014-1239 report recognized that the area around a lek that is sensitive for sage grouse is not always a simple "radii" buffer and that "logical and scientifically justifiable departures...based on local data and other factors may be warranted when implementing buffer protections..." (p. 2). The USGS report states that "We do not make specific management recommendations but instead provide summarized information, citations, and interpretation of findings available in scientific literature. We also recognize 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" (p. 1, emphasis added). The report clarifies that that impacts to leks are due to "influence of roads and infrastructure with topography and habitat conditions (visibility and audibility)..." (p. 6). In simple terms, even if within a lek buffer, if a human disturbance cannot be seen nor heard by sage grouse on the lek because of topography and other natural conditions, that area of the lek buffer could be clipped from the buffer. In the previous Administrative Record, the principal author of the USGS lek buffer report recognized the importance of locality in cautioning that the results of his literature search Page 13 of 89 conducted for BLM to justify the new lek buffers did not provide a "simple, one-size-fits-all solution that was based solely on science" explaining that many of the complications are not "specified biologically" explaining that "scientific results will not provide all answers needed to" render the BLM's desired outcome: In the end, trying to balance political and conservation desires and needs with what we understand to be the basic biological requirements of the species of concern (Sage-grouse in this case) is the hard work...our collective ability to "respect biological requirements" for conservation while allowing for nuances based on social impetus (e.g., NSO or closure of seasonal habitats in one state versus strict use of buffers and seasonal closures/limits in another state could both be viable options for protection of nesting habitat) that can incorporate local understanding and social needs is the task at hand." WO\_0035879. Also as referenced in the Administrative Record, there was addition of the new and universally applicable 1.2-mile buffer zone for fences that was not supported by the USGS report. In an April 2015 e-mail between Michael Bean, Sarah Greenberger, and Jim Lyons: "...the USGS report identifies only certain types of fences in certain types of terrain as a collision risk. By imposing a buffer requirement for all types of fences in all types of terrain, the BLM will impose a restriction for which the report offers no basis...If we want to anchor our plans in the USGS report, then the way to do that is to require that new fences (of the types described in the report) be placed at least 1.2 miles from leks in flat or rolling terrain . . . that is probably better than the alternative of lumping all fences together, regardless of type and location." WO 29247, WO 29250 (emphasis added). Despite the acknowledgement that the universal 1.2-mile buffer requirement for all fences does not adhere to the recommendations of the 2014 USGS study, it continues to be a requirement that has no scientific basis. In discussing roads, the USGS Report includes the following observations: "...it is important to recognize that . . . not all roads have the same effect...the influence of individual roads or networks of roads on sage-grouse habitat use and demographic parameters remains a research need. This is a good example of the challenge associated with making clear interpretations of the effect area (and therefore, a definitive buffer distance) for these types of infrastructure" (pp. 5-8). The USGS Report does not recommend uniform or prescriptive lek buffer distances and instead presents a range of lek-buffers. The USGS report does not support the categorical 1.2-mile buffer requirement for all fences. Site specific factors need to be taken consideration such as line of site between the lek and project, topographical relief, quality of site-specific habitat, current bird activity, probability of Page 14 of 89 sage-grouse nesting within the entire radius area, duration of the project/use and project/use intensity. We will

provide proposed language on this same issue in our review of Appendix B below. See County Needs Attachment I 1-9

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#### **G.4.1.1 Required Design Features**

Required Design Features Worksheets Although the DEIS states throughout Chapter 4 that no allocation decisions are tied to OHMA (see, for example, DEIS at 4-19), the Required Design Features ("RDFs") worksheets show that they are applicable to OHMA. This needs to be clarified. Additionally, many of the RDFs are not applicable to non-discretionary activities pursuant to the U.S. Mining Law and the 43 CFR 3809 regulations, which also needs to be clarified. Finally, some of the locatable minerals RDFs are impractical and as currently written would substantially interfere with claimants' rights under the Mining Law. For example, RDF LOC 3 stipulates "restrict pit or impoundment construction to reduce or eliminate augmenting threats from West Nile Virus". Pits and impoundments (i.e., tailings impoundments) are necessary for mining to occur and cannot be eliminated. Similarly, the requirement to cover pits "regardless of size" with netting in the RDFs for locatable minerals (RDF LOC 7) needs to be clarified to pertain to small pits like drilling sumps and not to open pit mines or pit lakes in open pit mines. It is obviously impractical to cover a large pit with netting.

Although the DEIS states throughout Chapter 4 that no allocation decisions are tied to OHMA (see, for example, DEIS at 4-19), the Required Design Features ("RDFs") worksheets show that they are applicable to OHMA. This needs to be clarified. Additionally, many of the RDFs are not applicable to non-discretionary activities pursuant to the U.S. Mining Law and the 43 CFR 3809 regulations, which also needs to be clarified. Finally, some of the locatable minerals RDFs are impractical and as currently

written would substantially interfere with claimants' rights under the Mining Law. For example, RDF LOC 3 stipulates "restrict pit or impoundment construction to reduce or eliminate augmenting threats from West Nile Virus". Pits and impoundments (i.e., tailings impoundments) are necessary for mining to occur and cannot be eliminated. Similarly, the requirement to cover pits "regardless of size" with netting in the RDFs for locatable minerals (RDF LOC 7) needs to be clarified to pertain to small pits like drilling sumps and not to open pit mines or pit lakes in open pit mines. It is obviously impractical to cover a large pit with netting.

3.5 Application of Required Design Features WREC has recent experience working with the Required Design Features Worksheet included in Appendix C of the RMPA/EIS. Note that the actual Required Design Features (RDFs) did not change from the current Plan to the worksheet in Appendix C, just the way in which they are presented. This worksheet puts the responsibility of identifying applicable RDFs on a project applicant, rather than the BLM field office issuing the permit. WREC believes it should not be the responsibility of the applicant to identify appropriate RDFs. Rather it should be the BLM field office personnel who examine a project and select appropriate RDFs, as opposed to the current practice where all RDFs are required unless the applicant works through numerous bureaucratic hoops to have them removed.

Clarify That Management Restrictions Are Not Applicable to Notices and Mining Plans Under 43 C.F.R. Subpart 3809 LNC supports and agrees with the proposed clarifications in the land use plan. DEIS at Table ES-3. In that regard, we are particularly interested in the Required Design Features worksheet included as Appendix C. However, confusion remains because neither the revised plan nor the worksheet explicitly exempt mining notices and plans from the General RDF's. We recommend that the plan include an explicit provision that the RDF's are not applicable to notices and plans under 43 C.F.R. Subpart 3809 and that similar language be on the Required Design Features Worksheet. At a minimum, the plan should be modified to include language to clarify that design features are required "where practicable" and may not be applied in a way that would prevent mineral development, particularly development of critical minerals.

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 GRSG conservation. In the Nevada 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.

We recommend that the Final EIS disclose the metrics that would be used in RDF determination for the types of actions likely to be proposed in PHMA and GHMA designated lands.

Rural utilities do not have the man-power and simply cannot afford the added cost of retrofitting all distribution poles with perch deterrents without passing those costs on to the members in the cooperative. Additionally, the increased maintenance required for perch deterrents will increase the operation and maintenance costs, and time spent in the field which would lead to increased disturbance on greater sage-grouse from maintenance and inspection crews.

This worksheet puts the responsibility of identifying applicable RDFs on a project applicant, rather than the BLM field office issuing the permit. LCPD believes it should not be the responsibility of the applicant



to identify appropriate RDFs. Rather it should be the BLM field office personnel who examine a project and select appropriate RDFs.

Consider updating the fence standards based on the NRCS fence standards and specifications, Code 382, maintaining that the fences creating legal "boundaries" continue to follow NRS 569.431; and requiring fence markers around sumps or meadows.

RDF GEN 10. This requirement should be deleted in the RMPA. We find nowhere in either the 2015 RMPA or the 2018 DRMPA where the motion of livestock windmills or pump jacks have been analyzed, nor any science that would support a provision to "minimize" their impacts on sage-grouse habitat. These small structures are entirely unlike power-generating windmills or the large pump jacks used in the gas and oil industry. 34. RDF GEN 20. The phrase "and fences" should be removed from the wording of this RDF. Fences are not considered "tall structures", and there is no supporting evidence that fences create additional perches for avian predators over and above the background setting of the DRMPA. Further, BLM has in the past construed "minimum number" to mean "no number", and such an interpretation should be avoided. This RDF should be reworded to state: "To reduce perching in GRSG habitat, construction of vertical facilities (excluding fences) will be constructed following a 'avoid, minimize, mitigate' hierarchy policy. Mitigate is defined at 40 CFR 1508.20"

APPENDIX C: Required Design Features Worksheet Chapter Page Paragraph / Line / Figure / Table Comment Appendix C All All Revise the first checkbox under every single "If RDF not applied, select reason" to read "A specific RDF is documented to not be applicable to the site-specific conditions of the project/activity (e.g. due to ground truthing, site limitations or engineering considerations). Economic considerations, such as increased costs, do not necessarily require that an RDF be varied or rendered inapplicable." Appendix C All All Revise the second checkbox under every single "If RDF not applied, select reason" to read "An alternative RDF or appropriate mitigation is determined to provide equal or better protection for GRSG or its habitat." Appendix C All All Please revise the definition to read "Existing routes. Existing routes are defined as those routes on the ground that clearly show prior use to the extent that a travel path is clearly visible." There are many RDFs related to "existing roads", "existing routes", or "new roads." This creates issues due to the definition of "existing routes" in the Glossary. The definition is problematic and not based on realities on the ground. NACO strongly disagrees with the definition. Many existing routes are used more heavily in different seasons. Additionally, many routes that are mechanically maintained (i.e., motor grader) do not have maintenance occur often enough to keep vegetation from establishing within the route, including centerlines, shoulders and drainages. Many of these routes are mapped on official federal agency maps and publicly available commercial products. See County Needs Attachment. Appendix C C-3 RDF Gen 15 Revise to "When interim reclamation is required, irrigate site, in accordance with state water law, to establish seedlings more quickly if the site requires it." Appendix C C-4 RDF Gen 17 Revise to "Reclaim disturbed areas at final reclamation to the pre-disturbance landforms, as feasible, and informed by desired habitat conditions based on current ecological potential according to ESD, associated STM and existing ecological state." Appendix C C-5 RDF Gen 22 Revise to "Load and unload all equipment on existing roads or disturbed areas (i.e., laydown areas and turnouts) to minimize additional disturbance to vegetation and soil." Appendix C C-6 RDF LR-LUA 1 Revise to "Where new ROWs associated with valid existing rights are required, co-locate new ROWs within or immediately adjacent to existing ROWs or where it best minimizes impacts in GRSG habitat. Use existing roads or realignments of existing roads to access valid existing rights that are not yet developed Appendix C C-6 RDF LR-LUA 2

Revise to "Do not issue ROWs to counties on newly constructed energy/mining development roads, unless for a temporary use consistent with all other terms and conditions included in this document or, based on site-specific analysis, the route provides specific benefits for public access and does not contribute to resource conflicts." Appendix C C-7 RDF WFM 2 Revise to "Reduce the risk of vehicle or human-caused wildfires and the spread of invasive species by planting and maintaining perennial vegetation (e.g., green-strips) or chemical or mechanical fallow (e.g., brown-strips), where appropriate, paralleling road rights-of-way."

Appendix C C-8 RDF Lease FM 4 Revise to "Ensure habitat restoration meets desired habitat conditions based on current ecological potential according to ESD, associated STM and existing ecological state."

Appendix C C-9 RDF Lease FM 6 Revise to "Reclaim disturbed areas at final reclamation to the pre-disturbance landforms, as feasible, and informed by desired habitat conditions based on current ecological potential according to ESD, associated STM and existing ecological state." Appendix C C-10 RDF Lease FM 11 Revise to "Co-locate or cluster disturbances associated with operations and facilities as close as possible, unless site-specific conditions indicate that disturbances to GRS habitat would be reduced if operations and facilities locations would best fit a unique special arrangement." Appendix C C-12 RDF LOC 2 Revise to "Co-locate or cluster disturbances associated with operations and facilities as close as possible, unless site-specific conditions indicate that disturbances to GRS habitat would be reduced if operations and facilities locations would best fit a unique special arrangement." Appendix C C-14 RDF CTTM 1 Revise to "Rehabilitate roads, primitive roads, and trails not designated in approved travel management plans. This would not include roads with determined or undetermined claims of pre-FLPMA right of way." Appendix C C-14 RDF CTTM 2 Revise to "Reclaim closed duplicate roads by restoring original landform, as feasible, and establishing desired vegetation in GRS habitat informed by desired habitat conditions based on current ecological potential according to ESD, associated STM and existing ecological state. This would not include roads with determined or undetermined claims of pre-FLPMA right of way."

Although the DEIS states throughout Chapter 4 that no allocation decisions are tied to OHMA (see, for example, DEIS at 4-19), the Required Design Features ("RDFs") worksheets show that they are applicable to OHMA. This needs to be clarified.

Additionally, many of the RDFs are not applicable to non-discretionary activities pursuant to the U.S. Mining Law and the 43 CFR 3809 regulations, which also needs to be clarified. Finally, some of the locatable minerals RDFs are impractical and as currently written would substantially interfere with claimants' rights under the Mining Law.

For example, RDF LOC 3 stipulates "restrict pit or impoundment construction to reduce or eliminate augmenting threats from West Nile Virus". Pits and impoundments (i.e., tailings impoundments) are necessary for mining to occur and cannot be eliminated.

Similarly, the requirement to cover pits "regardless of size" with netting in the RDFs for locatable minerals (RDF LOC 7) needs to be clarified to pertain to small pits like drilling sumps and not to open pit mines or pit lakes in open pit mines. It is obviously impractical to cover a large pit with netting.

APPENDIX C: Required Design Features Worksheet Chapter Page Paragraph / Line / Figure / Table Comment Appendix C All All Revise the first checkbox under every single "If RDF not applied, select reason" to read "A specific RDF is documented to not be applicable to the site-specific conditions of the project/activity (e.g. due to ground truthing, site limitations or engineering considerations). Economic considerations, such as increased costs, do not necessarily require that an RDF be varied or rendered inapplicable." Appendix C All All Revise the second checkbox under every single "If RDF not applied, select reason" to read "An alternative RDF or appropriate mitigation is determined to provide equal or better protection for GRSG or its habitat." Appendix C All All Please revise the definition to read "Existing routes. Existing routes are defined as those routes on the ground that clearly show prior use to the extent that a travel path is clearly visible." There are many RDFs related to "existing roads", "existing routes", or "new roads." This creates issues due to the definition of "existing routes" in the Glossary. The definition is problematic and not based on realities on the ground; we strongly disagree with the definition. Many existing routes are used more heavily in different seasons. Additionally, many routes that are mechanically maintained (i.e., motor grader) do not have maintenance occur often enough to keep vegetation from establishing within the route, including centerlines, shoulders and drainages. Many of these routes are mapped on official federal agency maps and publically available commercial products. See County Needs Attachment Appendix C C-3 RDF Gen 15 Revise to "When interim reclamation is required, irrigate site, in accordance with state water law, to establish seedlings more quickly if the site requires it." Page 43 of 89 Appendix C C-4 RDF Gen 17 Revise to "Reclaim disturbed areas at final reclamation to the pre-disturbance landforms, as feasible, and informed by desired habitat conditions based on current ecological potential according to ESD, associated STM and existing ecological state." Appendix C C-5 RDF Gen 22 Revise to "Load and unload all equipment on existing roads or disturbed areas (i.e., laydown areas and turnouts) to minimize additional disturbance to vegetation and soil." Appendix C C-6 RDF LR-LUA 1 Revise to "Where new ROWs associated with valid existing rights are required, co-locate new ROWs within or immediately adjacent to existing ROWs or where it best minimizes impacts in GRSG habitat. Use existing roads or realignments of existing roads to access valid existing rights that are not yet developed. Appendix C C-6 RDF LR-LUA 2 Revise to "Do not issue ROWs to counties on newly constructed energy/mining development roads, unless for a temporary use consistent with all other terms and conditions included in this document or, based on site-specific analysis, the route provides specific benefits for public access and does not contribute to resource conflicts." Appendix C C-7 RDF WFM 2 Revise to "Reduce the risk of vehicle or human-caused wildfires and the spread of invasive species by planting and maintaining perennial vegetation (e.g., green-strips) or chemical or mechanical fallow (e.g., brown-strips), where appropriate, paralleling road rights-of-way." Appendix C C-8 RDF Lease FM 4 Revise to "Ensure habitat restoration meets desired habitat conditions based on current ecological potential according to ESD, associated STM and existing ecological state." Appendix C C-9 RDF Lease FM 6 Revise to "Reclaim disturbed areas at final reclamation to the pre-disturbance landforms, as feasible, and informed by desired habitat conditions based on current ecological potential according to ESD, associated STM and existing ecological state." Appendix C C-10 RDF Lease FM 11 Revise to "Co-locate or cluster disturbances associated with operations and facilities as close as possible, unless site-specific conditions indicate that disturbances to GRSG habitat would be reduced if operations and facilities locations would best fit a unique special arrangement." Appendix C C-12 RDF LOC 2 Revise to "Co-locate or cluster disturbances associated with operations and facilities as close as possible, unless site-specific conditions indicate that disturbances to GRSG habitat would be reduced if operations and facilities locations would best fit a unique special arrangement." Appendix C C-14 RDF CTTM 1 Revise to "Rehabilitate roads, primitive roads, and trails not designated in approved travel management plans. This would not include

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#### **G.4.12 Fire and Invasive Species**

The DEIS often states that there has been and will likely continue to be fires that eliminate sage-grouse habitat, but the DEIS does not present updated information or analyses of the current the existing condition, as it should as required by NEPA.

The County would encourage the BLM to expedite the implementation of fuel breaks, other wildfire pre-suppression/hazard fuels reduction efforts, and post fire rehabilitation, particularly within Sage-grouse habitat.

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.

greater attention needs to be given to the area of implementing adaptive management steps which consider the risk of levels of fuel loads and stress proactive on-the-ground management steps to apply pre-suppression action to reduce the levels of massive wildfire destruction.

The Draft EIS acknowledges that wildfire destruction has exceeded restored habitat, yet the need for attention in management changes are ignored in this Draft EIS, alluding to "two programmatic EISs that are being prepared for implementing activities."

Elements (like Table 2.2) incorporated into current BLM land management plans need to be corrected with a balanced assessment of resource risk which recognizes fuel loads and results in pre-suppression fuel management activity to reduce the threats of habitat loss from wildfire. Changes in livestock grazing permits need to be incorporated that provide flexibility for using livestock grazing as a tool in pre-suppression fuel management, identified through a balanced assessment of resource conditions.

the BLM has still not provided sufficient funding for fire management, range improvement, reseeding and restoration after fires.

\* Restore funding for fire management and weed control: Request that money coming into the BLM from grazing allotments, mining claim fees, oil, gas and geothermal leases, and other payments to the U.S. from states with proposed sage-grouse restrictions be used to improve the sagebrush habitat, including fire prevention, reseeding after fires and reclamation of fireweed areas.

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.

DRMP/EIS should describe the threat of catastrophic wildfires that burn very large areas and that have become common in the recent years. Large hot fires are directly correlated to the abundance of vegetation that accumulates when livestock grazing is prohibited.

EPA recommends that the Final EIS quantify the acreage that burned in each type of HMA and explain how, if at all, the impacts of fire were factored into the modified HMA designated boundaries. We also recommend that the Final EIS clarify whether the burned lands in the PHMA or GHMA would retain their existing designations or would no longer be designated as PHMA or GHMA. Issue #4: Restoration and Rehabilitation not adequately assessed and May Not Reflect Achievable Conditions. The LUPAs have significant flaws in assessing restoration and rehabilitation potential and impacts outside of fire rehabilitation. The documents do not address the need to prioritize areas for restoration where natural disturbance such as fire has occurred. They also do not address the need to evaluate unintended negative consequences, as well as the cost and the likelihood of success in restoration projects. The documents also do not discuss areas that have crossed an ecological threshold. Specifically, the GRSG LUPA in (at least) Nevada includes the following Management Directions that demonstrate these flaws / consequences: Nevada - MD VEG 6: Manage for establishment of sagebrush in unmaintained nonnative seedings (e.g., crested wheatgrass seedings) in or next to GRSG habitat to meet habitat objectives (Table 2-2). Nevada - MD LG 20: In PHMA and GHMA, rest areas that have received vegetative treatments from livestock grazing until resource monitoring data verifies the treatment objectives are being met and an appropriate grazing regime has been developed. Any livestock grazing temporary suspended use or other management changes per 43 CFR, Part 4110.3-2a for the purpose of a vegetation treatment will be done through the grazing decision, prior to treatment. Nevada - MD LG 22: After grazing rest associated with vegetation treatments in PHMAs and GHMAs, monitor annually for a minimum of 5 years to ensure project objectives are being maintained. Issue #4, Recommendation 4: 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. Under current technology and funding, confidence in any conversion attempt is lacking, and any commitment by this planning process to do so is unrealistic; resulting to unachievable expectations. Issue #4, Recommendation 5: Management must be allowed the flexibility to manage authorizations based on realistic time frames. Specifically, for example, 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." See <https://agresearchmag.ars.usda.gov/2017/sep/grasses/> (last checked on 12/1/2017). In addition, management must be allowed the flexibility to authorize grazing when evaluations determine objectives of the project will not be met. Language stating objectives must be met before livestock return must be removed from any and all documents. Issue 4: DEIS Comment 4, 5: This recommendation is omitted for any discussion in the DEIS. It is critical that BLM consider and analyze this issue in the FEIS, and implement a proposed action in the ROD that adopts the recommendation.

Other issues that need to be address for the benefit of the sage grouse are predator control and invasive weeds. We are concerned with the amount of fox tail that is starting to invade the meadow on the north end where the general public access road is. If this patch is not brought under control, it will

eventually take over a large portion of the meadow and reduce the brood rearing habitat that is needed for the sage grouse, livestock and wildlife. Some mechanical means needs to be used to bring the fox tail under control or eradicate it. Also the number of ravens need to be addressed to reduce their impact on nesting areas.

We also hope that the BLM is opposed to the current Washoe County proposal to designate the majority of the Bitner allotment as Wilderness. The wilderness designation will add multiple layers of restrictions that will not benefit the sage grouse. Mechanically controlling invasive weeds and fire suppression as well as using mechanical means to maintain fences etc will become very difficult or not allowed. Maintaining water sources or developing new ones with mechanical means will be more restricted. Many of the water reservoirs need to be cleaned out so storage capacity is increased so all species have access to more stable water sources.

The County would like to remind the public land management agencies that wildfire and altered fire behavior / fire cycles due to annual invasive species such as cheatgrass remain the top threat to Sage-grouse in Nevada. This point has never been clearer than on the heels of the Martin Fire that burned over 435,000 acres in five days (223,000 acres on July 7 alone), including 433,000+ acres of mapped Sage-grouse habitat, much of which is in Humboldt County. While the fire was driven by a combination of topography and severe fire conditions, extremely high fine fuel loads (reported via Inciweb on July 7 as over 200% of normal cheatgrass) contributed to the rapid fire spread and ineffectiveness of traditional fire suppression techniques. This highlights the Count'/s concern of over-regulation of livestock grazing and a continual reduction in grazing (as measured in Animal Unit Months, AUMs) since the 1970s, resulting in build-up of fine fuels, particularly in years with above average winter and spring precipitation. The inability of the BLM to respond in real-time to such fuel loads, and provide added flexibility and effectiveness for the most cost-effective pre-suppression tool (managed grazing) continues to concern the County. As such, the County urges the BLM to incorporate new management actions that allow increased grazing of fine fuels, particularly when fuel loading is high, as a means of wildfire pre-suppression. The County supports the implementation of any and all tools (Programmatic EIS Analysis, Allotment Management Plans, Temporary Non-Renewable Grazing Authorizations, Outcome Based Grazing, etc.) to ensure more effective use of grazing as a fuels reduction method. Until this happens, the County foresees similar outcomes to the Martin Fire. To that end, the County has attached an Article in Press titled Viewpoint: An Alternative Management Paradigm for Plant Communities Affected by Invasive Annual Grass in the Intermountain West. This article was developed by some of the most respected and experienced Range Management Professionals in the Great Basin, and the County fully supports their proposed 'Fuels Management Approach'.

\* The County would have preferred to see more of an emphasis on fire management (fuels reduction, suppression, use of local fire fighting resources, and post fire rehabilitation) but appreciates and supports ongoing efforts to address fire through ongoing Programmatic EIS processes.

Successful protection of habitat cannot be achieved without meeting the threat of wildfire head on and using all tools in the toolbox. These tools should first include timely/managed grazing and this EIS should evaluate the use of grazing outside of current permits to provide NEPA analysis for land managers to tier to (something we have heard consistently over the last two years as a reason grazing couldn't be used to remove hazardous fuel loading).

The LUPA fails to recognize that managed livestock grazing represents an important and cost effective tool to achieve desired sage-grouse habitat conditions and to reduce wildfires. The livestock grazing restrictions in the LUPA will cause environmental harm because they will increase the volume of highly flammable non-native invasive annual grasses and inevitably lead to more wildfires. The livestock grazing restrictions in the LUPA conflict with Section 6.21 of the Eureka Master Plan which specifically states: "... Managed grazing is beneficial in preventing excessive damage to plants by wildfire and prohibition of grazing prior to a fire results in unnecessary damage to the plants." The increased fuels that will result from the economically burdensome and technically ill-advised livestock grazing restrictions in the LUPA will place a burden upon our fire district and very likely result in destruction of critical GRSG habitat. The LUPA will also decrease the level of active management currently provided by ranchers that benefit GRSG. When permitted to have livestock on the range, ranchers provide a constant presence to maintain water developments used by wildlife, provide first response to fires, keep a watchful eye, and provide a timely response to situations that may be detrimental to GRSG habitat. Eureka County has led numerous efforts to improve and conserve GRSG habitat by taking proactive measures to address pinyon-juniper (P-J) encroachment, which is a known threat to GRSG habitat. Eureka County approached BLM in 2011 with a proposal to hand thin P-J around selected springs on BLM-administered land. Unfortunately, Eureka County is still waiting for BLM to approve this habitat improvement project. Eureka County has proceeded with concerted actions to remove P-J from thousands of acres of private lands that have habitat characteristics that would benefit from P-J removal. The County successfully built relationships and gained approvals from private landowners and identified funding, including grants, to hire hand-crews to selectively remove P-J from over 5,000 acres on private land in GRSG habitat on Roberts Mountain, the Diamond Range, the Monitor Range, and the Sulphur Springs Range in southern Eureka County at a cost over \$300,000, and have additional funds committed for continued P-J removal projects. The LUPA restrictions, including but not limited to the lek buffer zones, disturbance caps, seasonal travel restrictions, road closures, and noise limits, will interfere with these types of conservation projects, making private landowners less able and willing to work on cooperative conservation efforts, which will frustrate the goal of conserving and enhancing GRSG habitat. Eureka County has also spearheaded projects to rehabilitate and restore agricultural lands in and adjacent to GRSG habitat because invasive weeds increase wildfire risks. Eureka County has a substantial noxious and invasive weed treatment program that treats over 1,000 acres of noxious and invasive weeds per year at a cost of \$60,000 to \$100,000 per year. The 2015 ARMPA travel restrictions limits Eureka County's ability to access weed infested roads in the spring, which is the optimal treatment time. The 2015 ARMPA threatens the viability of this important fire reduction and habitat conservation program, which is funded with taxpayer monies collected mainly from ranchers and farmers. These tax revenues from ranching and farming are expected to decline as a result of the land use restrictions. Eureka County has constructed, maintained, and repaired wildlife water guzzlers and wildlife escape ramps that benefit GRSG and other wildlife species. The LUPA will impair the ability to pursue and implement wildlife water developments and habitat projects approved on BLM-managed land.

We ask that BLM immediately authorize targeted and managed grazing and brush thinning or removal to reduce fuel loads as an emergency measure to address wildfire risks

"Wild fire and the period of time for recovery from fires has become a regulatory issue in Eureka County that has caused unreasonable economic hardship to Eureka County livestock producers. Properly managed grazing provides a substantial advantage for native plant recovery following fire. Prohibition of grazing following wildfire is not necessary for the recovery of rangeland vegetation.

Managed grazing is beneficial in preventing excessive damage to plants by wildfire and prohibition of grazing prior to a fire results in unnecessary damage to the plants" (p. 6-8). o The DEIS includes provision to defer grazing after wildfires in all cases and does not fully recognized properly managed grazing as the best and primary tool to manage fuel loads before and immediately after fires. This must be included. Specifically, there needs to be inclusion of a methodology to allow for and streamline Temporary Non-Renewable (TNR) allocation of forage for fuels reduction in general and specifically including measures to allow for targeted cheatgrass control through TNR.

"Develop prescribed fire and wildfire management plans to re-establish historic fire frequencies for appropriate vegetation types and include in such plans livestock grazing techniques as a tool for fire fuel management related to both wildfires and prescribed fires" (p. 6-10). o This is a major component missing from the DEIS. The condition of much of the Great Basin rangelands and coincident GRSG habitat is degraded due to a fire regime that is not conducive to health rangelands and GRSG habitats. The DEIS must develop strong measures to return fire to the landscape in a managed way, where appropriate, or Page 59 of 89 use other techniques, primarily livestock grazing, to mimic fire and it's positive historic influences on the diverse and varietal needs of GRSG. The DEIS speaks to "limiting human influence on intact GRSG habitats" especially where cheatgrass is present. Unfortunately, even in areas where cheatgrass appears to be absent, a bioassay of the soils would show that there is, in fact, a seedbank of cheatgrass almost ubiquitously (see research by USDA-ARS (Charlie Clements) in Nevada regarding this matter). Protecting these areas from livestock use or other use with the excuse that they will allow "establishment" of cheatgrass is dangerous and short-sighted. These protections will create large, catastrophic fires that will bear the evidence of cheatgrass nonetheless. Regarding wildfire management, there should instead be a focus on increasing man's influence in these ecosystems to allow for active, progressive, adaptive management. The decline in GRSG is coincident with the increase of regulatory schemes and bureaucratic hoops that must be overcome to do anything on the ground. This too has resulted in increases of extent and cycle of wildfires. Man's influence has shaped where we are today and man's influence must be focused, strategic, and targeted to keep managing these lands for GRSG habitat and current and future generations. See great work by the USDA-ARS Research Station in Dubois, Idaho where active grazing management and prescribed burning to mimic the historic fire regime has created an increase in GRSG when neighboring BLM land has continued to see a decline in GRSG ("A Home on the Range", Agricultural Research, November/December 2006).

While the DEIS acknowledges pinyon-juniper (PJ) encroachment and speaks to vegetation management of these issues, there is limited and general focus on the need to also address sagebrush and other shrub encroachment (such is rabbitbrush into meadows) and senescence (such as single age and decadent stands of sagebrush). If ESDs are followed, the areas, density, and cover of brush would be able to be targeted to approach ecological potential. Many of the vegetation/habitat objectives focus on values of sagebrush cover without consideration of site potential and conditions (state). Further, there is no effort in the DEIS to address utilization of Page 60 of 89 biomass from PJ as a means to incentive treatments and return dollars to the economy. Please include.

As such, the Board urges the BLM to incorporate new management actions that allow increased grazing of fine fuels, particularly when fuel loading is high, as a means of wildfire presuppression.



Desirable non-native species that are more readily available, more cost effective, more competitive with non-native annual grass species (particularly medusahead and cheatgrass) and provide a similar ecological functionality should also be encouraged for use.

#### **G.4.13 Outcome Based Grazing**

Fuel loads, particularly cheatgrass, are high in the County due to two consecutive springs of above-average precipitation. These fuel loads carried multiple large wildfires in the County last year and have only exacerbated the accelerated cheatgrass-fire cycle. As such, anything the BLM can do to allow additional grazing that targets reduction of such excess fuel is highly encouraged, particularly around potential ignitions sources (i.e. Highway 50 and the Fallon Training Range Complex Bravo bombing ranges).

Moving forward, the agencies MUST recognize the highly positive effects of livestock grazing on a healthy ecosystem. They must amend seasons of use, amount of use to correspond to conditions on the ground, not a rule book or outdated AOI and ten year agreement.

#### **G.4.14 Land Health Assessments**

I-Range Improvements and Supplemental Feeding Range improvements and supplemental feeding are critically important for achieving standards of rangeland health and for herd health. The LUPAs apply a negative focus on range improvements, including but not limited to water developments and fencing. Specifically, the GRSG LUPAs in (at least) Idaho, Nevada, Utah, and Oregon include the following Management Directions, and Management Actions, which demonstrate these flaws / consequences: MD LG 19: In PHMAs and GHMAs, remove livestock ponds built in perennial channels that are negatively impacting riparian habitats, either directly or indirectly, unless riparian access is able to be controlled and negative impacts effectively mitigated (e.g.; water gap fence to pond), and do not permit new ones to be built in these areas subject to valid existing rights. Prior to pond removal, offsite watering options will be examined and considered. MD LG 13: For range improvement projects, review Objective SSS4 and apply MDs SSS1 through SSS 4 when reviewing and analyzing projects and activities proposed in GRSG habitat. MD LG 16: Authorize new water developments for diversion from spring or seep source, in accordance with state water law and subject to valid existing rights when PHMAs and GHMAs will benefit from or not be negatively impacted by the new development. This includes developing new water sources for livestock as part of a grazing management plan to improve GRSG habitat. MD LG 15: in accordance with state water law and subject to valid existing rights, remove or modify water developments that are negatively impacting GRSG habitats. MD LG 17: Modify water development projects to ensure riparian habitats in PHMAs and GHMAs are being maintained or improved in compliance with valid existing right sand in accordance with state water law. MD LG 18: Locate salting and supplemental feeding locations, temporary or mobile watering, and new handling facilities (e.g., corrals and chutes) at least 1 mile from riparian areas, springs, and meadows. The distance can be greater based on site-specific conditions. MD LG 14: Build or modify livestock enclosures so that they are large enough to provide hiding cover to GRSG and other wildlife and to reduce the possibility of wildlife collisions with fences (Christiansen 2009; Stevens 2011; NRCS 2012).

2- Issue #5, Recommendation 12: Any decision from this process would be amend all Plans to remove any elements as related to permitted livestock grazing, and to defer GRSG management to the BLM via continued implementation of 43 C.F.R. Part 4100, subpart 4180.

3- See Issue #2. Issue 5: DEIS Comment 12: This recommendation is omitted from any discussion in the DEIS. It is critical that BLM consider and analyze this issue in the FEIS, and implement a proposed action in the ROD that adopts the recommendation. Issue #5, Recommendation 13: 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. Issue 5: DEIS Comment 13: This recommendation is omitted for any discussion in the DEIS. It is critical that BLM consider and analyze this issue in the FEIS, and implement a proposed action in the ROD that adopts the recommendation.

4- Issue #5, Recommendation 14: Range improvements should not be prohibited per se in any GRSG habitat. Range improvements are a necessary range management tool. Issue 5: DEIS Comment 14: The DEIS, Appendix B, at page B-2, seems to address this issue by stating that: "If it is not possible to avoid or minimize impacts by relocating the project outside of the identified lek buffer-distance(s), the BLM may approve the project if: ... Range improvements do not impact Greater Sage-Grouse, or range improvements provide a conservation benefit to Greater Sage-Grouse such as fences for protecting important seasonal habitats". While this may be a step in the right direction, it still spins range improvements as being contrary to sage grouse management in lek areas. It is common knowledge and occurrences that leks exist and/or leks are established in water development areas. Based thereon, it is critical that BLM consider and analyze this issue in the FEIS, and implement a proposed action in the ROD that adopts the recommendation.

5- Issue #5, Recommendation 15: As previously discussed in Issue #5, the LUPAs elevate 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 management direction 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 5: DEIS Comment 15: This recommendation is omitted for any discussion in the DEIS. It is critical that BLM consider and analyze this issue in the FEIS, and implement a proposed action in the ROD that adopts the recommendation.

#### **G.4.15 Alternatives**

Please fully implement the current science-based sage-grouse plans.

#### **G.4.16 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.

Going beyond the identified Preferred Alternative, we maintain that the land management plans that were adopted in 2015, need to be totally replaced using the Nevada Greater Sage Grouse Conservation Plan.

Alternatives: While I strongly support the BLM's implementation of the 2015 GRSG conservation plans before any whole scale changes are proposed, including those in the draft EIS, I am concerned that the plans, especially if the proposed amendments are adopted, will not be effective in dealing with

catastrophic losses of GRSG habitat in Nevada and Eastern California by invasive species and massive fires. One fire in Nevada can destroy as many acres of GRSG habitat as acres which are conserved or protected or restored for GRSG through BLM management actions and habitat projects in any one year. The Martin Fire is the largest single fire that has burned in Nevada. From a July 17, 2018 report of the Nevada Sagebrush Ecosystem Council, [http://sagebrusheco.nv.gov/uploadedFiles/sagebrushconvgov/content/Meetings/2018/Martin %20Fire.pdf](http://sagebrusheco.nv.gov/uploadedFiles/sagebrushconvgov/content/Meetings/2018/Martin%20Fire.pdf) we learned that as of this date, the Martin Fire had burned 691 square miles or 435,474 acres or 6% of Nevada. 357,165 acres of PHMA, 29,758 acres of GHMA and 46,377 acres of OHMA were destroyed. 47 GRSG leks, including 29 active leks were burned. The draft EIS totally fails to address either catastrophic habitat losses nor proposes any effective way to address these threats. A recent update of the GAP report by the Western Fish & Wildlife Agencies (WAFWA) reported that public land managers are losing a battle against invasive plant species and wildfires in sagebrush habitats in the US West: <https://www.usnews.com/news/best-states/idaho/articles/2018-05-24/officialsefforts-failing-to-save-us-west-sagebrush-land>. The report documents that invasive plants on nearly 160,000 square miles of public and private lands in the West have reached enormous levels and are spreading. WAFWA said that the top problem identified in the report is the limited ability at all levels of government to prevent invasive plants such as fire-prone cheatgrass from spreading and displacing native plants. "There is widespread recognition that invasive annual grasses and wildlife fire are the most crucial threats to the sagebrush ecosystem, yet invasive annual grass management is not funded at a level to be effective in breaking the invasive annual grass/fire cycle," the report said. Again, the draft EIS does not address these threats of catastrophic GRSG habitat losses. My suggestion for an alternative in the draft EIS for Nevada and Eastern California, if the BLM decides to continue this process, is a maximum GRSG protection alternative with a pledge by the BLM to restore as much GRSG habitat lost to wildfires or other events on an annual basis. This would require effectively funding the fight to control invasive plants to break the invasive plants/wildfire cycle in Nevada and the West.

#### **G.4.17 Preferred Alternative**

We support the Management Alignment Alternative for modifying habitat management areas. The Management Alignment Alternative also allows the Resource Management Plan maps to be updated when updates are approved by the Nevada SEC for the Nevada Plan. This is essential for consistent planning and coordination between state, federal, and private partners.

The NvMA advocates for the inclusion of state and local perspectives in land use planning and decision making whenever possible. The preferred alternative should be as inclusive as possible to allow for this input.

WEX appreciates the BLM's approach in the Management Alignment Alternative that appears to promote and require use of the best available information to create proper designation of any actual habitat based on that which will benefit the species, where that information must be based on ground-truthing making clear that the landscape level mapping is solely for purposes of generally designating a starting point of what is believed to be habitat - subject to site-specific and best available science. The Management Alignment approach to consider site specific information and also honor valid existing rights and consider existence authorized uses and disturbance also is legally appropriate and critical.

WEX strongly supports the approach under the Management Alignment Alternative to consider the importance of involvement of all stakeholders at the state and local level to develop specific strategies

or actions necessary to achieve conservation objectives. This critical component was totally absent and ignored in the 2015 process and would impermissibly continue under the No Action alternative. WEX appreciates the proposed consideration of greater coordination with county plans which contain conservation measures, while still accounting for necessary mineral exploration and fiscal health of the communities. Namely, WEX's investment-backed expectations are directly impacted by Elko County's conservation plan and the Nevada plan, and the BLM must strive for coordination with those plans and properly address any inconsistencies.

The Alliance specifically supports BLM's adoption of the Management Alignment Alternative because of changes it makes to the following resource issues: \* Habitat management area designations \* Sagebrush focal area designations \* Adaptive management \* Mitigation strategy \* Seasonal timing restrictions

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 Nevada bring GrSG conservation measures in closer alignment with Nevada's Greater Sage-Grouse Conservation Plan. Coordination with the Nevada 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 Nevada and collaborative stakeholder's efforts to study and work to protect GrSG.

Of equal importance and as adopted by BLM, in the preferred alternative, habitat assessments of a project site and its surrounding area must be conducted by qualified biologists to identify suitable, marginal, or unsuitable habitat at multiple scales. Only with this site-specific, on-the-ground review of the habitat conditions can BLM be in a position to make informed and scientific decisions on siting of wind energy development and transmission projects.

We support the MAA for the remaining issues and clarifications in the RMPA DEIS.

ES-4 ES-9 Table ES-4 No Action Alternative: See Sagebrush Focal Area Attachment Management Alignment Alternative: Paragraph 1: BLM will need to verify this, but NACO believes that Coates et al 2016 identifies BSU boundaries, and the State of Nevada through its Sagebrush Ecosystem Council established Habitat Management Areas / SMGAs (see above comment). Paragraph 3: In this alternative "net conservation gain" needs to be updated to be consistent with the State Plan definition. Paragraph 4: Revise to read "...metrics for tracking changes and mitigating impacts in habitat quality and quantity by providing equivalent number of functional habitat acres over time is..."

Consequently, BLM cannot select the No Action Alternative as the Preferred Alternative in the 2018 FEIS. Additionally, BLM cannot incorporate elements of the alternatives considered in detail in the 2015 FEIS that are based on landscape-scale management into the Preferred Alternative in the 2018 FEIS.

WMC remains concerned about the aspects of the Management Alignment Alternative that are based on the landscape-scale management and mitigation principles embraced in the following documents: \* The National Technical Team ("NTT") Report; \* The Conservation Objectives Team ("COT") Report; \* The October 2014 SFA Memo from the U. S. Fish and Wildlife ("FWS") Director to the BLM Director and the U.S. Forest Service Chief; 4 \* The September 2014 U.S. FWS Mitigation Framework; \* The November 2014 USGS Lek Buffer Study; and \* The September 2015 Crist et al USGS Open File Report. Because all of these documents were developed to implement the Obama Administration's landscape-

scale land use and mitigation policies, they are no longer consistent with current policy and the law as Congress clarified in its rejection of BLM's Planning 2.0 Rule. Consequently, BLM must eliminate any future reliance on the findings or recommendations in these documents. This is another compelling reason why the No Action Alternative, which uses these documents as a foundation, is not selectable. However, it also means that elements of the Management Alignment Alternative in the 2018 DEIS that are based on the above-listed documents must be eliminated from BLM's Preferred Alternative in the 2018 FEIS and the amended LUP. Specifically, the one-size-fits-all, landscape-scale land use restrictions based on the NTT Report such as uniform lek buffers, seasonal restrictions, noise restrictions, disturbance caps, and required design features need to be eliminated and replaced with project-specific conditions based on actual site habitat conditions.

#### **G.4.18 Range of Alternatives**

The No Action Alternative is Not Selectable The 2018 Final EIS ("FEIS") needs to articulate that the No Action Alternative is not selectable because it is premised on landscape-scale planning concepts that are no longer consistent with the Department of the Interior's ("DOI's") policies and that Congress rejected when it used the Congressional Review Act (5 U.S.C. §801 et seq. "CRA") to rescind BLM's Planning 2.0 Rule. Congress may use the CRA and an expedited joint resolution legislative process to overturn last minute regulations from the previous Administration. As one of the last rules promulgated during the Obama administration, BLM published the Resource Management Planning Rule (Planning 2.0 Rule) on December 12, 2016 (81 FR 89580). The rule became effective on January 11, 2017. BLM's Planning 2.0 Rule, which was developed after the 2015 LUPs, was a reverse-engineered, after-the-fact regulation designed to require BLM to use the landscape-scale land use planning principles that are the foundation of the 2015 GSG LUPs in all future resource management planning efforts. In overturning the Planning 2.0 Rule, Congress reaffirmed its intent that DOI must develop resource management plans like the GSG LUPs in compliance with the land management principles in the Federal Land Policy and Management Act of 1976 ("FLPMA"), 43 U.S.C. §§ 1701 et seq. FLPMA does not authorize the landscape-scale planning measures embraced in the Planning 2.0 Rule and the 2015 GSG LUPs. Because the CRA prohibits agencies from reinstating a similar rule through rulemaking, BLM must not replicate the now defunct policies in its Planning 2.0 Rule in the 2018 amended GSG LUPs. Congress has made it clear that FLPMA does not authorize landscape-scale management of public lands. Therefore, the GSG Land Use Plans ("LUPs") must not be based on landscape-scale management philosophies. The SFA designations, the net conservation gain mitigation standard, uniform lek buffer zones, disturbance and density caps, rigid adaptive management triggers, and travel restrictions in the No Action Alternative/2015 LUPs are landscape-scale management provisions that are unauthorized in light of Congress' revocation of the Planning 2.0 Rule, violate FLPMA, and are inconsistent with the following Secretarial and Executive Orders: Secretary Zinke's June 2017 Secretarial Order 3353 "Greater Sage-Grouse Conservation and Cooperation with Western States;" President Trump's March 2017 Energy Independence Executive Order (EO 13783); and Secretary Zinke's March 2017 Secretarial Order 3349 implementing EO 13783.

The 2018 FEIS should clearly explain that the No Action Alternative in the 2018 DEIS and the 2015 LUPs are not consistent with FLPMA and DOI policies. Consequently, BLM cannot select the No Action Alternative as the Preferred Alternative in the 2018 FEIS. Additionally, BLM cannot incorporate elements of the alternatives considered in detail in the 2015 FEIS that are based on landscape-scale management into the Preferred Alternative in the 2018 FEIS.

Perch Discouragers on Tall Structures GRSG-LR-SUA-O-013-Objective and GRSG-LR-SUA-ST-017-Standard, identified in the current Plan, call for the retrofit of tall structures currently located in nesting habitat, PHMA, GHMA, and SFA to be fitted with perch deterrents when issuing new authorizations or renewing existing authorizations. While the SFA designation would be eliminated under Alternative B of the RMPA/EIS, the Objective and Standard described here would not be altered. This is overly burdensome on rural utilities which have many miles of distribution power line in greater sage-grouse habitat. Rural utilities do not have the manpower and simply cannot afford the added cost of retrofitting all distribution poles with perch deterrents without passing those costs on to all members in the cooperative. Additionally, the increased maintenance required for perch deterrents will increase the operation and maintenance costs and time spent in the field which would lead to increased disturbance on greater sage-grouse from maintenance and inspection crews. WREC has previously worked with BLM to place perch deterrents in areas where they may be warranted. WREC recently agreed to stipulations requiring the placement of avian perch discouragers within 4.0 miles of an active lek and having a direct line of sight to that lek. This demonstrates that WREC is willing to work to increase protections for greater sage-grouse, but these efforts must be concentrated in locations where they will actually make a difference and the cost-benefit of applying perch deterrents makes sense.

Courts have required an SEIS when the proposed action differs "dramatically" from the alternatives described in the DEIS so that meaningful public comment on the proposed action 'was precluded, see *California v. Block*, 690 F.2d 753, 758 (9th Cir. 1982). Here, none of the DEIS alternatives utilized all or most of the key elements found in the Proposed Action, particularly the SFAs and lek-buffer distances as applied through the new Lek Buffer Study. Indeed, the Proposed Action amalgamated so many different elements that the Preferred Alternative could not have been fairly anticipated by reviewing the DEIS alternatives, thus "seriously diluting the relevance of public comment on the DEIS alternatives." *California v. Block*, 690 F.2d at 758. See also *New Mexico ex rel. Richardson v. Bureau of Land Management*, 565 F.3d 683, 707 (10th Cir. 2009) (new alternative proposing new locations of activities required an SEIS because it affected "environmental concerns in a different manner than previous analyses," even though the general nature of the alternatives impact resembled those already analyzed). This fatal error is compounded through the heavy reliance on the Ashe Memo and the Lek Buffer Study both significant and material post-DEIS information- that formed key cornerstones to the Proposed Action. See PLUPA/FEIS at 2-2 (describing the need for SFAs, "In light of the landscape level approach to GRSG conservation provided through this planning effort and as defined by the characteristics set forth above, as well as additional considerations, including potential for impacts from climate change, fire and invasives, these areas have been identified as SFAs.") and justifying buffers through "The USGS report [which] states that 'various protection measures have been developed and implemented.. [which have] the ability (alone or in with others) to protect important habitats, sustain populations, and support multiple-use demands for public lands.'", PLUPA/FEIS at Appendix B-2. Accordingly, the Agencies' justification that the PLUPA is a lawful "suite of management decisions that present a minor variation of the Preferred Alternative identified in the Draft LUPA/EIS5" FEIS at 2-6, fails both practically and as a matter of law.

The range of alternatives is insufficient. The Draft EIS only considers one alternative, the "Management Alignment Alternative", and refers 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 Env'tl 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. 1. 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..." NV/CA Draft EIS at ES-2.

The No-Action Alternative in the Draft EIS is the baseline, not a real alternative. The 2018 Draft EIS for the Greater Sage-Grouse purports to compare two alternatives - the "No Action Alternative" versus the "Management Alignment Alternative." See NV/CA Draft EIS at 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 EIS, the Draft EIS proposes 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. 3. 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 GRSG 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 EIS 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 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 2, 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 DEIS, including Sagebrush Focal Areas (SFA). NV/CA Draft EIS at I-8. 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.

4. An agency may tier only to an EIS of larger scope; BLM cannot tier its analysis of alternatives in the Draft EISs to the 2015 EISs, since the 2018 Draft EISs are based on a different purpose and need, and have a similarly broad scope. Instead of analyzing a full range of alternatives or the impact of its proposed Management Alignment Alternative, BLM seeks to rely on analysis from the 2015 Sage-grouse Plans. The 2018 Draft EIS states that: . . . issues were analyzed under most resource topics in the 2015 Final EIS, and these 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 RMPA/EIS are within the range of alternatives previously analyzed. See NV/CA Draft EIS at I-11. The Draft EIS further states that it "is tiered to the [2015 EIS] . . . and incorporates by reference all of the descriptions of the affected environment and impacts analyzed in the [2015 EIS]. . . . Incorporation by reference and tiering provide opportunities to reduce paperwork and redundant analysis in the NEPA process." *Id.* at I-2. However, an agency may tier a new EIS only to an existing EIS of larger scope. The 2018 Draft EIS for amending the 2015-Sage-grouse Plan as it applies to Nevada would affect the same scope as the 2015 EIS. "Tiering is appropriate when the sequence of statements or analysis is: (a) From a program, plan, or policy environmental impact statement to a program, plan, or policy statement or analysis of lesser scope or to a site-specific statement or analysis." 40 CFR § 1508.28. Because the 2018 Draft EIS is not of "lesser scope" than the 2015 EIS, NEPA prohibits the BLM from "tiering" to the 2015 EIS. See 40 CFR §§ 1508.28, 46.140(c). Further, NEPA requires that "A NEPA document that tiers to another broader NEPA document in accordance with 40 CFR 1508.28 must include a finding that the conditions and environmental effects described in the broader NEPA document are still valid or address any exceptions." 40 C.F.R. § 46.140. The Draft EIS has not made a thorough finding in this regard and cannot justify relying on previous analysis of alternatives.

5. An agency may incorporate documents by reference, but those documents must still be appropriate for the current use and context; BLM cannot incorporate by reference analysis of alternatives from the 2015 Sage-grouse Plans into this EIS. In addition to stating that it is tiering to the previous analysis of alternatives, BLM also states it is incorporating the analysis of alternatives in the 2015 plan by reference. For instance, in the Draft EIS for Northwest Colorado, BLM states: "this RMPA/EIS has its foundation in the comprehensive 2015 Final EIS and ROD/ARMPA and incorporates those documents by reference-including the entire range of alternatives evaluated through the 2015 planning process." NV/CA Draft EIS at 2-1-2. However, in order to incorporate documents by reference, BLM "must determine that the analysis and assumptions used in the referenced document are appropriate for the analysis at hand." 43



C.F.R. § 46.135(a). As discussed above, the analysis of alternatives in the 2015 plans did not relate to the purpose and need of these amendments and is not appropriate to reference in this context. Further, as prescribed by the Council on Environmental Quality, "[a]gencies shall incorporate material into an environmental impact statement by reference when the effect will be to cut down on bulk without impeding agency and public review of the action. The incorporated material shall be cited in the statement and its content briefly described." 40 C.F.R. § 1502.21. BLM has not met these requirements either. Simply stating that the previous analysis of alternatives are incorporated by reference does not explain why the analysis is sufficient, what was analyzed, how it pertains to the focus of these amendments or why it obviates the need for analysis of alternatives in these EISs. Moreover, failing to analyze alternatives in these EISs is not providing the public with a sufficient opportunity to review and evaluate the proposed course of action. BLM has attempted to rely on both authority to tier and authority to incorporate documents by reference without clarification and without actually meeting the applicable standards. BLM cannot simply look to the 2015 plans to avoid completing necessary NEPA analysis. The agency must analyze a reasonable range of alternatives in this NEPA process that addresses the new purpose and need.

Therefore, the only alternative that is reasonable and rational as a final decision in this case is to vacate the 2015 LUPAs entirely and return to the management that was in place when the 2010 FWS Findings were first published.

We request that the Bureau withdraw and then revise the draft RMPA/EIS for Nevada and Eastern California to include this conservation alternative, not just a No-Action Alternative or a Preferred Management Alignment Alternative.

From our analysis, American Bird Conservancy believes the Bureau's Nevada and Eastern California plan would weaken existing protection and fail to address the foreseeable impacts of mineral extraction. The plan leaves Greater Sage-Grouse at greater risk of being endangered, and 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 Nevada and Eastern California.

We strongly oppose the efforts to modify the 2015 Sage-Grouse Conservation Plans and ask that the agency choose the No-action alternative and to continue implementing the plans as approved in 2015.

The Management Alignment Alternative reduces total acreage in OHMA's by 17% overall. The agency suggests that this action is negligible since no allocation decisions are tied to this type of HMA. However, because management and allocation decisions can be tied to this type of HMA in the future a reduction in the acreage for this HMA reduces agencies' ability to adaptively manage sagebrush habitat and sage grouse populations based on the best available science.

Limitations inherent in PHMA, GHMA, OHMA, and SFA areas under the 2015 NVLMP and the "No Action" Alternative threaten the economic viability of the Projects, and thus the longterm economic impacts of the local communities who rely on the Projects for revenue, employment, etc. Specifically, under the No Action Alternative all projects are located in areas proposed for travel and transportation limitations/restrictions; major and minor rights of way are proposed to be avoided in Wood Gulch and Doby George; locatable mineral entry had been proposed for withdrawal in Wood Gulch (but has now been cancelled); and two sections along the Sonoma Range front are slated for disposal. With respect to

Doby George, the agency already has determined that WEX's "commitment to the environmental protection measures and monitoring activities included in the environmental assessment will minimize the risk of adverse impacts and unnecessary or undue degradation to public lands." (See BLM - Tuscarora Field Office, Doby George Exploration Project Environmental Assessment Decision Record (February 2013)). The Management Alignment Alternative provides for consideration of such protective measures, site specific information and adaptive management that appropriately balances use and conservation as required by FLPMA's multiple-use mandate.

exploration conducted by WEX of the Wood Gulch deposit and surrounding area lead to the discovery in 2013 of another, larger gold deposit approximately one mile east of the reclaimed Wood Gulch mine. This new deposit will be an economically significant discovery. This latter point is critical because, if withdrawn from locatable mineral entry as had been proposed or interfered with at a level that development does not occur, all potential for economic development in the very promising Wood Gulch area will be eliminated. While total withdrawal from mineral entry no longer appears to be a threat given the cancellation of the withdrawal, this demonstrates one of the reasons the No Action alternative is unacceptable and unlawful. Interference with development of the project would have serious implications both to WEX and the local and state communities. The Management Alignment Alternative provides for the use of best available science and site-specific information along with an appropriate Allocation Exception Process that is not only more compliant with the multiple-use mandate as compared to the No Action Alternative approach of "no go" outright prohibitions based on erroneous data and unsupported conclusions but also provides for much improved and effective conservation (as was explained in the litigation and prior comments submitted throughout this process).

Although the withdrawal was cancelled as unnecessary (which was appropriate) the segregation of these lands effective September 24, 2015 created a significant cloud of uncertainty on the project and continued development and had a chilling effect on Western's ability to continue raising necessary funds for its development. This is yet another reason why the No Action alternative should not be adopted and the BLM should consider this effect on WEX and similarly-situated mining companies with valid existing rights in the SEIS and should consider clarifying and confirming that such analysis must occur prior to any proposed withdrawal (based on existing law and regulations to avoid such harm in the future) in the future. WEX strongly supports and urges the BLM to adopt the provisions in the Management Alignment Alternative that eliminate the SFAs, remove any reference to any potential withdrawal of lands from mineral entry and reject in totality the No Action alternative the adoption of which would not comport with the law.

Proposals such as the No Action Alternative to limit development now not only violate the U.S. Mining Law, they provide no meaningful benefit to the greater sage grouse or its habitat in the area.

The comparison of alternatives does not address the problems with the 2015 plan regarding these issues: \* MD SSS 2(A) - requiring application of the three percent cap on anthropogenic disturbance in proposed project areas. This policy will discourage concentration of anthropogenic disturbance and is a recognized flaw according to the 2015 plan in the DRMP/DEIS published by the BLM Idaho state office. It is recommended the Nevada plan align with the proposed Idaho plan in this regard. See also MD LR 1. \* MD LR 5 - makes PHMA an avoidance area for transmission lines greater than or equal to 100 kV. This would effectively prevent development of utility-scale wind projects and should be eliminated. \* MD LR 18 - in priority habitat, under the 2015 plan, new roads are only permitted for public safety or

administrative access or, if they will create no new surface disturbance. It is unclear how a new road could avoid creating new surface disturbance. In any event, the inability to construct new roads for purposes of access to authorized projects will effectively prevent authorization of new projects since access roads will be necessary to reach those projects. Consequently, this management direction has the effect of vetoing any new development projects in PHMA and should be changed or eliminated to remove this veto effect.

The No Action Alternative in the 2018 RMP DEIS cannot be adopted because the 2015 LUPs are not consistent with FLPMA and Department of Interior policies. Further, BLM must not incorporate portions of the alternatives considered in detail in the 2015 FEIS that are based on landscape-scale management into the Preferred Alternative in the 2018 RMP FEIS.

#### **G.4.19 Assumptions and Methodology**

We request adding management decisions based on science be tied to qualified biologists and accepted methodologies.

The Conservation Credit System (CCS) is the visionary yet bedrock tool of our NV SGMP for case-specific mitigation of human impacts on SG habitat. It must be validated and enabled by BLM within this review process.

Retain the BLM commitment to use the state's Habitat Quantification Tool through "solidifying" rather than "clarifying" it, while adopting the most current version verified by current best science. A mechanism for updates must be provided.

Quantitative Habitat Triggers (QHT) must be retained, while systematically refined by monitoring and current science information gained over time. The DEIS is non-specific as to how and how often analysis will be conducted, nor the tool to determine percent decline. To avoid variability and establish consistency, detailed methods, as in the current QHT are already established and must be retained.

Further, the Nevada Plan only provides for credits to be generated from positive conservation practices carried out on private land that qualifies as Greater Sage Grouse habitat. Since federally managed lands are not included in the program provided by the State of Nevada and the BLM's IM 2018-093 is being applied except on a voluntary basis - what linkage does the Nevada standard have to a BLM land management plan without full adoption of the Nevada Greater Sage Grouse Conservation Plan?

With the changes made by the U.S. Fish and Wildlife Service and their actions to no longer retain "net conservation gain" as a standard - what does Nevada's Plan, that hasn't been incorporated in land use plans as a whole, have to do with anything related to BLM's land management plans?

EPA recommends that the Final ETS explain how the impacts of a proposed project and any pursuant compensatory mitigation would be quantified on BLM administered lands in California in the event the State of California does not adopt the State of Nevada's HQT.

Prioritization for Field Checks BLM utilizes the LUPAs to set monitoring priorities and requirements. This will result in an unobtainable requirement for already stressed workloads for the agency; resulting in noncompliance that is out of the permittees control; and resulting in unwarranted third-party litigation due to failures simply to monitor. Specifically, the GRSG LUPA in (at least) Nevada includes the

following Management Direction that demonstrate these flaws / consequences: Nevada MD LG 11: Allotments within SFA, followed by those within PHMA, and focusing on those containing riparian areas, including wet meadows, will be priorities for field checks to help ensure compliance with the terms and conditions of the grazing permits. Field checks could include monitoring for actual use, utilization and use supervision. Issue #5, Recommendation 17: Any decision from this process would be amend all Plans to remove any elements as related to permitted livestock grazing, and to defer GRSG management to the BLM via continued implementation of 43 C.F.R. Part 4100, subpart 4180. See Issue #2. Issue #5, Recommendation 18: 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 5: DEIS Comments 17, 18: This DEIS at page 2-8 appears to delete MD LG 11 among other Decision numbers, however the document is hard to decipher whether the management alignment alternative just removes SFAs from those items, or deletes them in their entirety. BLM should remove MD LG 11 (and related MDs) in the FEIS, and implement a proposed action in the ROD that adopts the recommendation.

the BLM has failed to provide scientific support for the idea that the Conservation Plans need amending or how the Management Alignment Alternative will aid recovery of the species. Indeed, the 2015 Conservation Plans have not been given adequate time to make any conclusions regarding their efficacy. Amending them prematurely in the way the BLM proposes is dangerous and will harm Nevada and California long-term. The decision to amend plans was blatantly political in nature rather than the result of an identified management or scientific deficiency in the 2015 plans

The BLM should: Maintain a strong "net conservation gain" standard.

Additional details are needed in the Draft RMP Amendment and Draft EIS regarding the 3% disturbance cap for the biologically sensitive units, including how calculations are made. Specifically, the calculation process needs to be clearly defined with specific steps, so the same disturbance calculation results can be reproduced by different parties. Currently, the calculation process is not reproducible. The process needs to be clarified and transparent so the public has a clear understanding of existing and proposed disturbance in each Biologically Significant Unit.

The most current HQT version should be adopted by the BLM as the quantification tool. (Could this be included with the plan maintenance section, along with updating maps and science?) 2 2-11 Mitigation The SETT requests the following language, "would be calculated using the HQT result." to replace the existing language, "calculated using the HQT would be mitigated with the equivalent number of functional acres regardless of mitigation method."

Impacts eliminated over time still need to be addressed with term debits within the CCS. Any impacts not effectively avoided still need to be mitigated for. Language reflecting this view is requested.

A full species assessment should be conducted including but not limited to fish, mammals, birds other than sage-grouse, reptiles, and important native plants that could be adversely impacted.

#### **G.4.20 Greater Sage-Grouse**

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

DRMP/EIS must clearly state the benefits that sage grouse receive when livestock are grazed on the rangelands that provide sage grouse habitat.

A clear description of how severely predation can limit sage hen populations should be included by the DRMP/EIS especially the effect on nest success and brood rearing. It is well documented that ravens, coyotes, bobcats, and other predators can greatly reduce the reproductive success and survival of sage grouse within both grazed and ungrazed rangeland habitats. Studies throughout sage grouse habitat areas indicate that herbaceous cover a.k.a. stubble height or shrub canopy that hides nest sites from biologists have no significant bearing on the rate of depredation. This plan should state that rigorous predator controls are essential if the goal is to have more sage grouse.

LCPD requests flexibility be developed into the three percent disturbance cap to accommodate for clustering proposed projects in areas that are already disturbed, and not restricting them based on the level of current disturbance in the Final RMPA/EIS.

The SEP requests that this DEIS explicitly acknowledge not only the presence of direct impacts, but also the presence of indirect impacts resulting from anthropogenic disturbance inside the SGMA

The SEP is also concerned that inadequate mitigation poses an elevated risk for placement of the GRSG on the endangered species list, and we request this potential listing be expressly considered when Undue or Unnecessary Degradation (UUD) is determined from potential projects.

GRSG population objectives: the federal government has no authority over wildlife management or populations or population objectives. In a letter to Secretary Zinke (8/19/17), Nevada Governor Brian Sandoval objected to Secretary Zinke's proposals to set GRSG population targets for Western states, citing no scientific support for these kinds of proposals. Our Governor stated that GRSG habitat must be managed properly in order to increase numbers and that habitat conservation by federal agencies is the more effective long term solution than a scientifically (and legally) questionable population augmentation approach. Statements on GRSG population objectives should be removed from the draft EIS.

#### **G.4.21 Livestock Grazing**

Instead, as with the proposal for the 13 RNAs, grazing should be incorporated into conservation practices to allow grazing management flexibility. Grazing should be used to assist in achieving conservation strategy, vegetation management, and fire management. BLM should avoid making large areas of public lands off limits to productive land use and this management tool under the guise of "undisturbed baseline reference areas."

BLM should more explicitly recognize that livestock grazing practices complement Sage-Grouse conservation and may improve habitat by sustaining a diversity of plants that are important to Sage-Grouse and by reducing the risk of wildfire that destroys the habitat.

DRMP/EIS must analyze the correlation of the loss of numbers of grazing livestock which in turn leaves vast quantities of vegetation available to burn but does not result in an abundance of sage grouse.

Issue #5: LUPAs Repeatedly Elevate Livestock Grazing to Priority Threat Multiple scientific studies document that livestock grazing and sage-grouse conservation can beneficially co-exist. Top threats to GRSG 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 LUPAs elevated 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 GRSG 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). Our comments below are our best effort of grouping issues that need resolved in any LUPA amendment, with some recommendations on what language should move forward.

We are concerned with how the Sage grouse management plan will impact our grazing on the Bitner BLM permit. When it comes to livestock grazing, we feel that it is better to spread the cattle out across the whole allotment rather than grouping them exclusive to one are of the allotment one year and then to the other part of the allotment another year. Moderate grazing across the entire area reduces the fuel loads for fire season and therefore is protecting the sagebrush habitat from out of control burns with heavy fuel loads.

The LUPA fails to recognize that managed livestock grazing represents an important and cost-effective tool to achieve desired sage-grouse habitat conditions and to reduce wildfires. The livestock grazing restrictions in the LUPA will cause environmental harm because they will continue to increase the volume of highly flammable non-native invasive annual grasses and inevitably lead to more wildfires similar to those we have seen already in 2018. The increased fuels that will result from the economically burdensome and technically ill-advised livestock grazing restrictions in the LUPA will place a burden upon local fire districts and very likely continue to result in destruction of critical GSG habitat. The LUPA will also decrease the level of active management currently provided by ranchers that benefit GSG. When permitted to have livestock on the range, ranchers provide a constant presence to maintain water developments used by wildlife, provide first response to fires, keep a watchful eye, and provide a timely response to situations that may be detrimental to GSG habitat. The LUPA calls for arbitrary and unnecessary grazing restrictions that will force many Nevada ranchers out of business because the forage utilization thresholds in the LUPA are unrealistic and often unattainable based on Ecological Site Descriptions and State and Transition Models.

The livestock grazing objectives in Section 2.6.2 and Table 2-2 of the Final EIS/LUPA are completely inconsistent with the Elko County Plan because they establish prescriptive, range-wide, one-size-fits-all habitat management objectives that apply to the SFA as well as to the PHMA and GHMA. In contrast, the Elko County Plan, like the U.S. Fish and Wildlife Service's 2013 Greater Sage-Grouse Conservation Objectives: Final Report ("COT Report"), explicitly rejects the concept of uniform, range-wide prescriptions for managing the land: "Due to the variability in ecological conditions, species' and threat status, and differing cultural perspectives across the greater sage-grouse range, developing detailed,

prescriptive species or habitat actions is biologically untenable and inappropriate at the range-wide scale." (Elko County Plan, Page 112). Elko County estimates that the inconsistencies between the livestock grazing policies in the 2015 ARMPA compared to the Elko County Plan will cost the county roughly \$31 million per year in lost agricultural productivity using USDA agricultural census data, and interfere with Elko's continuing implementation of its Conservation Plans. The Elko County Plan focuses on reducing threats to greater sage-grouse and its habitat (mainly wildfire, invasive grass species, and predation) while maintaining multiple uses of the land, whereas the 2015 ARMPA focuses on prohibiting and restricting regulated multiple uses (e.g., livestock grazing, mining, recreation, and access) in the SFA, PHMA, and GHMA. These fundamentally different approaches create irreconcilable inconsistencies between the 2015 ARMPA and the Elko County Plan and will interfere with Elko County's Greater SageGrouse habitat conservation programs. The COT Report clearly documents that regulated public land uses are not the main threats to greater sage-grouse habitat and that wildfire followed by the invasion of non-native grass species like cheat grass are the main threats to greater sage-grouse and its habitat. The Elko County Plan focuses on reducing these threats while at the same time adhering to FLPMA multiple use principles. It is thus consistent with federal law and will achieve far superior greater sage-grouse habitat conservation compared to the 2015 ARMPA. Section 6.2 of the Elko County Plan establishes six livestock grazing management objectives to address identified habitat issues with recommended actions. The actions include specific recommendations to restore, preserve, and enhance greater sage-grouse habitat through proper livestock grazing principles that focus on achieving sustainable multiple uses of the land. For example, Management Goal No. 1 states: "manage agriculture and livestock grazing to maintain and enhance conditions necessary for a properly functioning sagebrush community that addresses the long-term needs of agriculture, livestock grazing and greater sage-grouse habitat." Similarly, Management Goal No. 5 says: "Utilize and expand where appropriate existing grazing permits and new grazing permits designed to achieve rangeland health standards, to properly manage grazing and identify opportunities for livestock grazing to be used as a management tool to improve habitat quality and reduce wildfire threats." The multiple use approach and the recognition of the potential synergies between livestock grazing and greater sage-grouse habitat protection, enhancement and restoration in the Elko County Plan are lacking in the LUPA, which will interfere with the Elko County Plan through its limitations on grazing across the rangeland (especially in the SFA). The important synergy between proper livestock grazing and greater sage-grouse habitat restoration, conservation, and enhancement is a key premise of the Elko County Plan. The 2015 ARMPA livestock grazing restrictions interfere with this synergy and Elko County's ability to implement its local land use plans. The federal grazing policies for the past 50 years that have reduced livestock grazing on annual grasses have produced a dangerous build up of flammable fuel comprised mainly of non-native invasive annual grass species. This artificial buildup of flammable annual grasses has resulted in increased range fire frequency and intensity and is the primary cause of greater sage-grouse habitat destruction in Nevada and elsewhere in the Great Basin. The Elko County Plan contains a number of recommended actions that focus on reducing this fuel load with strategic grazing strategies to restore a more fire-resistant, resilient, and diverse vegetation community that will provide greater sage-grouse habitat. The livestock grazing restrictions in the 2015 ARMPA will interfere with this important component of the Elko County Plan and increase the buildup of nonnative grass species and inevitably lead to more frequent and intense wildfires and the future destruction of greater sage-grouse habitat. The inconsistency in livestock grazing policies between the Elko County Plan and the 2015 ARMPA will thwart Elko County's continued implementation of its local land and conservation plans and thus create serious and substantial environmental harm to greater sage-grouse and its habitat in Elko County and throughout Nevada.

"Essentially all rangeland use and value is dependent upon maintenance and enhancement of the primary landscape resources of soils, vegetation, and watersheds. August L. Hormay states that "...all renewable rangeland values stem directly or indirectly from vegetation. Sustained high-level production of these values therefore depends on proper management of the vegetation. The principal tool the rangeland manager has for managing vegetation is livestock grazing. It is the only force under firm control of the manager that can be applied on practically the entire range area....desirable vegetation and the overall productive capacity of rangelands can be increased more rapidly with livestock grazing than without....Livestock can be used to trample seed into the soil thereby promoting more forage and a better soil cover; to remove stifling old growth on plants, thus increasing plant vigor and production of useable herbage; to stimulate adventitious growth and higher quality forage; and to reduce fire hazard." (emphasis added) ("Principles of Rest-Rotation and Multiple-Use Land Management" USFS Training Text No. 4(2200)). Hormay explained that grazing management that is based on the physiological status and phenological development of the plants is the basis for keeping plants healthy and vigorous. Utilization levels have essentially no bearing on the longevity of the plants and very little value in management decisions. The principles of plant physiology as the basis for vegetation management taught by Hormay and other experts are a sound basis for grazing management in Eureka County. Eureka County natural resource strategy includes management based on the renewable nature of Eureka County's vegetation resources" (p. 6-14). o The DEIS actions for grazing are not based on this concept and grazing is generally disregarded as probably the best tool available for BLM to manage GRSG habitat to meet resource objectives while also stabilizing local economies and the industry uses of the land.

"Where monitoring history, actual use or authorization of Temporary Non-renewable grazing (TNR) demonstrates that supplemental use is continuously available, and can or should be used to improve or protect rangelands (e.g., reduction of fuel loads to prevent recurring wildfire), initiate a process to allocate such use to permittees as active grazing preference; Authorize use of supplemental forage during those years when climatic conditions result in additional availability" (p. 6-15). o The DEIS fails to acknowledge or implement a process for TNR or access to additional forage and conversion to active grazing preference if the criteria in our Plan is met.

The BLM is not accounting for indirect impacts of mining and oil extraction such as new roads, structures, buildings, and noise pollution; all of which are known to change Sage-Grouse habitat use patterns.

In coordination with federal agencies and state and local government planning agencies and in cooperation with interested members of the public, develop a land management mineral classification plan to evaluate, classify and inventory the potential for locatable mineral, oil, gas and geothermal, and material mineral exploration or development, to insure that lands shall remain open and available unless withdrawn by Congress or federal administrative action. To the extent practicable, land with high mineral or oil and gas values shall remain open for economic use" (p. 6-29). o This coordination and process has not occurred and was not included in the DEIS.

#### **G.4.22 Lands and Realty**

Although the disturbance cap language includes a "subject to" clause regarding the Mining Law and valid existing rights, it is unclear whether these disturbance caps preclude other disturbances that are reasonably incident to mining, such as roads, power lines, and other vertical structures. See 30 U.S.C. § 612. Thus, the BLM should remove the disturbance caps or, at the very least, clarify that the disturbance



caps do not apply to any land except BLM land and locatable mineral related disturbances should be exempt.

#### **G.4.23 Socioeconomics**

\* Increase PILT payments to offset economic impacts to local governments, Counties and States to offset loss of production from withdrawn lands: An increase in Payments in Lieu of Taxes (PILT) should be considered for loss of revenue to government entities. An increase in PILT could be directly equated to possible revenues generated from lands impacted by proposed withdrawals or restrictions. In this manner, the weight of the proposed actions are more evenly distributed rather than falling on the shoulders of the few.

1- Incorporate New Technology: The use of new technology is recommended to enhance sage-grouse recovery. Drone surveillance of leks is suggested.

2- Using drones is also an option for reseeded and restoration of recent burn areas.

3- Instigate an early warning system for dry lightning weather systems.

4- Have on-the-ground fire fighting resources ready to deploy to areas at risk.

\* National security concerns should be incorporated into any future EIS.

Conduct a detailed analysis of the impact of any proposed sage-grouse regulations on the existing economies in the counties affected, and recommend mitigation for undermining these economies

DRMP/EIS should put forth an analysis of economic effects that will include the direct result of regulatory decisions that prevent ranches such as ours from accessing and using our existing property rights within federally controlled lands. DRMP/EIS economic analysis must also recognize and quantify the value of our investment backed expectations.

The liability for costs of Takings of property must be included in any economic analysis of DRMP/EIS.

DRMP/EIS should complete an analysis of economic effects that will be the result of special treatment of sage grouse to the exclusion of other land uses

Sage-Grouse habitat would suffer from the environmental impacts associated with increased mining activity, but local communities would see little economic benefit. Since the Management Alignment Alternative amendments increase the likelihood of a listing for the species, the long-term economic impacts and regulatory burdens associated with a species listing would drastically outweigh the short-term economic benefits of a small increase in a largely non-permanent labor force.

Based on WEX's many years of professional experience working in mineral exploration and mining, the company believes that its new Gravel Creek discovery could be developed as an underground gold mine that could produce on the order of 2 million ounces of gold and 60 million ounces of silver over a period of 15 to 20 years. The FEIS did not contain an adequate socioeconomic analysis of the jeopardy to WEX and other mining companies - and WEX appreciates the inclusion of the proposed mineral withdrawal DEIS as part of the record on the SEIS to provide some of this information that must be included and considered to reasonably evaluate impacts of restricting such development - both to WEX and to local, state and our national communities.

EXECUTIVE SUMMARY ES-4 ES-9 through ES-11 Table ES-4 NCA asserts that the socioeconomic impacts analysis was never adequately completed for the 2015 ARMPA and by extension for the No Action Alternative. The analysis failed to calculate a detailed economic and fiscal impacts to counties, among other flaws. The University of Nevada, Reno has begun working on a Socioeconomic Baseline Data collection process for the entire State, and as part of that process will be performing a socioeconomic as well as fiscal impacts analysis for the greater sage-grouse plans. These models and the analysis will be conducted irrespective of the BLM's timeline and will not likely be completed during this process. NCA requests that the BLM work with UNR during this analysis.

3 3-9 P 1 & 2 The lack of adequate socioeconomic analysis from the 2015 ARMPA jeopardizes this process and all decisions in the future. The 2015 Land Use Plan Amendment did not quantify the social or economic effects of actions that impact these industries directly or detailed economic and fiscal impacts to counties, among other flaws, failing to rely upon the best available information. This analysis needs to be completed due to its importance.

Chapter 4 4.4 4-10 P 4 What about incomplete information regarding socioeconomics?

ES-4 ES-9 through ES-11 Table ES-4 Counties still assert that the socioeconomic impacts analysis was never adequately completed for the 2015 ARMPA and by extension for the No Action Alternative. The analysis failed to calculate a detailed economic and fiscal impacts to counties, among other flaws. The University of Nevada, Reno has begun working on a Socioeconomic Baseline Data collection process for the entire State, and as part of that process will be performing a socioeconomic as well as fiscal impacts analysis for the greater sage-grouse plans. These models and the analysis will be conducted irrespective of the BLM's timeline and will not likely be completed during this process. Counties request that the BLM work with UNR during this analysis.

3 3-9 P 1 & 2 The lack of adequate socioeconomic analysis from the 2015 ARMPA jeopardizes this process and all decisions in the future. Despite the fact that NACO and others made critical economic impact information available to the BLM through locally sourced data and reports, the 2015 Land Use Plan Amendment did not quantify the social or economic effects of actions that impact these industries directly or detailed economic and fiscal impacts to counties, among other flaws, failing to rely upon the best available information. This analysis needs to be completed due to its importance.

4.4 4-10 P 4 What about incomplete information regarding socioeconomics?

4 4-16 through 17 28 The lack of adequate socioeconomic analysis from the 2015 ARMPA jeopardizes this process and all decisions in the future. The BLM opted to conduct a qualitative analysis, despite the fact that NACO represented counties made critical economic impact information available to the BLM through locally sourced data and reports, the 2015 Land Use Plan Amendment did not quantify the social or economic effects of actions that impact these industries directly or detailed economic and fiscal impacts to counties, among other flaws, failing to rely upon the best available information. This analysis needs to be completed due to its importance.

ES-4 ES-9 through ES-11 Table ES-4 The socioeconomic impacts analysis was never adequately completed for the 2015 ARMPA and by extension for the No Action Alternative. The analysis failed to calculate a detailed economic and fiscal impacts to counties, among other flaws. The University of Nevada, Reno has begun working on a Socioeconomic Baseline Data collection process for the entire

State, and as part of that process will be performing a socioeconomic as well as fiscal impacts analysis for the greater sage-grouse plans. These models and the analysis will be conducted irrespective of the BLM's timeline and will not likely be completed during this process. Counties request that the BLM work with UNR during this analysis. The EIS needs to make it clear that this analysis is only focused on SFA changes. As it reads now, it makes it look like the Management Alignment Alternative would somehow facilitate mining activity. Mining activity would not increase in most of the state under the Management Alignment Alternative.

3 3-9 P 1 & 2 The lack of adequate socioeconomic analysis from the 2015 ARMPA jeopardizes this process and all decisions in the future. Despite the fact that Eureka County and others made critical Page 36 of 89 economic impact information available to the BLM through locally sourced data and reports, the 2015 Land Use Plan Amendment did not quantify the social or economic effects of actions that impact these industries directly or detailed economic and fiscal impacts to counties, among other flaws, failing to rely upon the best available information. This analysis needs to be completed due to its importance.

4.4 4-10 P 4 What about incomplete information regarding socioeconomics? Adding a bullet regarding the lack of quantifiable social or economic effects specific to counties, such as Eureka County, would be appropriate to add.

Hard triggers are an unreasonable burden on the economic security of Nye County as well as other Nevada counties. Soft triggers should be implemented only when absolutely necessary, considering all factors.

Wild horses and burros should be eliminated from sage-grouse habitat. The non-native wild horses and burros are not compatible with the limited resources and economic priorities of Nevada

#### **G.4.24 Vegetation**

In the EIS, Modifying Habitat Objectives is of great concern in that vegetation objectives may not be achievable across all ecological sites in sub-regions of the Great Basin. The landscape should be managed to provide a diversity of vegetation and composition at multiple scales. The work of Stringham and Snyder, 2017 should be considered, incorporated and referenced. Additionally, vegetation management criteria should be revised to provide for practices to achieve desired outcomes for rangeland health and greater sage grouse habitat. The recent Martin Fire in north central Nevada is an excellent example where fuel loads may have been reduced through a system of closely monitored and selective grazing. The BLM should look to a flexible system of vegetation management not tied to across the board habitat criteria, while allowing for timely grazing decision making.

During the past three years FIM Corporation in conjunction with Natural Resources Conservation Service (NRCS) and Bureau of Land Management (BLM) has removed conifers (pinyon-juniper) from over 1000 acres. We have found that the measured water flows from springs has increased and in fact doubled in volume. Furthermore, understory herbaceous vegetation has increased and understory shrubs including sagebrush have increased in apparent vigor and production. Numbers of sage grouse in the vicinity of these treatments has also increased. DRMP/EIS should endorse these treatments as beneficial to wildlife including sage grouse.

The County would like to remind the public land management agencies that wildfire and altered fire behavior / fire cycles due to annual invasive species such as cheatgrass remain the top threat to Sage-grouse in Nevada. This point has never been clearer than on the heels of the Martin Fire that burned over 435,000 acres in five days (223,000 acres on July 7 alone), including 433,000+ acres of mapped Sage-grouse habitat, much of which is in Humboldt County. While the fire was driven by a combination of topography and severe fire conditions, extremely high fine fuel loads (reported via Inciweb on July 7 as over 200% of normal cheatgrass) contributed to the rapid fire spread and ineffectiveness of traditional fire suppression techniques. This highlights the County's concern of over-regulation of livestock grazing and a continual reduction in grazing (as measured in Animal Unit Months, AUMs) since the 1970s, resulting in build-up of fine fuels, particularly in years with above average winter and spring precipitation. The inability of the BLM to respond in real-time to such fuel loads, and provide added flexibility and effectiveness for the most cost-effective pre-suppression tool (managed grazing) continues to concern the County. As such, the County urges the BLM to incorporate new management actions that allow increased grazing of fine fuels, particularly when fuel loading is high, as a means of wildfire pre-suppression. The County supports the implementation of any and all tools (Programmatic EIS Analysis, Allotment Management Plans, Temporary Non-Renewable Grazing Authorizations, Outcome Based Grazing, etc.) to ensure more effective use of grazing as a fuels reduction method. Until this happens, the County foresees similar outcomes to the Martin Fire. To that end, the County has attached an Article in Press titled Viewpoint: An Alternative Management Paradigm for Plant Communities Affected by Invasive Annual Grass in the Intermountain West. This article was developed by some of the most respected and experienced Range Management Professionals in the Great Basin, and the County fully supports their proposed 'Fuels Management Approach'.

#### **G.4.25 Travel and Transportation Management**

**Travel Management Seasonal and Spatial Restrictions** As discussed in Section IX, VERs granted by the U.S. Mining Law at 30 U.S.C. § 22 and FLPMA at 43 U.S.C. § 1732(b) provide rights of ingress and egress for the purpose of exploring for or developing minerals. The travel management restrictions and seasonal and spatial use and occupancy constraints in the GSG LUPs cannot substantially interfere with these ingress and egress rights. Consequently, the travel restrictions applicable to PHMA and GHMA shown on Figure 2-13b cannot apply to travel that is necessary for mineral purposes under the U.S. Mining Law. The 2018 FEIS and LUP need to make it clear that the restrictions shown on Figure 2-13b cannot be applied as 24/7 access restrictions precluding travel that is necessary for mineral exploration and development. On a project- and site-specific basis, certain time of day or seasonal restrictions of a limited duration may be appropriate. However, these restrictions cannot create significant barriers to mineral activities.

**Does Not Allow for Administrative Use Under Travel Management** It is critical that permittees have the ability to have administrative use of off-road vehicles for livestock management and improvement maintenance. Permittees are legally required by the grazing regulations and by their Grazing Permits to manage their livestock and to maintain their range improvements. Permittees need access to do both, and LUPA are hindering that ability. Specifically, the GRS LUPA in (at least) Nevada includes the following Management Direction, which demonstrates these flaws / consequences: Nevada MD TTM: none of the TTM management decisions specifically allow for administrative or permittee access. Issue #7, Recommendation 25: LUPA should provide flexibility for manager discretion for off road vehicle use in order to manage range improvements and livestock. Travel restrictions should not impact the ability of permittees to access and manage allotments and livestock. Issue 7: DEIS Comment 25: The DEIS at

page ES-3 seems to suggest that "comprehensive travel management" is addressed (see also DEIS, Table ES-2; DEIS at page ES-11; ) but the DEIS simply carries forward the management action from the 2015 ARMPA, as shown at the DEIS at Table 2-1 at page 2-5. However, all of this omits any discussion in the DEIS as to the issue and recommendation address above. It is critical that BLM consider and analyze this issue in the FEIS, and implement a proposed action in the ROD that adopts the recommendation.

The County is greatly concerned with the Winnemucca District BLM's Travel Management Plan, particularly due to the BLM's reliance on incomplete habitat mapping in the 2015 LUP. Travel restrictions interfere with the County's key responsibilities, including road maintenance, landfill plans, pipelines, and necessary local and state travel. The restrictions also prevent expansion in a manner that is entirely inconsistent with the County's development goals. This includes limiting industrial areas to those currently identified in the Master Plan, curtailing or disallowing public land disposals, and restricting the expansion of regional landfill to meet County growth predictions. The travel restrictions leave question for possible interference with use by closing or restricting access on numerous roads. The BLM should clarify that existing County roads (including those within RS 2477 rights-of-way) will not be restricted and this issue should also be addressed in the DEIS, as well as the current Travel Management Plan. This issue impacts the County's ability to build, monitor, and maintain roads, as well as its required access to public and private lands, as well as private inholdings including water rights. In addition, maintaining access to public lands is critical to managing fuels (invasive/noxious species) and fires by utilizing / implementing all means and tools available (i.e. managed grazing of both public and private lands).

#### **G.4.26 Renewable Energy**

Removing these Lithium deposits from potential use means severely hampering the nation's ability to generate a "green economy" and address major concerns such as climate change.

#### **G.4.27 Cumulative Impacts**

Also, the DEIS does not conduct an adequate cumulative effects analysis, given new information is available and habitat has been lost since the analysis using 2013 data, rendering the cumulative effects analysis in the no action alternative inappropriate and in violation of NEPA.

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 EIS 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.* § 1508.25(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 amendment meets the cumulative effects analysis requirement that is needed now. See NV/CA Draft EIS at 4-19 ("This RMPA/EIS incorporates by reference the analysis in the 2015 Final EIS and the 2016 SFA Withdrawal Draft EIS, which comprehensively analyzed the cumulative impacts associated with these planning decisions under consideration in that process."). 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 plan cannot "incorporate[ ] by reference the analysis in the 2014 and 2015 Final EISs and the 2016 Draft Sagebrush Focal Area Withdrawal EIS. . . ." NV/CA Draft EIS at 4-19. 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 EIS differs from that of the 2015 EIS, which underscores why neither tiering nor incorporation by reference is appropriate. Secondly, in the Draft RMPA/EIS, the BLM lists a number of projects that it claims reflect the cumulative effects impacts that are applicable here. NV/CA Draft EIS 4-23-25. But this list of projects fails to incorporate many relevant projects that should be considered in the cumulative effects analysis. For example, while BLM discloses that it approved several mining projects between 2015 and 2017, it does not provide any information on new claims filed in habitat areas, including in SFAs following cancellation of the SFA Withdrawal EIS. NV/CA Draft EIS at 4-24. In addition, while in Nevada (and the other states), unspecified oil and gas lease sales are mentioned, see NV/CA Draft EIS at 4-25, the list is not detailed, and it is not apparent that it includes the quarterly sales scheduled for September and December 2018. 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/eplfrontoffice/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 Table 4-5 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. Finally, the BLM must account for any newly identified cumulative impacts. This includes the Martin Fire, which started in early July 2018 and burned more than 400,000 acres in northern Nevada. According to media reports, the Martin Fire "is the single largest fire that has burned in Nevada." Nevada Independent, "'It's gone, it's gone!' Nation's largest wildfire in Nevada devastates ranches, sage grouse" (July 12, 2018), available at <https://thenevadaindependent.com/article/its-gone-its-gone-nations-largest-wildfire-in-nevada-devastates-ranches-sage-grouse>. The impacts of the fire could be significant, since "[t]he vast majority of the fire burned in sensitive habitat for sage-grouse . . . the blaze is likely to be a setback for sustaining habitat for the bird." *Id.* 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](https://ceq.doe.gov/docs/ceq-regulations-andguidance/regs/Guidance_on_CE.pdf). This means the BLM must consider what the impacts of implementing (and not 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.

This statement needs to offer more clarity, and the SETT requests clear articulation that what cannot be rectified through reclamation would represent a permanent disturbance within the State's Conservation Credit System and permanent debits would need to be sourced.

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# Appendix H

## Cumulative Effects Supporting Information



# Appendix H. Cumulative Effects Supporting Information

## H.1 RANGEWIDE IMPACTS FROM PAST, PRESENT, AND REASONABLY FORESEEABLE ACTIONS

**Table I** 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 RMPA/EIS 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 I**  
**Rangewide Impacts from Past, Present, and Reasonably Foreseeable Actions**

Action	Type	Effects
<b>Great Basin</b>		
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.
<b>Northwest Colorado</b>		
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.

**Table I**  
**Rangewide Impacts from Past, Present, and Reasonably Foreseeable Actions**

<b>Action</b>	<b>Type</b>	<b>Effects</b>
Continued oil and gas development	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	
<b>Idaho</b>		
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.

**Table I**  
**Rangewide Impacts from Past, Present, and Reasonably Foreseeable Actions**

<b>Action</b>	<b>Type</b>	<b>Effects</b>
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.
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	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: Future 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.
<b>Nevada and Northeast California</b>		
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.

**Table I**  
**Rangewide Impacts from Past, Present, and Reasonably Foreseeable Actions**

<b>Action</b>	<b>Type</b>	<b>Effects</b>
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.
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.

**Table I**  
**Rangewide Impacts from Past, Present, and Reasonably Foreseeable Actions**

<b>Action</b>	<b>Type</b>	<b>Effects</b>
Geothermal	BLM: Past and Present	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.  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.
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.
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.
<b>Oregon</b>		
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).

**Table I**  
**Rangewide Impacts from Past, Present, and Reasonably Foreseeable Actions**

<b>Action</b>	<b>Type</b>	<b>Effects</b>
Trout Creek Mountain	Grazing permit renewal	Grazing permit renewal allotment includes the East Fork Trout Creek Research Natural Area (2016).
<b>Utah</b>		
<b>Fire and Fuels</b>		
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.
Fire Restoration (Emergency Stabilization and Rehabilitation)	Acres of habitat restoration following wildland fires	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.  Effect: Potentially improve or increase habitat due to vegetative restoration activities.
<b>Vegetation</b>		
Habitat Treatments	Acres of habitat improvement projects	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.  Effect: Potentially improve or increase habitat due to vegetative restoration activities.  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.  Effect: Potentially improve or increase habitat due to vegetative restoration activities.



**Table I**  
**Rangewide Impacts from Past, Present, and Reasonably Foreseeable Actions**

Action	Type	Effects
<b>Lands and Realty</b>		
Land Use and Realty (issued and pending) 2015-2018	ROWs issued or pending on BLM land	<p>Past: 841 ROWs were issued in the planning area between 2015 and 2017.</p> <p>Effect: 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.</p> <p>Future: 380 ROW applications are pending review and analysis.</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>

**Table I**  
**Rangewide Impacts from Past, Present, and Reasonably Foreseeable Actions**

<b>Action</b>	<b>Type</b>	<b>Effects</b>
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 the Uintah 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>
<b>Leasable Minerals (Oil and Gas, Non-energy Leasable Minerals, Coal, and Oil Shale and Tar Sands)</b>		
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.</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 until a decision is made on this RMPA/EIS.</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>

**Table I**  
**Rangewide Impacts from Past, Present, and Reasonably Foreseeable Actions**

<b>Action</b>	<b>Type</b>	<b>Effects</b>
Oil and Gas Wells	Oil and Gas exploration and development	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.  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.
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	Still in planning and NEPA stages – could impact the Uintah population.  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.
Flat Canyon Coal Lease by application	The Flat Canyon Coal Lease Tract is approximately 2,692 acres of federal coal reserves	Forest Service completed the consent to BLM. Approximately 23 acres out of the 2,692 acres are within the Emery Population Area.  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.

**Table I**  
**Rangewide Impacts from Past, Present, and Reasonably Foreseeable Actions**

<b>Action</b>	<b>Type</b>	<b>Effects</b>
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. Lease and development of the mine still pending – could impact 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.</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: 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>
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>

**Table I**  
**Rangewide Impacts from Past, Present, and Reasonably Foreseeable Actions**

<b>Action</b>	<b>Type</b>	<b>Effects</b>
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 area 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>
<b>Other Items</b>		
Hard Rock Prospecting Permits being considered on Bankhead Jones	Hard rock exploration permits	<p>Pending Consideration for this area in the Sheepprocks 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>

**Table I**  
**Rangewide Impacts from Past, Present, and Reasonably Foreseeable Actions**

<b>Action</b>	<b>Type</b>	<b>Effects</b>
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>
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>Draft EIS issued in August 2018. Still in planning stages for this area that overlaps the Panguitch population.</p> <p>Effect: This action would provide a framework to manage both the remaining monument areas and the areas no longer within the monument boundaries. It is too early in the process to determine a cumulative effect since the proposed plan is unknown.</p>

**Table I**  
**Rangewide Impacts from Past, Present, and Reasonably Foreseeable Actions**

<b>Action</b>	<b>Type</b>	<b>Effects</b>
Forest Service Sage-Grouse Planning	Forest Service and Utah Division of Wildlife Resources	<p>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. 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>
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 Sage-Grouse Management Areas (SGMA), there was no established approach to implement that mitigation process to the State’s 11 SGMAs.</p> <p>Effect: The plan establishes 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 is updating their Greater Sage-Grouse plan and 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 will also provide an opportunity for economic development to occur while offsetting the impacts to habitat quality.</p>

**Table I**  
**Rangewide Impacts from Past, Present, and Reasonably Foreseeable Actions**

<b>Action</b>	<b>Type</b>	<b>Effects</b>
<b>Wyoming</b>		
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.
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 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.
Oil and Gas	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. The actions in the Proposed Plan to not propose to change stipulations analyzed in the 2014 and 2015 plans.



**Table I**  
**Rangewide Impacts from Past, Present, and Reasonably Foreseeable Actions**

<b>Action</b>	<b>Type</b>	<b>Effects</b>
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 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 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 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.

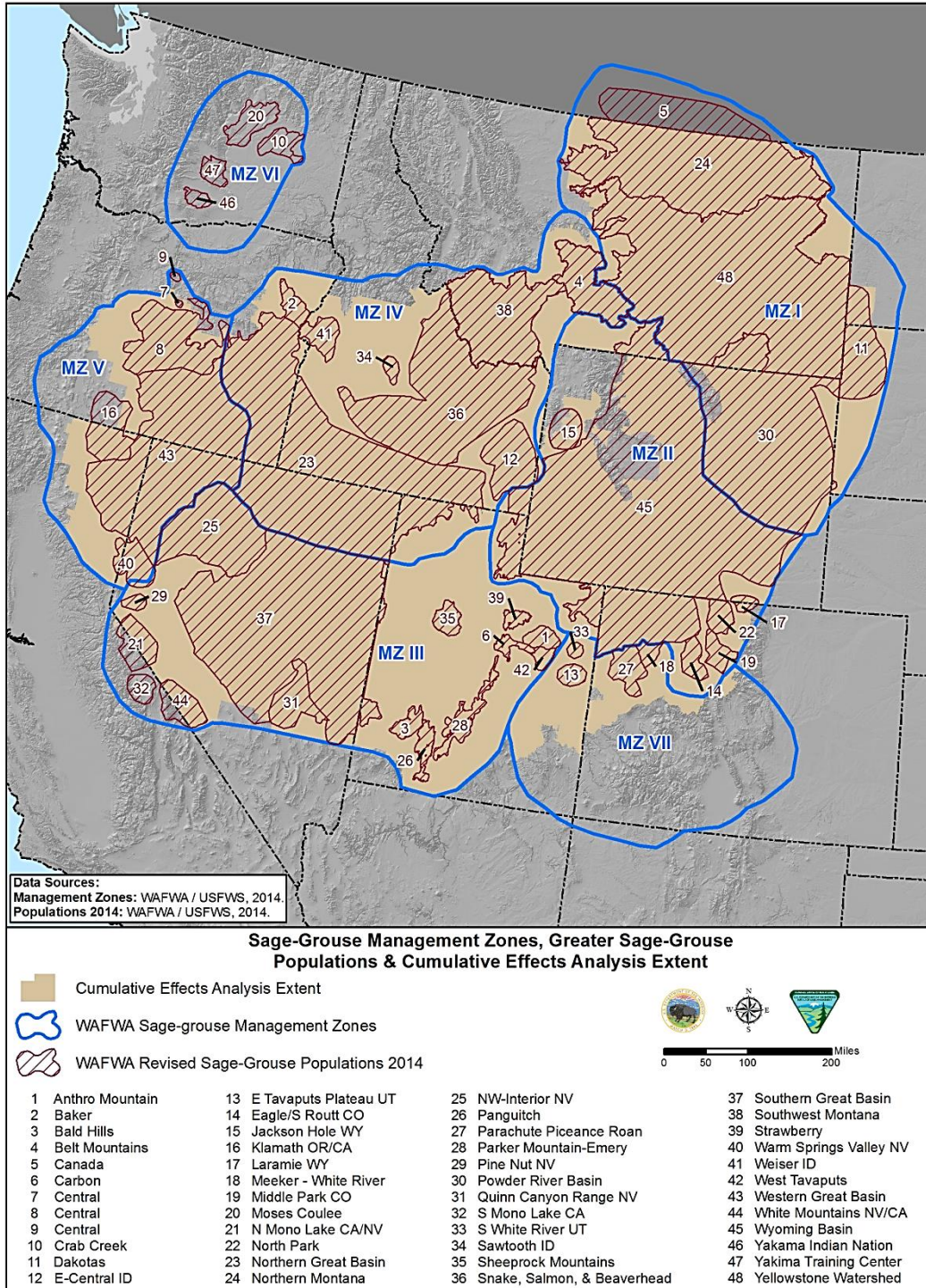
## H.2 CUMULATIVE EFFECTS ANALYSIS – HABITAT AND ALLOCATION DECISION SUMMARIES FOR THE NO-ACTION AND PROPOSED PLAN AMENDMENT ALTERNATIVES BY MANAGEMENT ZONE

Data representing the final plan allocation decisions and habitat delineations collected by the BLM upon the completion of the 2015 planning process have 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 Proposed RMPAs/Final EISs, which were then used in the comparative analysis. Decision data are summarized by habitat type within each Management Zone (MZ) (see **Figure 1**) and are presented in this appendix in both approximate acreage of BLM-administered lands within each habitat designation as well as percent of BLM-administered 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. The 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 1, detailing which areas did not provide data for analysis. In these cases, summaries reflect submitted data only. All figures and tables are intended for MZ 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	N	Y	N – Bighorn Basin
Land Tenure	Y	Y	Y	Y	N	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	N	Y	N – Bighorn Basin, Buffalo, Wyoming (9-Plan)
Fluid Mineral Leasing (Oil & Gas)	Y	Y	N - Lewistown	Y	N	Y	Y
Rights-of-Ways	Y	Y	Y	Y	N	Y	Y
Salable-Mineral Materials Disposals	Y	Y	Y	Y	N	Y	Y
Solar Energy	Y	Y	Y	Y	N	Y	N – Bighorn Basin, Buffalo, Lander, Wyoming (9-Plan)
Trails and Travel Management	Y	Y	Y	Y	N	Y	Y
Wind Energy	Y	Y	Y	Y	N	Y	Y



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

**H.2.1 Management Zone I – Wyoming, Montana, North Dakota, South Dakota**

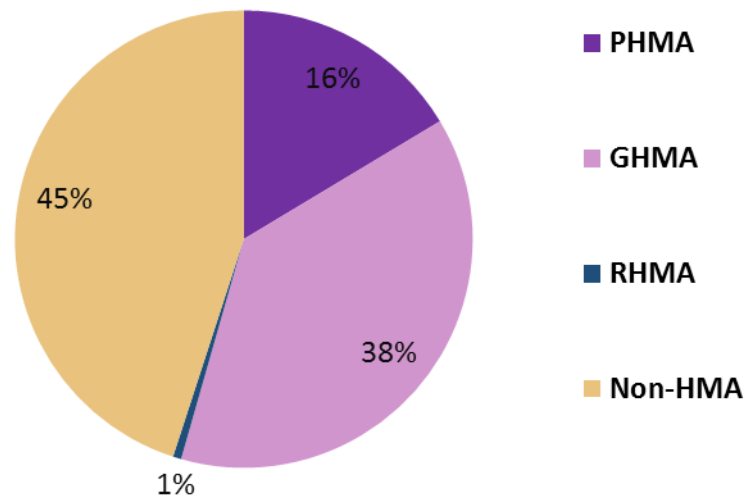
**I. Habitat Management**

**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 <sup>1</sup>	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.

<sup>1</sup> Restoration Habitat Management Area (RHMA)

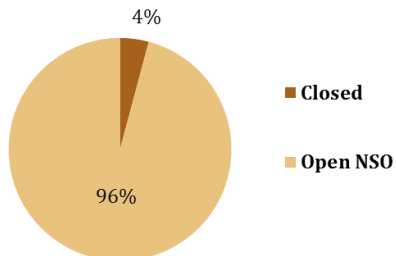
## II. Geothermal Energy

**Table 4 – Geothermal Energy Decisions within MZ I**

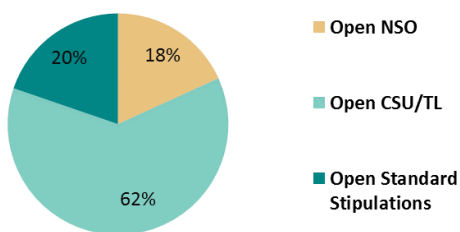
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding.  
<sup>1</sup> Data not available for portions of MT and WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes 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.

<b>Approximate Acres of Geothermal Decisions<sup>1</sup> in MZ I by Habitat Management Area Type</b>					
<b>Geothermal Energy</b>	<b>No Action &amp; Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	86,000	0	NA	86,000	<b>172,000</b>
Open NSO	1,988,000	130,000	NA	230,000	<b>2,349,000</b>
Open CSU/TL	0	443,000	NA	1,071,000	<b>1,514,000</b>
Open Standard Stipulations	0	141,000	NA	372,000	<b>514,000</b>
<b>Total</b>	<b>2,074,000</b>	<b>714,000</b>	<b>NA</b>	<b>1,760,000</b>	<b>4,548,000</b>
<b>Approximate % of Habitat Management Area by Geothermal Decision<sup>1</sup> within Habitat in MZ I</b>					
<b>Geothermal Energy</b>	<b>No Action &amp; Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	4%	0%	NA	5%	<b>4%</b>
Open NSO	96%	18%	NA	13%	<b>52%</b>
Open CSU/TL	0%	62%	NA	61%	<b>33%</b>
Open Standard Stipulations	0%	20%	NA	21%	<b>11%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>

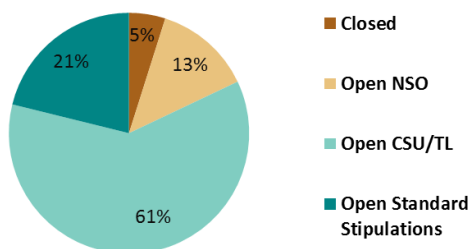
**No Action & Management Alignment - PHMA - Geothermal Energy**



**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. <sup>1</sup> 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**

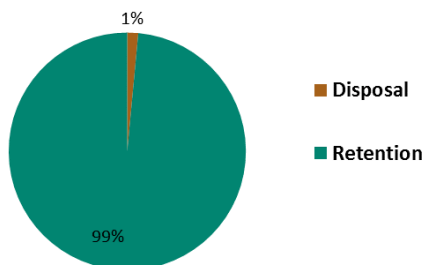
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual 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
<b>Total</b>	<b>3,308,000</b>	<b>3,164,000</b>	<b>159,000</b>	<b>1,681,000</b>	<b>8,312,000</b>

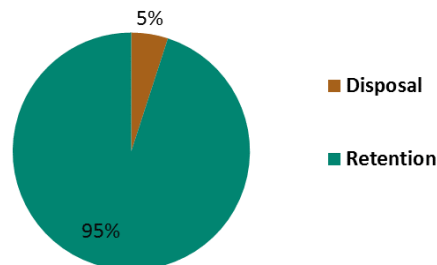
  

Approximate % of Habitat Management Area by Land Tenure Decision within Habitat in MZ I					
Land Tenure	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Disposal	1%	5%	0%	9%	4%
Retention	99%	95%	100%	91%	96%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

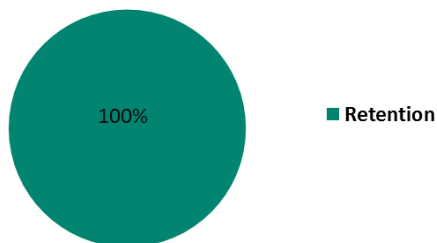
No Action & Management Alignment - PHMA - Land Tenure



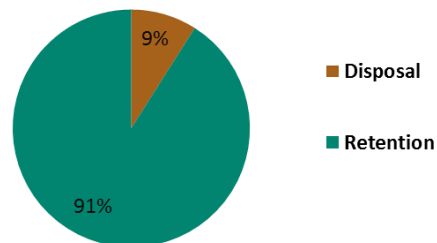
No Action & Management Alignment - GHMA - Land Tenure



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**

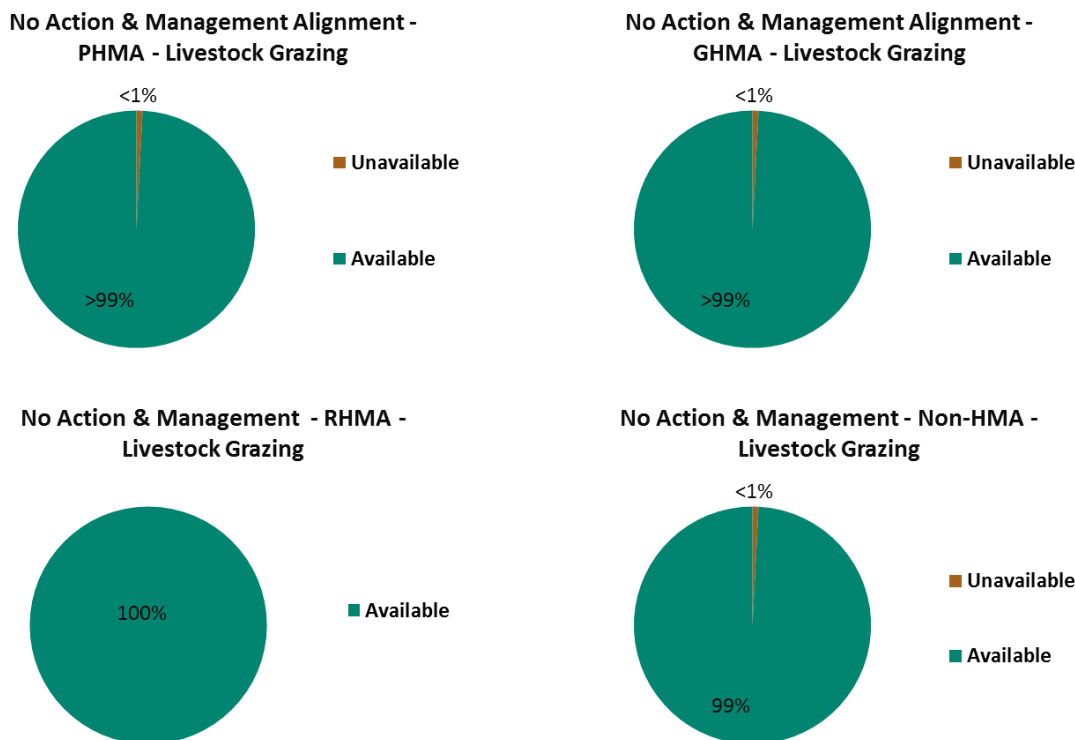
**Table 6 – Livestock Grazing Decisions within MZ I**

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
<b>Total</b>	<b>3,306,000</b>	<b>3,194,000</b>	<b>158,000</b>	<b>1,644,000</b>	<b>8,302,000</b>

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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**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.

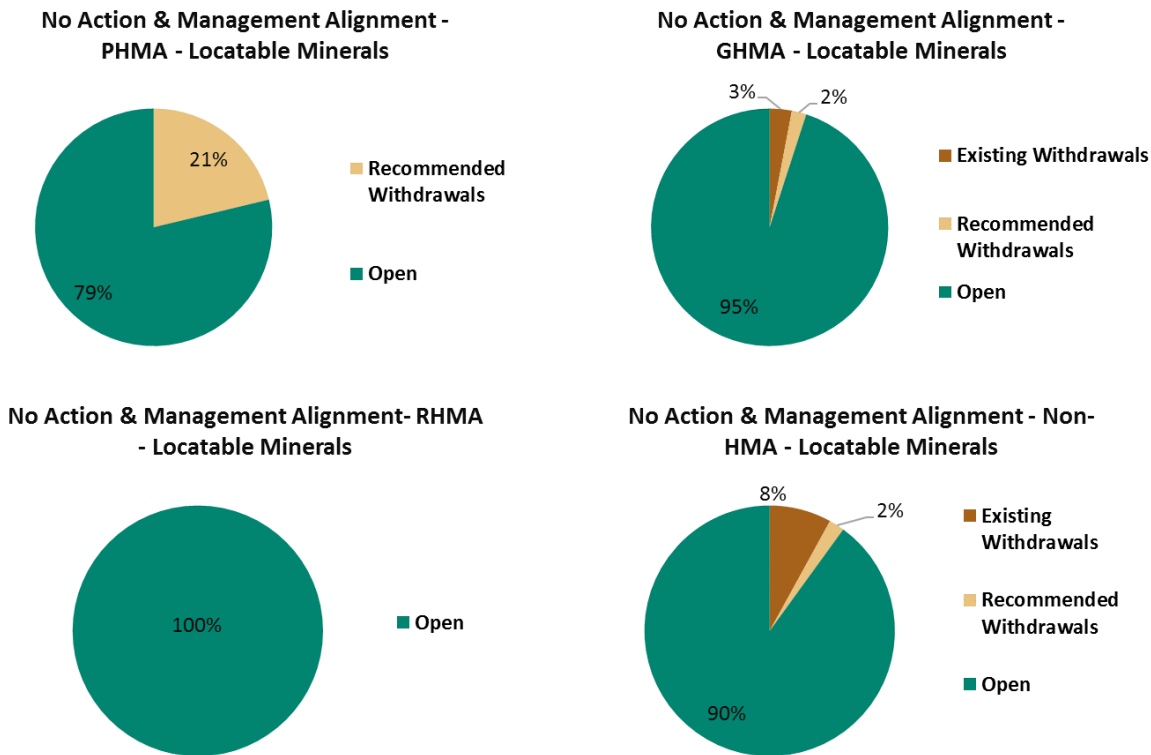


## V. Locatable Minerals

**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. <sup>2</sup> MT Recommended Withdrawals Decisions in PHMA will be removed via plan maintenance.

<b>Approximate Acres of Locatable Minerals Decisions<sup>2</sup> in MZ I by Habitat Management Area Type</b>					
<b>Geothermal Energy</b>	<b>No Action &amp; Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Existing Withdrawals	22,000	203,000	0	240,000	<b>465,000</b>
Recommended Withdrawals	1,094,000	166,000	0	46,000	<b>1,306,000</b>
Open	4,053,000	7,132,000	164,000	2,688,000	<b>14,037,000</b>
<b>Total</b>	<b>5,169,000</b>	<b>7,501,000</b>	<b>165,000</b>	<b>2,974,000</b>	<b>15,808,000</b>
<b>Approximate % of Habitat Management Area by Locatable Minerals Decisions<sup>2</sup> within Habitat in MZ I</b>					
<b>Geothermal Energy</b>	<b>No Action &amp; Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Existing Withdrawals	<1%	3%	<1%	8%	<b>3%</b>
Recommended Withdrawals	21%	2%	0%	2%	<b>8%</b>
Open	79%	95%	100%	90%	<b>89%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**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. <sup>2</sup> MT Recommended Withdrawals Decisions in PHMA will be removed via plan maintenance.

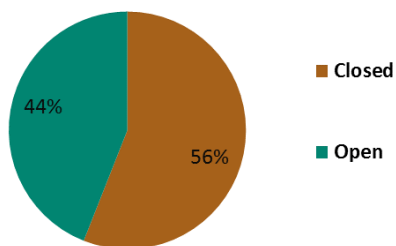
## VI. Non-Energy Leasable Minerals

**Table 8 – Non-Energy Leasable Minerals Decisions within MZ I**

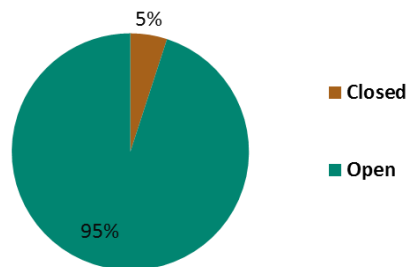
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding.  
<sup>3</sup> Data not available for portions of MT and WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes 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.

<b>Approximate Acres of Non-Energy Leasable Minerals<sup>3</sup> Decisions in MZ I by Habitat Management Area Type</b>					
<b>Livestock Grazing</b>	<b>No Action &amp; Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	2,432,000	296,000	NA	355,000	<b>3,083,000</b>
Open	1,900,000	6,205,000	NA	2,463,000	<b>10,568,000</b>
<b>Total</b>	<b>4,332,000</b>	<b>6,501,000</b>	<b>NA</b>	<b>2,818,000</b>	<b>13,651,000</b>
<b>Approximate % of Habitat Management Area by Non-Energy Leasable Minerals<sup>3</sup> Decision within Habitat in MZ I</b>					
<b>Livestock Grazing</b>	<b>No Action &amp; Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	56%	5%	NA	13%	<b>23%</b>
Open	44%	95%	NA	87%	<b>77%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>

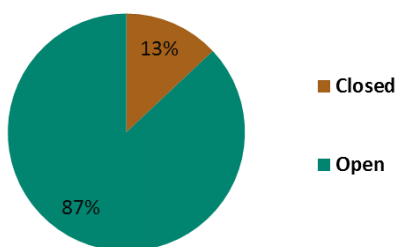
No Action & Management Alignment- PHMA  
- Non-Energy Leasable Minerals



No Action & Management Alignment -  
GHMA - Non-Energy Leasable Minerals



No Action & Management Alignment - Non-  
HMA - Non-Energy Leasable Minerals



**Figure 7 – Non-Energy Leasable Minerals Decisions within MZ I**

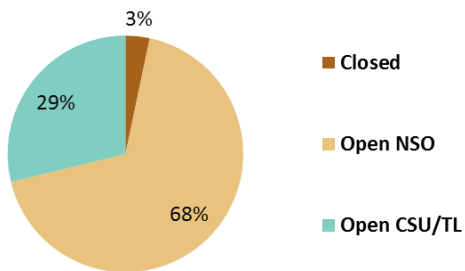
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. <sup>3</sup> Data not available for portions of MT and WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. 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**

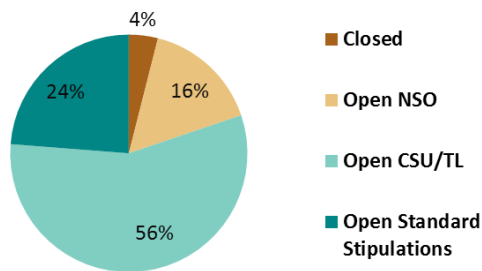
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. <sup>4</sup>Data not available for portions of MT. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. 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.

<b>Approximate Acres of Fluid Minerals (Oil a&amp; Gas) Decisions<sup>4</sup> in MZ I by Habitat Management Area Type</b>					
<b>Fluid Minerals (Oil and Gas)</b>	<b>No Action &amp; Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	196,000	328,000	0	346,000	<b>870,000</b>
Open NSO	3,730,000	1,485,000	228,000	406,000	<b>5,849,000</b>
Open CSU/TL	1,582,000	5,280,000	64,000	2,155,000	<b>9,082,000</b>
Open Standard Stipulations	0	2,223,000	0	744,000	<b>2,967,000</b>
<b>Total</b>	<b>5,508,000</b>	<b>9,316,000</b>	<b>292,000</b>	<b>3,651,000</b>	<b>18,768,000</b>
<b>Approximate % of Habitat Management Area by Fluid Minerals (Oil a&amp; Gas) Decision<sup>4</sup> within Habitat in MZ I</b>					
<b>Fluid Minerals (Oil and Gas)</b>	<b>No Action &amp; Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	3%	4%	0%	9%	<b>5%</b>
Open NSO	68%	16%	78%	11%	<b>31%</b>
Open CSU/TL	29%	57%	22%	59%	<b>48%</b>
Open Standard Stipulations	0%	24%	0%	20%	<b>16%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

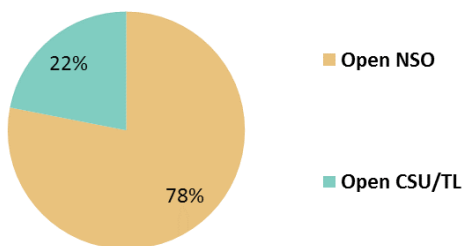
No Action & Management Alignment - PHMA - Fluid Mineral Leasing (Oil & Gas)



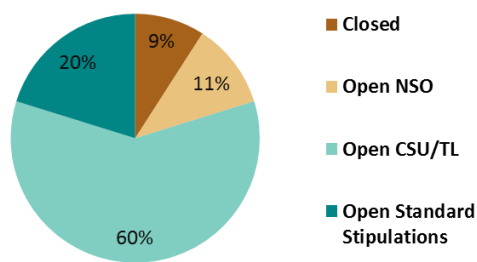
No Action & Management Alignment - GHMA - Fluid Mineral Leasing (Oil & Gas)



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. <sup>4</sup>Data 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**

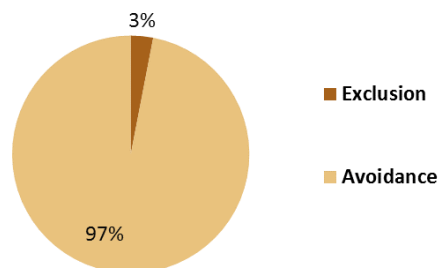
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual 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
<b>Total</b>	<b>3,278,000</b>	<b>3,126,000</b>	<b>159,000</b>	<b>1,574,478</b>	<b>8,136,478</b>

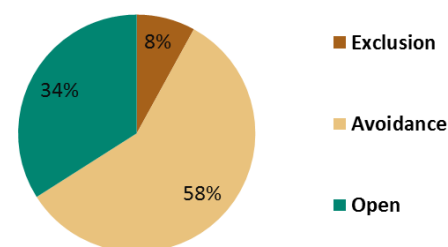
  

Approximate % of Habitat Management Area by Rights-of-Ways Decision within Habitat in MZ I					
Geothermal Energy	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Exclusion	3%	8%	0%	5%	5%
Avoidance	97%	58%	45%	18%	66%
Open	0%	34%	55%	77%	29%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

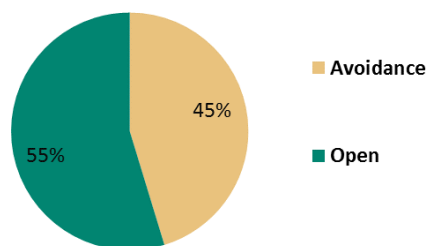
No Action & Management Alignment - PHMA - Rights of Ways



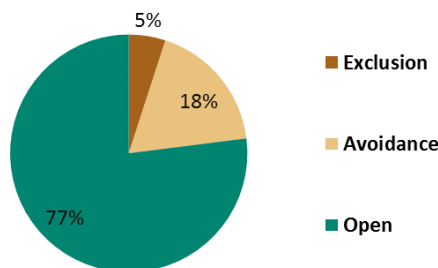
No Action & Management Alignment - GHMA - Rights of Ways



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.

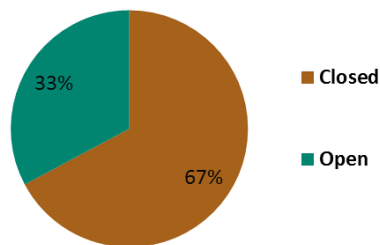
**IX. Salable Minerals Materials**

**Table 11 – Salable Minerals Decisions within MZ I**

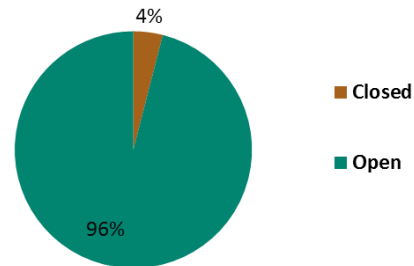
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual 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	<b>4,705,000</b>
Open	1,882,000	8,787,000	267,000	2,990,000	<b>13,926,000</b>
<b>Total</b>	<b>5,752,000</b>	<b>9,189,000</b>	<b>276,000</b>	<b>3,414,000</b>	<b>18,631,000</b>
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%	<b>25%</b>
Open	33%	96%	97%	88%	<b>75%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

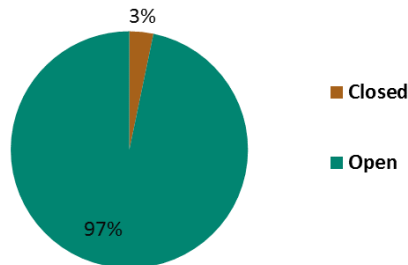
No Action & Management Alignment - PHMA - Salable Minerals Materials



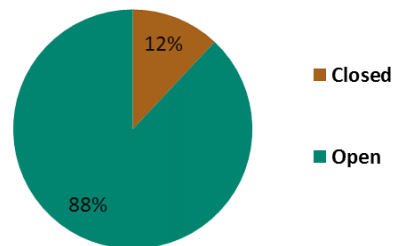
No Action & Management Alignment - GHMA - Salable Minerals Materials



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.



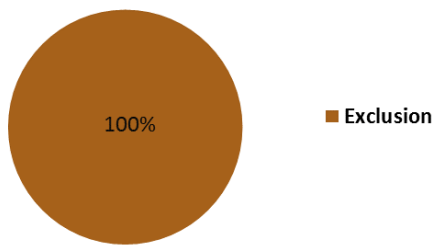
**X. Solar Energy****Table 12 – Solar Energy Decisions within MZ I**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding.

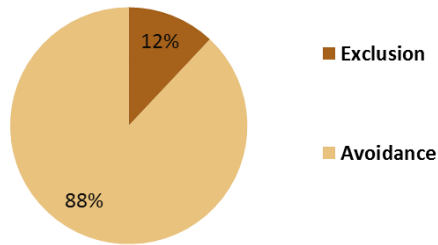
<sup>5</sup> Data not available for Wyoming. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

<b>Approximate Acres of Solar Energy Decisions<sup>5</sup> in MZ I by Habitat Management Area Type</b>					
<b>Geothermal Energy</b>	<b>No Action &amp; Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Exclusion	2,709,000	249,000	93,000	239,000	<b>3,290,000</b>
Avoidance	0	1,844,000	55,000	172,000	<b>2,071,000</b>
Open	0	0	0	1,144,000	<b>1,145,000</b>
<b>Total</b>	<b>2,709,000</b>	<b>2,093,000</b>	<b>148,000</b>	<b>1,555,000</b>	<b>6,506,000</b>
<b>Approximate % of Habitat Management Area by Solar Energy Decision<sup>5</sup> within Habitat in MZ I</b>					
<b>Geothermal Energy</b>	<b>No Action &amp; Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Exclusion	100%	12%	63%	11%	<b>51%</b>
Avoidance	0%	88%	37%	15%	<b>32%</b>
Open	0%	0%	0%	74%	<b>18%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

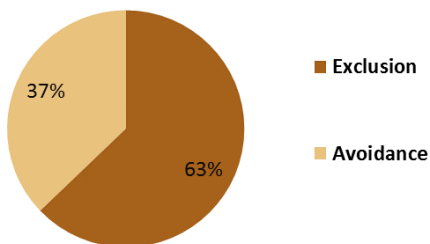
No Action & Management Alignment - PHMA - Solar Energy



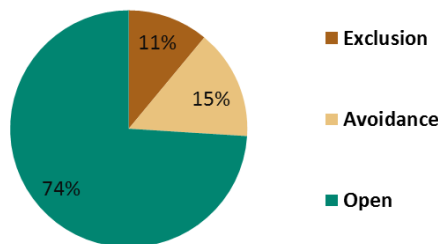
No Action & Management Alignment - GHMA - Solar Energy



No Action & Management Alignment - RHMA - Solar Energy



No Action & Management Alignment - Non-HMA - Solar Energy



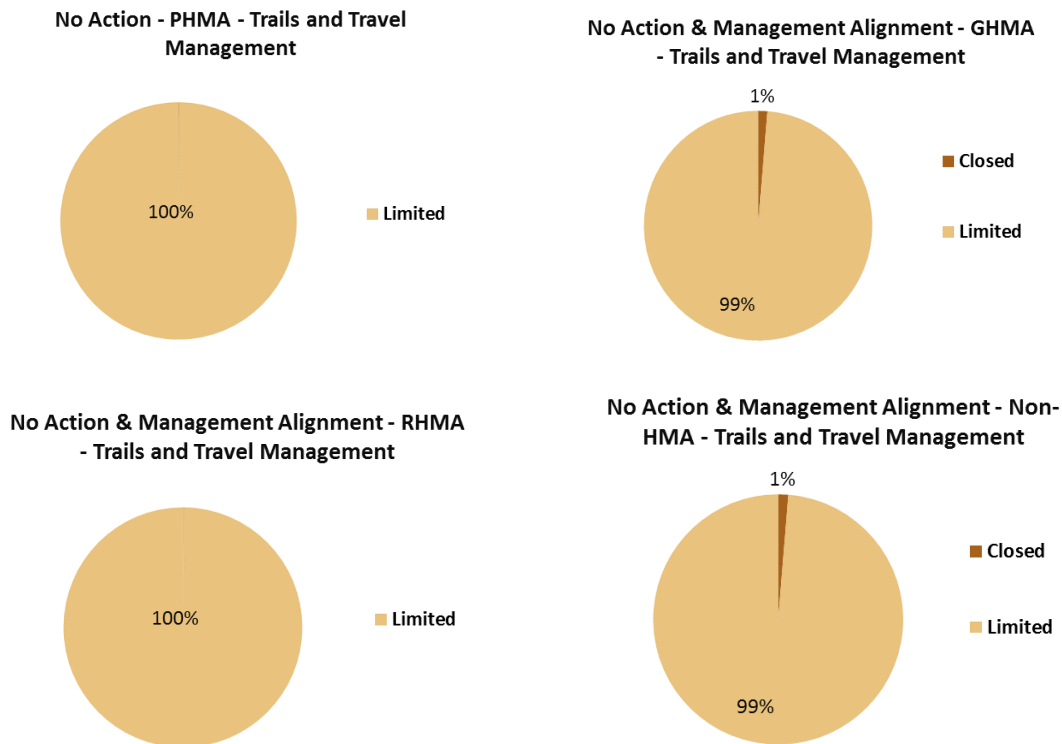
**Figure 11 - Solar Energy Decisions within MZ I**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding.  
<sup>5</sup> 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.

<b>Approximate Acres of Trails and Travel Management Decisions in MZ I by Habitat Management Area Type</b>					
<b>Geothermal Energy</b>	<b>No Action &amp; Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	2,000	39,000	0	11,000	<b>52,000</b>
Limited	3,306,000	3,125,000	159,000	1,655,000	<b>8,245,000</b>
Open	0	0	0	0	<b>0</b>
<b>Total</b>	<b>3,308,000</b>	<b>3,164,000</b>	<b>159,000</b>	<b>1,666,000</b>	<b>8,297,000</b>
<b>Approximate % of Habitat Management Area by Trails and Travel Management Decision within Habitat in MZ I</b>					
<b>Geothermal Energy</b>	<b>No Action &amp; Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	0%	1%	0%	1%	<b>1%</b>
Limited	100%	99%	100%	99%	<b>99%</b>
Open	0%	0%	0%	0%	<b>0%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**Figure 12 – 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.

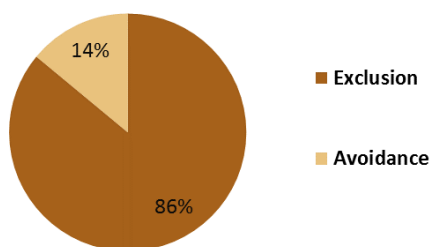
**XII. Wind Energy**

**Table 14 – Wind Energy Decisions within MZ I**

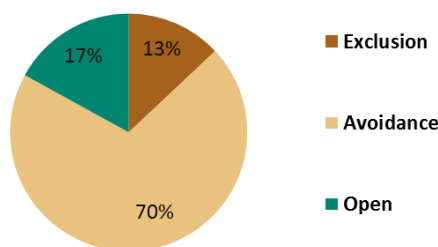
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual 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	<b>3,862,000</b>
Avoidance	493,000	2,090,000	55,000	594,000	<b>3,232,000</b>
Open	0	513,000	0	655,000	<b>1,168,000</b>
<b>Total</b>	<b>3,459,000</b>	<b>2,987,000</b>	<b>148,000</b>	<b>1,668,000</b>	<b>8,262,000</b>
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%	<b>47%</b>
Avoidance	14%	70%	37%	36%	<b>39%</b>
Open	0%	17%	0%	39%	<b>14%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

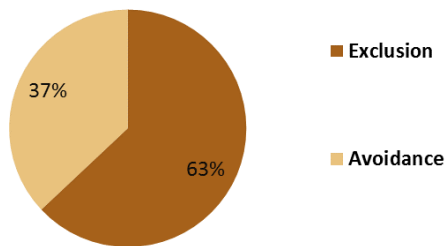
No Action & Management Alignment - PHMA - Wind Energy



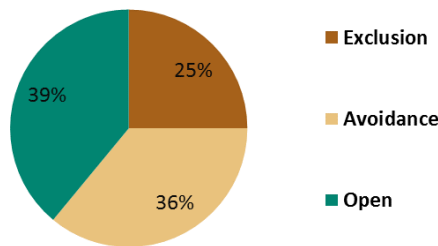
No Action & Management Alignment - GHMA - Wind Energy



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.

**H.2.2 Management Zones II/VII – Wyoming, Colorado, Utah, Idaho**

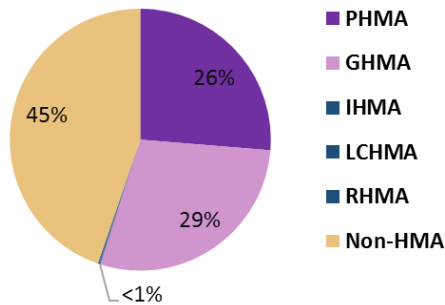
**I. Habitat Management**

**Table 15 – Habitat Management Areas within MZs II/VII**

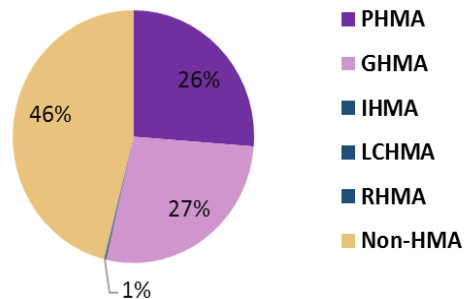
Acres and percentages reflect all lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of HMA in MZs II/VII					
No Action					
PHMA	IHMA	GHMA	LCHMA <sup>2</sup>	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.

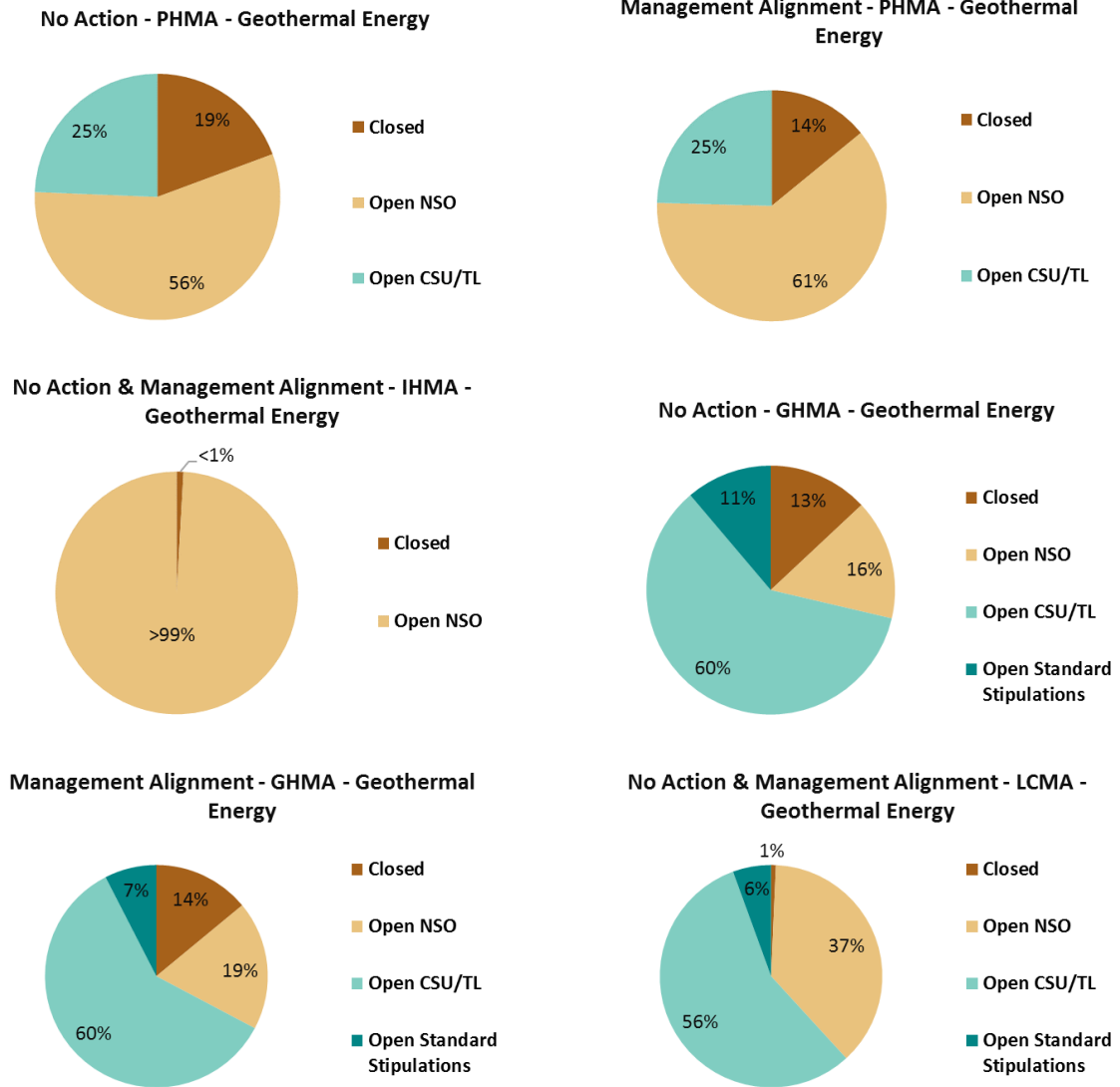
<sup>2</sup> Linkage Connectivity Habitat Management Area (LCHMA)

## 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.  
<sup>6</sup> 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 Decisions <sup>6</sup> in MZ II/VII by Habitat Management Area Type							
Geothermal Energy	No Action						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
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
<b>Total</b>	<b>4,037,000</b>	<b>29,000</b>	<b>2,187,000</b>	<b>144,000</b>	<b>NA</b>	<b>10,179,000</b>	<b>16,575,000</b>
Geothermal Energy	Management Alignment						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
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
<b>Total</b>	<b>4,000,000</b>	<b>29,000</b>	<b>1,857,000</b>	<b>144,000</b>	<b>NA</b>	<b>10,509,000</b>	<b>16,538,000</b>
Approximate % of Habitat Management Area by Geothermal Energy Decision <sup>6</sup> in MZ II/VII							
Geothermal Energy	No Action						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>
Geothermal Energy	Management Alignment						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>

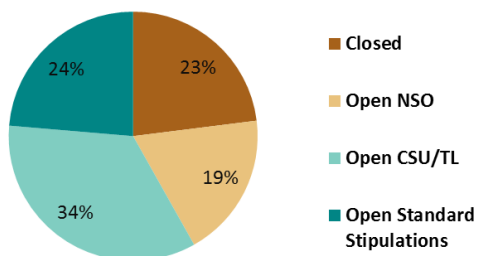


**Figure 15 – Geothermal Energy Decisions within MZ II/VII**

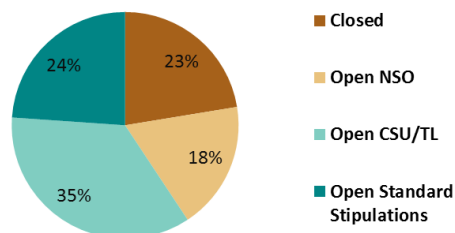
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. <sup>6</sup> Data not available for portions of MT and WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. 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**

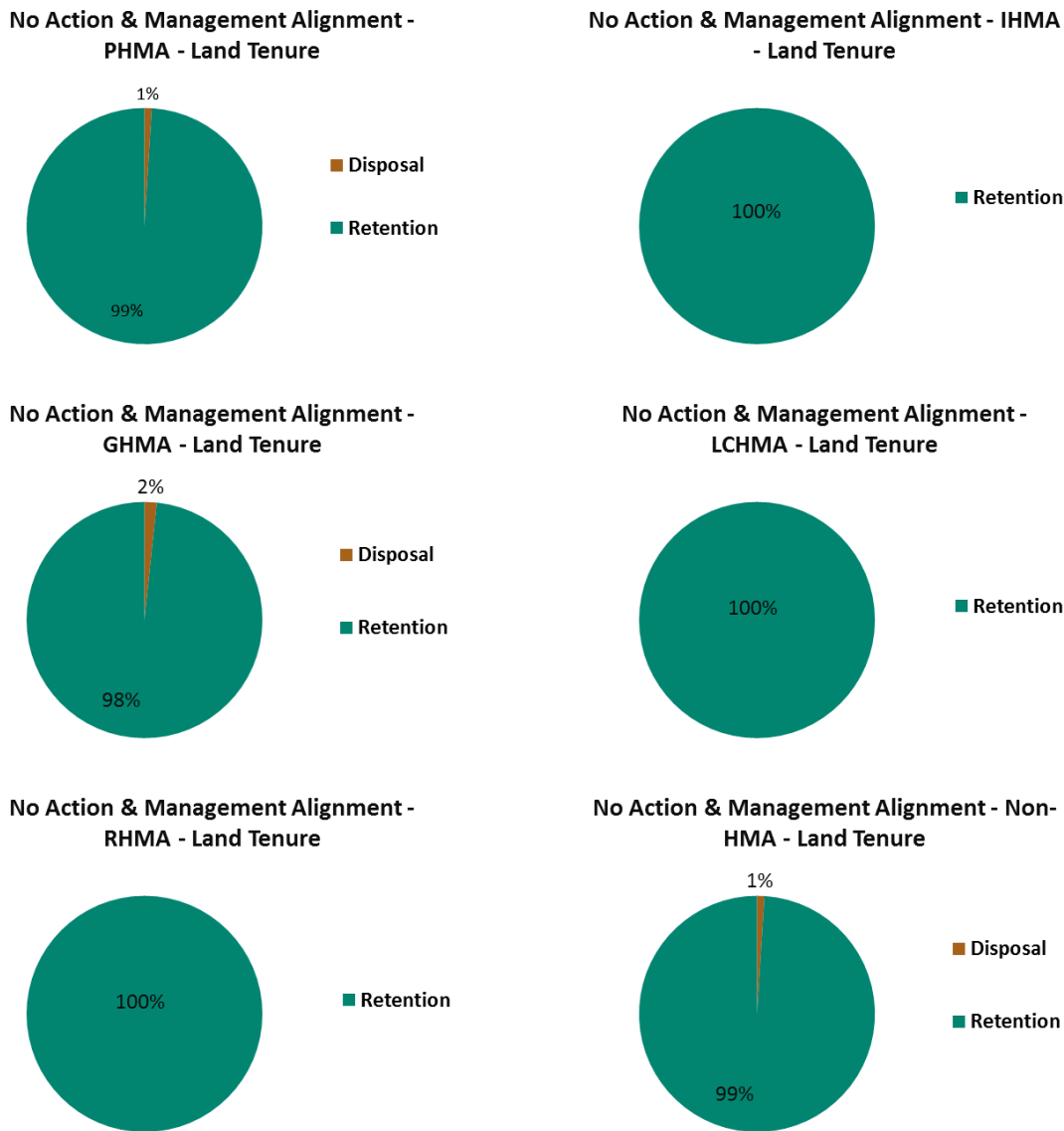
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. <sup>6</sup> Data not available for portions of MT and WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. 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
<b>Total</b>	<b>8,951,000</b>	<b>18,000</b>	<b>9,126,000</b>	<b>82,000</b>	<b>7,000</b>	<b>11,952,000</b>	<b>30,136,000</b>
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
<b>Total</b>	<b>8,951,000</b>	<b>18,000</b>	<b>8,839,000</b>	<b>82,000</b>	<b>7,000</b>	<b>12,239,000</b>	<b>30,136,000</b>
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**Figure 16 – Land Tenure Decisions within MZ II/VII**

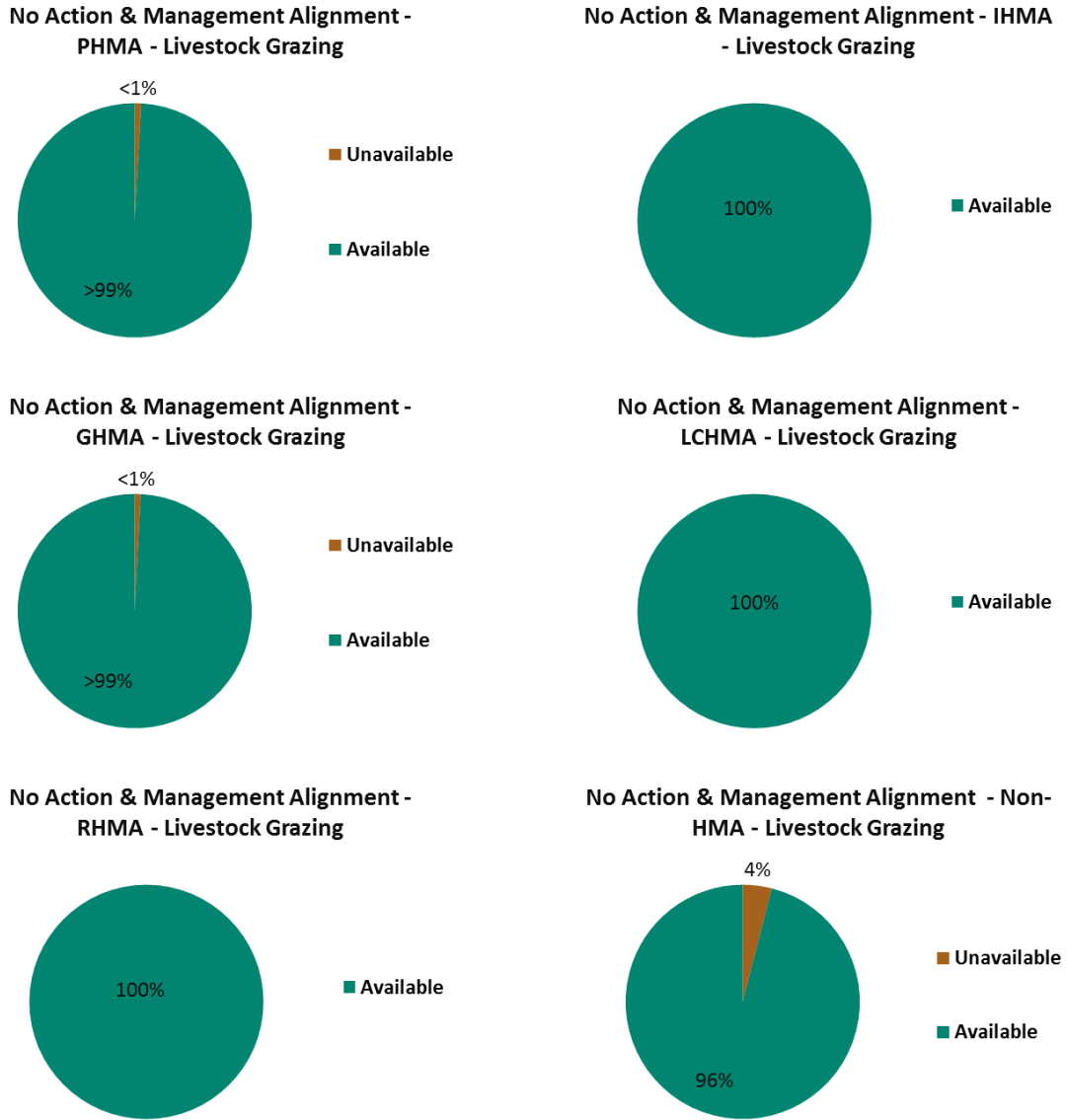
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for 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.

<b>Approximate Acres of Livestock Grazing Decisions in MZ II/VII by Habitat Management Area Type</b>							
<b>Livestock Grazing</b>	<b>No Action</b>						<b>Total</b>
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>LCHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	
Unavailable	40,000	0	40,000	0	0	316,000	<b>395,000</b>
Available	8,872,000	18,000	9,069,000	81,000	7,000	8,193,000	<b>26,241,000</b>
<b>Total</b>	<b>8,912,000</b>	<b>18,000</b>	<b>9,109,000</b>	<b>81,000</b>	<b>7,000</b>	<b>8,508,000</b>	<b>26,635,000</b>
<b>Livestock Grazing</b>	<b>Management Alignment</b>						<b>Total</b>
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>LCHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	
Unavailable	40,000	0	40,000	0	0	316,000	<b>395,000</b>
Available	8,872,000	18,000	8,784,000	81,000	7,000	8,479,000	<b>26,241,000</b>
<b>Total</b>	<b>8,912,000</b>	<b>18,000</b>	<b>8,824,000</b>	<b>81,000</b>	<b>7,000</b>	<b>8,794,000</b>	<b>26,635,000</b>
<b>Approximate % of Habitat Management Area by Livestock Grazing Decision in MZ II/VII</b>							
<b>Livestock Grazing</b>	<b>No Action &amp; Management Alignment</b>						<b>Total</b>
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>LCHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	
Unavailable	<1%	0%	<1%	0%	0%	4%	<b>1%</b>
Available	100%	100%	100%	100%	100%	96%	<b>99%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**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.

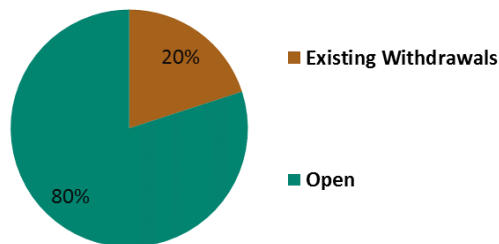
## V. Locatable Minerals

**Table 19 – Locatable Minerals Decisions within MZ II/VII**

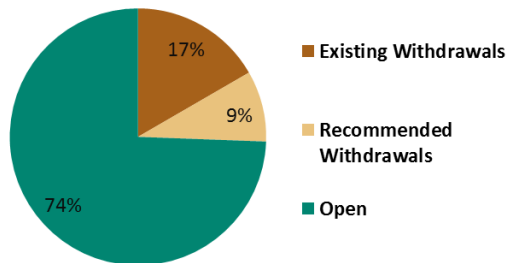
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

<b>Approximate Acres of Locatable Minerals Decisions in MZ II/VII by Habitat Management Area Type</b>							
<b>Locatable Minerals</b>	<b>No Action</b>						<b>Total</b>
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>LCHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	
Existing Withdrawals	1,863,000	7,000	2,394,000	1,000	0	4,804,000	<b>9,068,000</b>
Recommended Withdrawals	998,000	0	320,000	0	0	302,000	<b>1,620,000</b>
Open	8,323,000	27,000	8,529,000	137,000	7,000	10,250,000	<b>27,273,000</b>
<b>Total</b>	<b>11,185,000</b>	<b>33,000</b>	<b>11,243,000</b>	<b>137,000</b>	<b>7,000</b>	<b>15,357,000</b>	<b>37,962,000</b>
<b>Locatable Minerals</b>	<b>Management Alignment</b>						<b>Total</b>
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>LCHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	
Existing Withdrawals	1,863,000	7,000	2,125,000	1,000	0	5,072,000	<b>9,068,000</b>
Recommended Withdrawals	618,000	0	318,000	0	0	302,000	<b>1,238,000</b>
Open	8,703,000	27,000	8,420,000	137,000	7,000	10,361,000	<b>27,656,000</b>
<b>Total</b>	<b>11,185,000</b>	<b>33,000</b>	<b>10,863,000</b>	<b>137,000</b>	<b>7,000</b>	<b>15,736,000</b>	<b>37,962,000</b>
<b>Approximate % of Habitat Management Area by Locatable Minerals Decision in MZ II/VII</b>							
<b>Locatable Minerals</b>	<b>No Action</b>						<b>Total</b>
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>LCHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	
Existing Withdrawals	17%	20%	21%	<1%	0%	31%	<b>24%</b>
Recommended Withdrawals	9%	0%	3%	0%	0%	2%	<b>4%</b>
Open	74%	80%	76%	100%	100%	67%	<b>72%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Locatable Minerals</b>	<b>Management Alignment</b>						<b>Total</b>
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>LCHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	
Existing Withdrawals	17%	20%	20%	<1%	0%	32%	<b>24%</b>
Recommended Withdrawals	6%	0%	3%	0%	0%	2%	<b>3%</b>
Open	78%	80%	78%	100%	100%	66%	<b>73%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

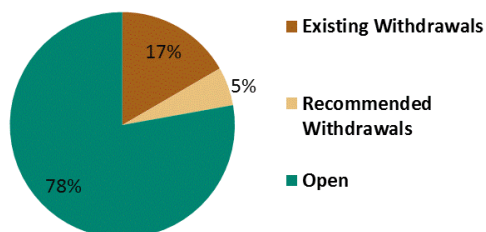
**No Action & Management Alignment - IHMA - Locatable Minerals**



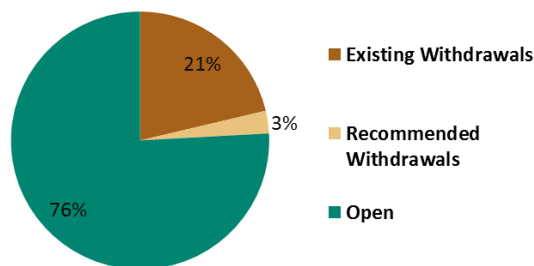
**No Action - PHMA - Locatable Minerals**



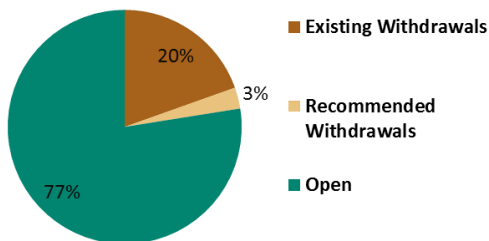
**Management Alignment - PHMA - Locatable Minerals**



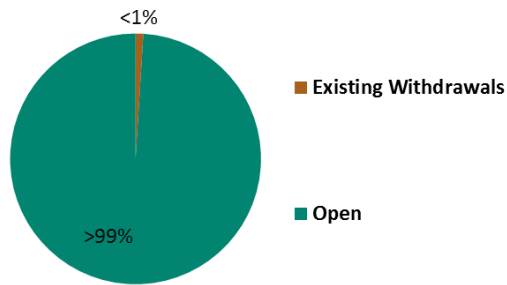
**No Action - GHMA - Locatable Minerals**



**Management Alignment - GHMA - Locatable Minerals**



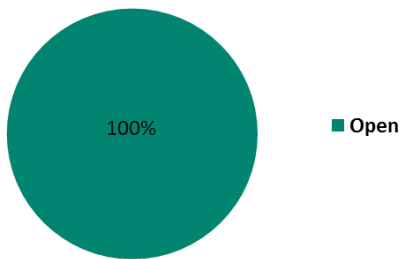
**No Action & Management Alignment - LCHMA - Locatable Minerals**



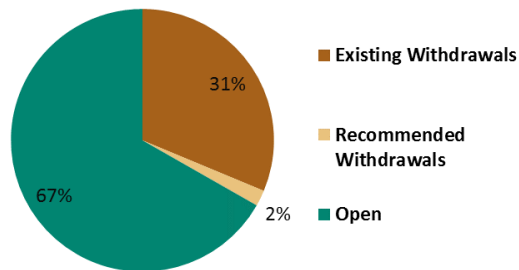
**Figure 18 – Locatable Minerals Decisions within MZ II/VII**

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.

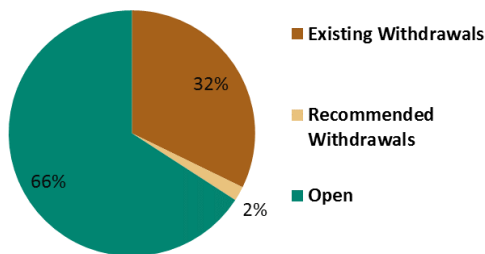
No Action & Management Alignment -  
RHMA - Locatable Minerals



No Action - Non-HMA - Locatable Minerals



Management Alignment - Non-HMA -  
Locatable Minerals



**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. <sup>7</sup>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 Minerals Decisions <sup>7</sup> 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	<b>9,471,000</b>
Open	6,052,000	23,000	7,330,000	137,000	NA	10,221,000	<b>23,763,000</b>
<b>Total</b>	<b>9,669,000</b>	<b>30,000</b>	<b>8,586,000</b>	<b>137,000</b>	<b>NA</b>	<b>14,812,000</b>	<b>33,233,000</b>
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	<b>9,436,000</b>
Open	6,052,000	23,000	6,972,000	137,000	NA	10,614,000	<b>23,799,000</b>
<b>Total</b>	<b>9,633,000</b>	<b>30,000</b>	<b>8,216,000</b>	<b>137,000</b>	<b>NA</b>	<b>15,217,000</b>	<b>33,233,000</b>
Approximate % of Habitat Management Area by Non-Energy Leasable Minerals Decision <sup>7</sup> 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%	<b>28%</b>
Open	63%	77%	85%	100%	NA	69%	<b>72%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>
Non-Energy Leasable Minerals	Management Alignment						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	37%	23%	15%	<1%	NA	30%	<b>28%</b>
Open	63%	77%	85%	100%	NA	70%	<b>72%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>





**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. <sup>7</sup>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.

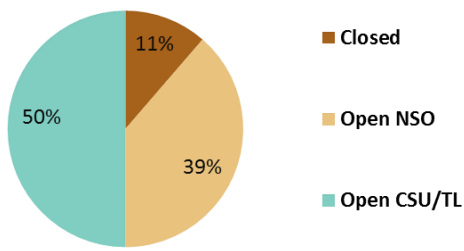
### VII. Fluid Minerals (Oil & Gas)

**Table 21 – Fluid Minerals (Oil & Gas) Decisions within MZ II/VII**

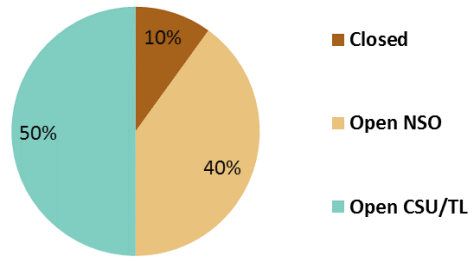
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages

<b>Approximate Acres of Fluid Minerals (Oil &amp; Gas) Decisions in MZ II/VII by Habitat Management Area Type</b>							
<b>Fluid Minerals (Oil &amp; Gas)</b>	<b>No Action</b>						
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>LCHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	1,294,000	7,000	1,178,000	1,000	0	4,773,000	<b>7,252,000</b>
Open NSO	4,399,000	23,000	1,425,000	54,000	5,000	2,628,000	<b>8,535,000</b>
Open CSU/TL	5,689,000	0	6,517,000	81,000	2,000	4,748,000	<b>17,036,000</b>
Open Standard Stipulations	0	0	2,297,000	8,000	0	2,895,000	<b>5,200,000</b>
<b>Total</b>	<b>11,382,000</b>	<b>29,000</b>	<b>11,416,000</b>	<b>144,000</b>	<b>8,000</b>	<b>15,046,000</b>	<b>38,024,000</b>
<b>Fluid Minerals (Oil &amp; Gas)</b>	<b>Management Alignment</b>						
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>LCHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	1,078,000	7,000	1,153,000	1,000	0	4,787,000	<b>7,024,000</b>
Open NSO	4,578,000	23,000	1,430,000	54,000	5,000	2,634,000	<b>8,725,000</b>
Open CSU/TL	5,689,000	0	6,310,000	81,000	2,000	4,956,000	<b>17,036,000</b>
Open Standard Stipulations	0	0	2,193,000	8,000	0	3,000,000	<b>5,200,000</b>
<b>Total</b>	<b>11,345,000</b>	<b>29,000</b>	<b>11,086,000</b>	<b>144,000</b>	<b>8,000</b>	<b>15,376,000</b>	<b>37,988,000</b>
<b>Approximate % of Habitat Management Area by Fluid Minerals (Oil &amp; Gas) Decision in MZ II/VII</b>							
<b>Fluid Minerals (Oil &amp; Gas)</b>	<b>No Action</b>						
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>LCHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	11%	21%	10%	<1%	0%	32%	<b>19%</b>
Open NSO	39%	79%	12%	38%	63%	17%	<b>22%</b>
Open CSU/TL	50%	0%	57%	56%	37%	32%	<b>45%</b>
Open Standard Stipulations	0%	0%	20%	6%	0%	19%	<b>14%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Fluid Minerals (Oil &amp; Gas)</b>	<b>Management Alignment</b>						
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>LCHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	10%	21%	10%	<1%	0%	31%	<b>18%</b>
Open NSO	40%	79%	13%	38%	63%	17%	<b>23%</b>
Open CSU/TL	50%	0%	57%	56%	37%	32%	<b>45%</b>
Open Standard Stipulations	0%	0%	20%	6%	0%	20%	<b>14%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

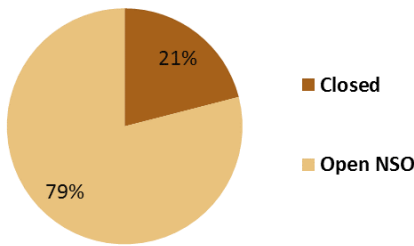
**No Action - PHMA - Fluid Mineral Leasing (Oil & Gas)**



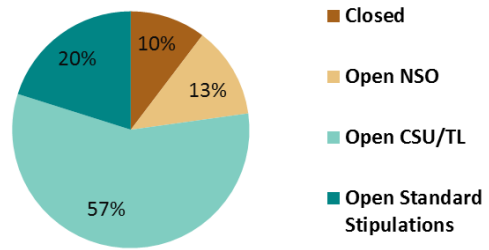
**Management Alignment - PHMA - Fluid Mineral Leasing (Oil & Gas)**



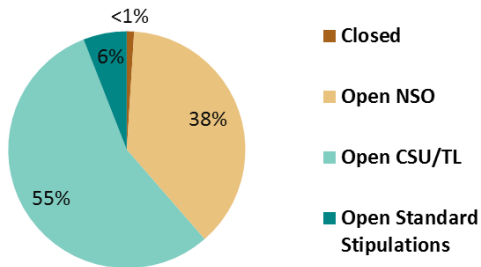
**No Action & Management Alignment - IHMA - Fluid Mineral Leasing (Oil & Gas)**



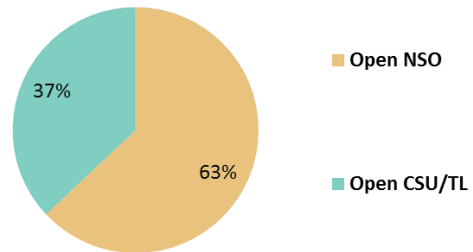
**No Action & Management Alignment - GHMA - Fluid Mineral Leasing (Oil & Gas)**



**No Action & Management Alignment - LCHMA - Fluid Mineral Leasing (Oil & Gas)**



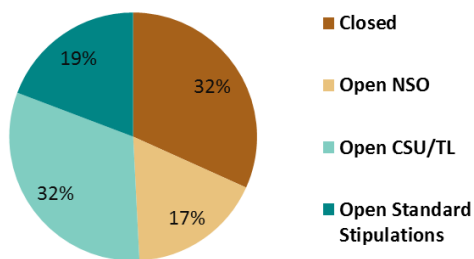
**No Action & Management Alignment - RHMA - Fluid Mineral Leasing (Oil & Gas)**



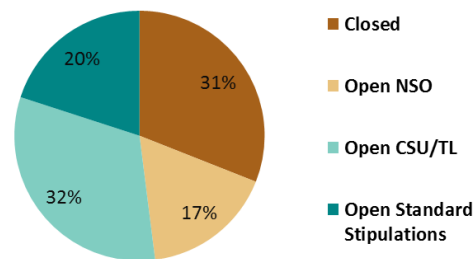
**Figure 20 – Fluid Minerals (Oil & Gas) Decisions within MZ II/VII**

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**

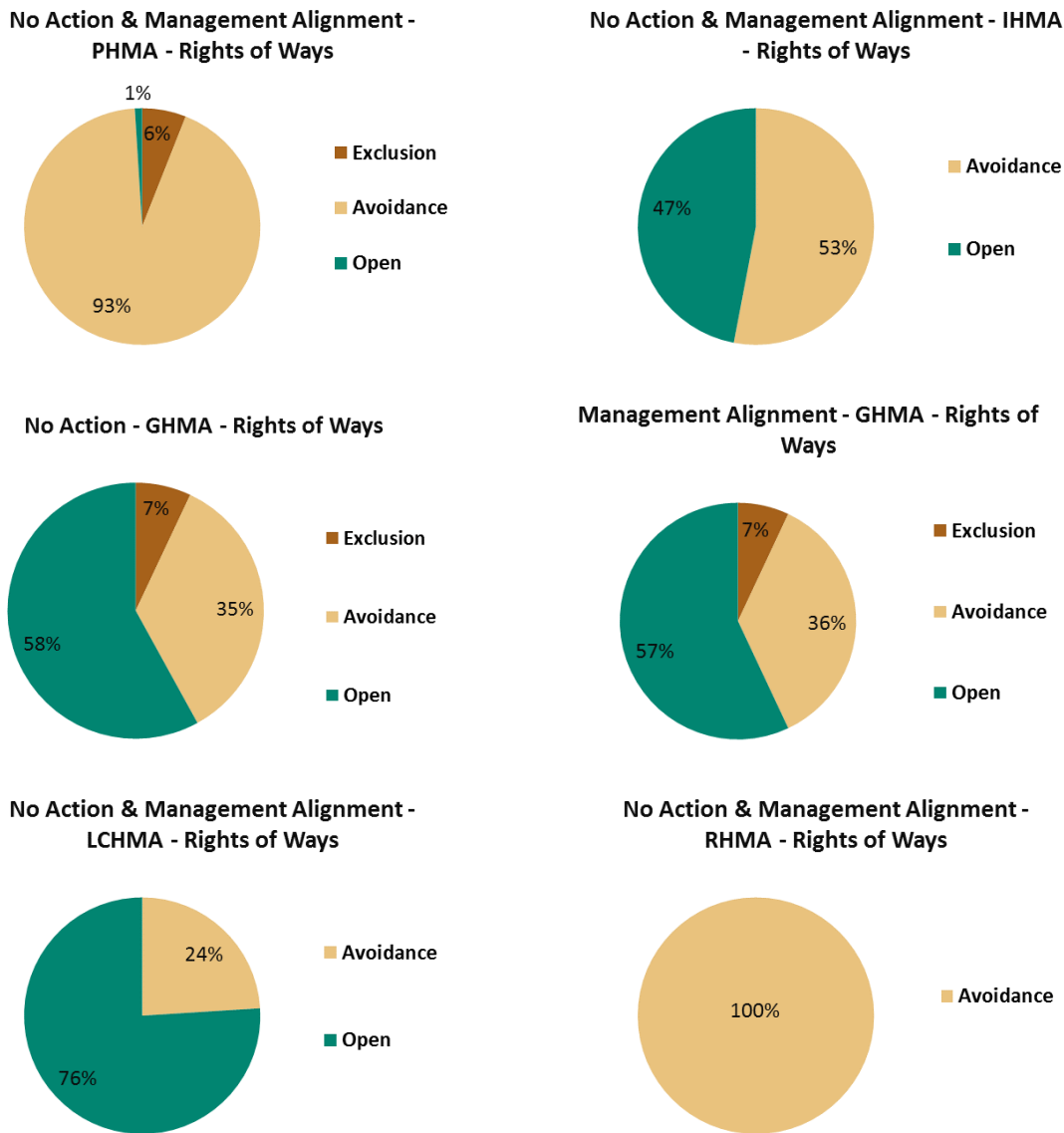
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

**VIII. Rights-of-Ways**

**Table 22 – Rights-of-Ways Decisions within MZ II/VII**

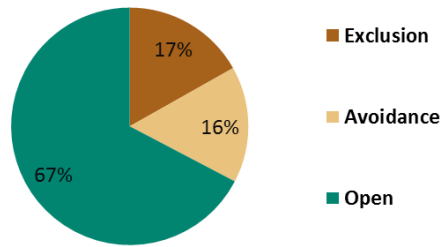
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual 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
<b>Total</b>	<b>8,752,000</b>	<b>34,000</b>	<b>9,041,000</b>	<b>67,000</b>	<b>7,000</b>	<b>7,494,000</b>	<b>25,395,000</b>
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
<b>Total</b>	<b>8,752,000</b>	<b>34,000</b>	<b>8,754,000</b>	<b>67,000</b>	<b>7,000</b>	<b>7,781,000</b>	<b>25,395,000</b>
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**Figure 21 – 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.

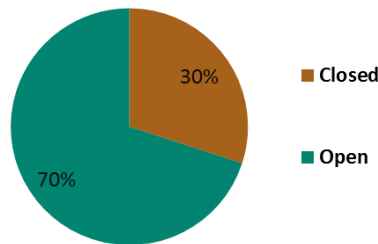
**IX. Salable Minerals Materials**

**Table 23 – Salable Minerals Materials Decisions within MZ II/VII**

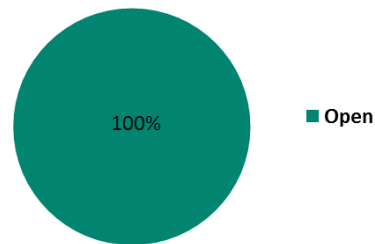
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual 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						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Closed	3,241,000	0	1,401,000	27,000	0	3,592,000	<b>8,263,000</b>
Open	7,671,000	28,000	9,745,000	115,000	7,000	9,675,000	<b>27,239,000</b>
<b>Total</b>	<b>10,912,000</b>	<b>28,000</b>	<b>11,145,000</b>	<b>142,000</b>	<b>7,000</b>	<b>13,268,000</b>	<b>35,502,000</b>
Salable Minerals Materials	Management Alignment						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Closed	3,241,000	0	1,399,000	27,000	0	3,594,000	<b>8,263,000</b>
Open	7,671,000	28,000	9,413,000	115,000	7,000	10,006,000	<b>27,239,000</b>
<b>Total</b>	<b>10,912,000</b>	<b>28,000</b>	<b>10,813,000</b>	<b>142,000</b>	<b>7,000</b>	<b>13,600,000</b>	<b>35,502,000</b>
Approximate % of Habitat Management Area by Salable Minerals Materials Decision in MZ II/VII							
Salable Minerals Materials	No Action						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Closed	30%	0%	13%	19%	0%	26%	<b>23%</b>
Open	70%	100%	87%	81%	100%	74%	<b>77%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Salable Minerals Materials	Management Alignment						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Closed	30%	0%	13%	19%	0%	27%	<b>23%</b>
Open	70%	100%	87%	81%	100%	73%	<b>77%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

No Action & Management Alignment - PHMA - Salable Minerals Materials



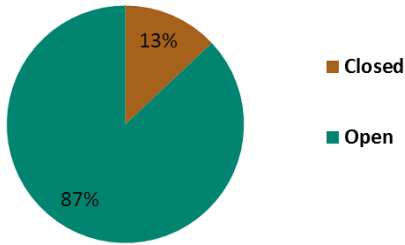
No Action & Management Alignment - IHMA - Salable Minerals Materials



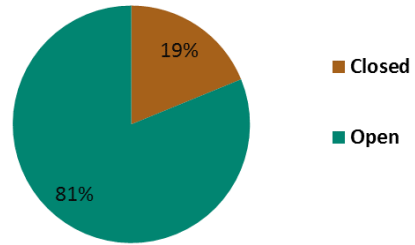
**Figure 22 – Salable Minerals Materials Decisions within MZ II/VII**

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.

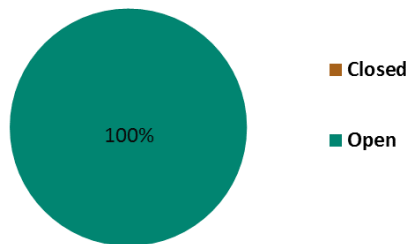
No Action & Management Alignment -  
GHMA - Salable Minerals Materials



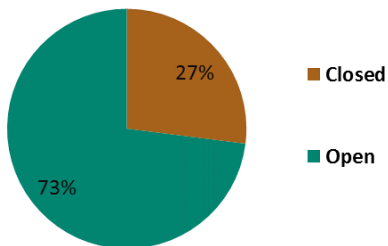
No Action & Management Alignment -  
LCHMA - Salable Minerals Materials



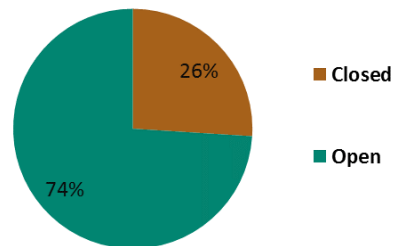
No Action & Management Alignment -  
RHMA - Salable Minerals Materials



No Action - Non-HMA - Salable Minerals  
Materials



Management Alignment - Non-HMA -  
Salable Minerals Materials



**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.



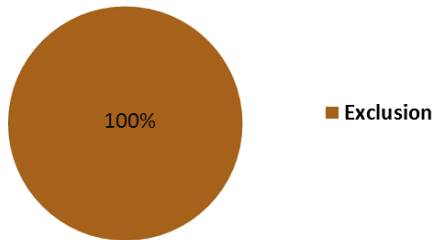
**X. Solar Energy**

**Table 24 – Solar Energy Decisions within MZ II/VII**

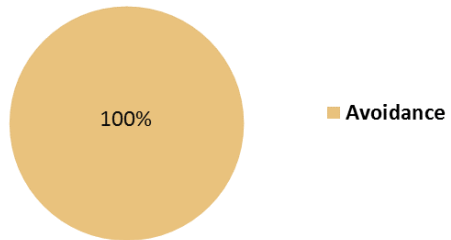
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. <sup>8</sup> Data not available for WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. They represent 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 <sup>8</sup> 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	<b>6,169,000</b>
Avoidance	2,000	18,000	764,000	83,000	0	742,000	<b>1,610,000</b>
Open	0	0	1,000	0	0	2,170,000	<b>2,171,000</b>
<b>Total</b>	<b>1,496,000</b>	<b>18,000</b>	<b>1,082,000</b>	<b>83,000</b>	<b>7,000</b>	<b>7,265,000</b>	<b>9,950,000</b>
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	<b>6,169,000</b>
Avoidance	2,000	18,000	764,000	83,000	0	742,000	<b>1,610,000</b>
Open	0	0	1,000	0	0	2,170,000	<b>2,171,000</b>
<b>Total</b>	<b>1,496,000</b>	<b>18,000</b>	<b>795,000</b>	<b>83,000</b>	<b>7,000</b>	<b>7,551,000</b>	<b>9,950,000</b>
Approximate % of Habitat Management Area by Solar Energy Decision <sup>8</sup> in MZ II/VII							
Solar Energy	No Action						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Exclusion	100%	0%	29%	0%	100%	60%	<b>62%</b>
Avoidance	0%	100%	71%	100%	0%	10%	<b>16%</b>
Open	0%	0%	<1%	0%	0%	30%	<b>22%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Solar Energy	Management Alignment						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Exclusion	100%	0%	4%	0%	100%	61%	<b>62%</b>
Avoidance	0%	100%	96%	100%	0%	10%	<b>16%</b>
Open	0%	0%	<1%	0%	0%	29%	<b>22%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

No Action & Management Alignment - PHMA - Solar Energy

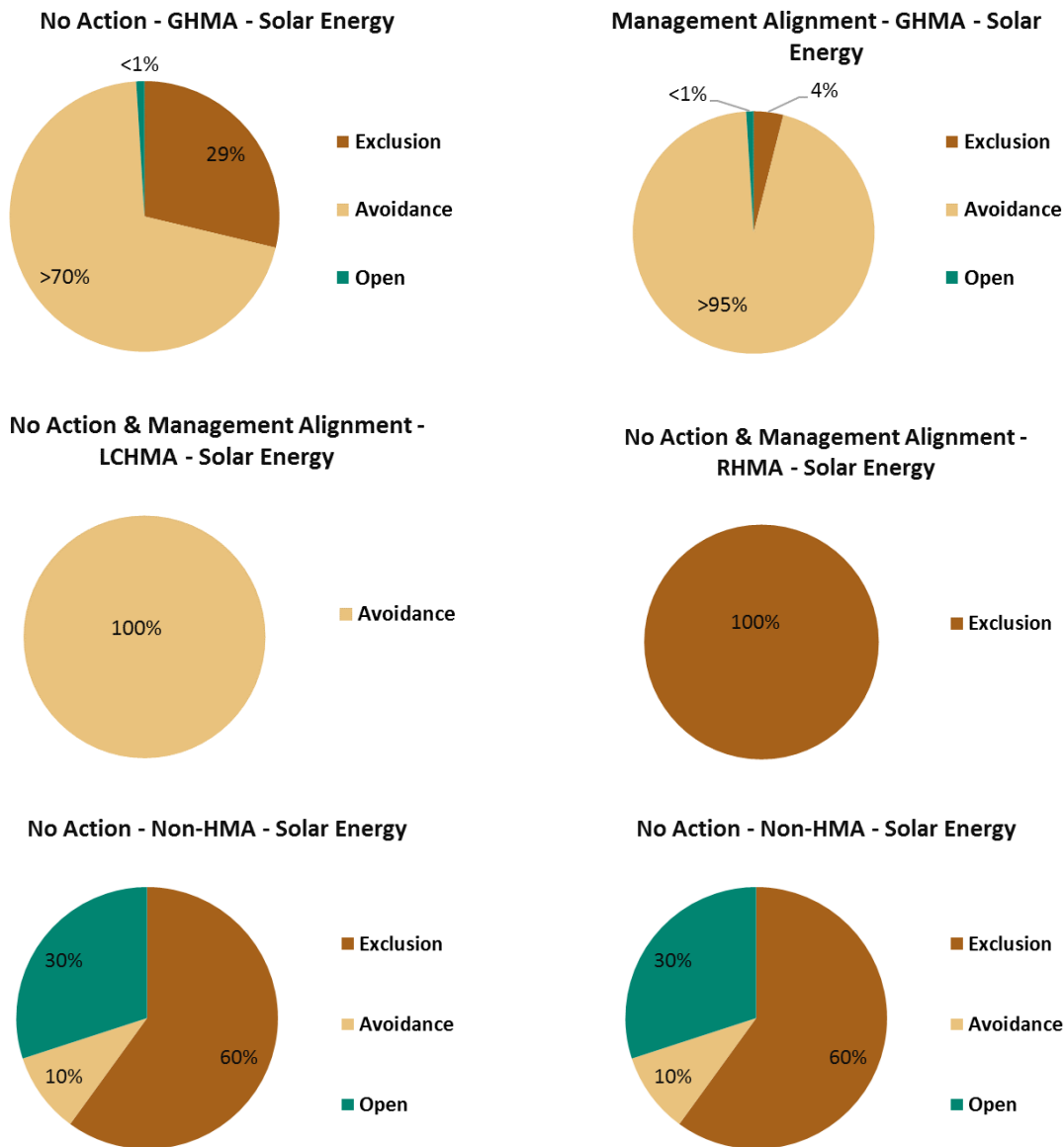


No Action & Management Alignment - IHMA - Solar Energy



**Figure 23 – Solar Energy Decisions within MZ II/VII**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. <sup>8</sup> 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**

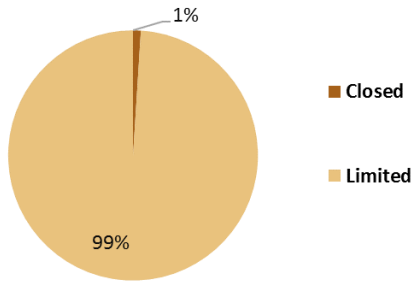
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. <sup>8</sup>Data not available for WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. They represent data 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**

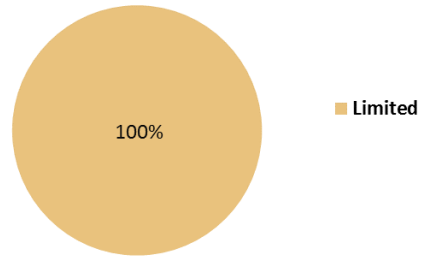
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

<b>Approximate Acres of Trails and Travel Management Decisions in MZ II/VII by Habitat Management Area Type</b>							
<b>Trails and Travel Management</b>	<b>No Action</b>						
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>LCHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	103,000	0	369,000	11,000	0	1,304,000	<b>1,787,000</b>
Limited	8,840,000	18,000	8,696,000	69,000	7,000	6,337,000	<b>23,966,000</b>
Open	4,000	0	54,000	3,000	0	891,000	<b>953,000</b>
<b>Total</b>	<b>8,947,000</b>	<b>18,000</b>	<b>9,121,000</b>	<b>82,000</b>	<b>7,000</b>	<b>8,531,000</b>	<b>26,706,000</b>
<b>Trails and Travel Management</b>	<b>Management Alignment</b>						
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>LCHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	103,000	0	366,000	11,000	0	1,307,000	<b>1,787,000</b>
Limited	8,840,000	18,000	8,413,000	69,000	7,000	6,620,000	<b>23,966,000</b>
Open	4,000	0	54,000	3,000	0	891,000	<b>953,000</b>
<b>Total</b>	<b>8,947,000</b>	<b>18,000</b>	<b>8,834,000</b>	<b>82,000</b>	<b>7,000</b>	<b>8,819,000</b>	<b>26,706,000</b>
<b>Approximate % of Habitat Management Area by Trails and Travel Management Decision in MZ II/VII</b>							
<b>Trails and Travel Management</b>	<b>No Action &amp; Management Alignment</b>						
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>LCHMA</b>	<b>RHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	1%	0%	4%	13%	0%	15%	<b>7%</b>
Limited	99%	100%	95%	84%	100%	74%	<b>90%</b>
Open	0%	0%	1%	4%	0%	10%	<b>4%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

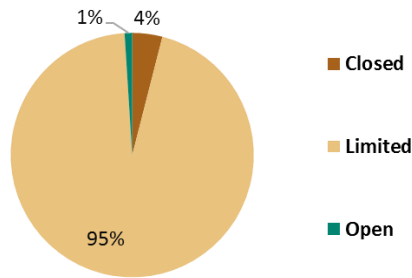
No Action & Management Alignment - PHMA - Trails and Travel Management



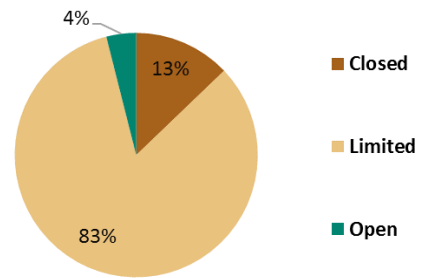
No Action & Management Alignment - IHMA - Trails and Travel Management



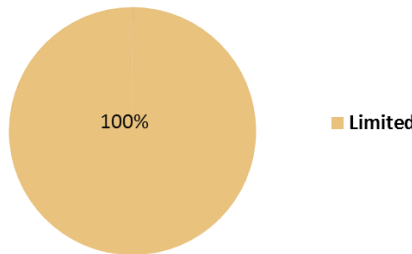
No Action & Management Alignment - GHMA - Trails and Travel Management



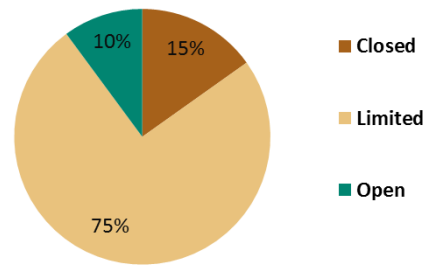
No Action & Management Alignment - LCHMA - Trails and Travel Management



No Action & Management Alignment - RHMA - Trails and Travel Management



No 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.

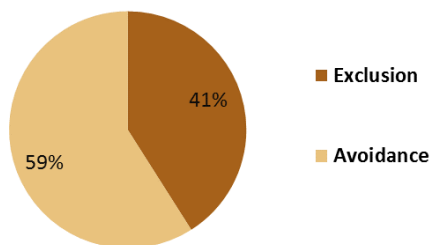
**XII. Wind Energy**

**Table 26 – Wind Energy Decisions within MZ II/VII**

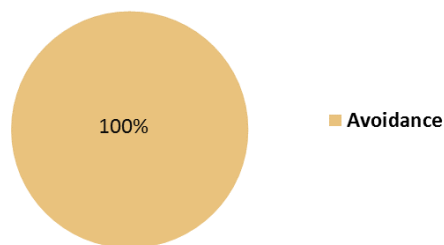
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual 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
<b>Total</b>	<b>8,953,000</b>	<b>18,000</b>	<b>9,119,000</b>	<b>83,000</b>	<b>7,000</b>	<b>7,476,000</b>	<b>25,656,000</b>
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
<b>Total</b>	<b>8,953,000</b>	<b>18,000</b>	<b>8,831,000</b>	<b>83,000</b>	<b>7,000</b>	<b>7,763,000</b>	<b>25,656,000</b>
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

No Action & Management Alignment - PHMA - Wind Energy

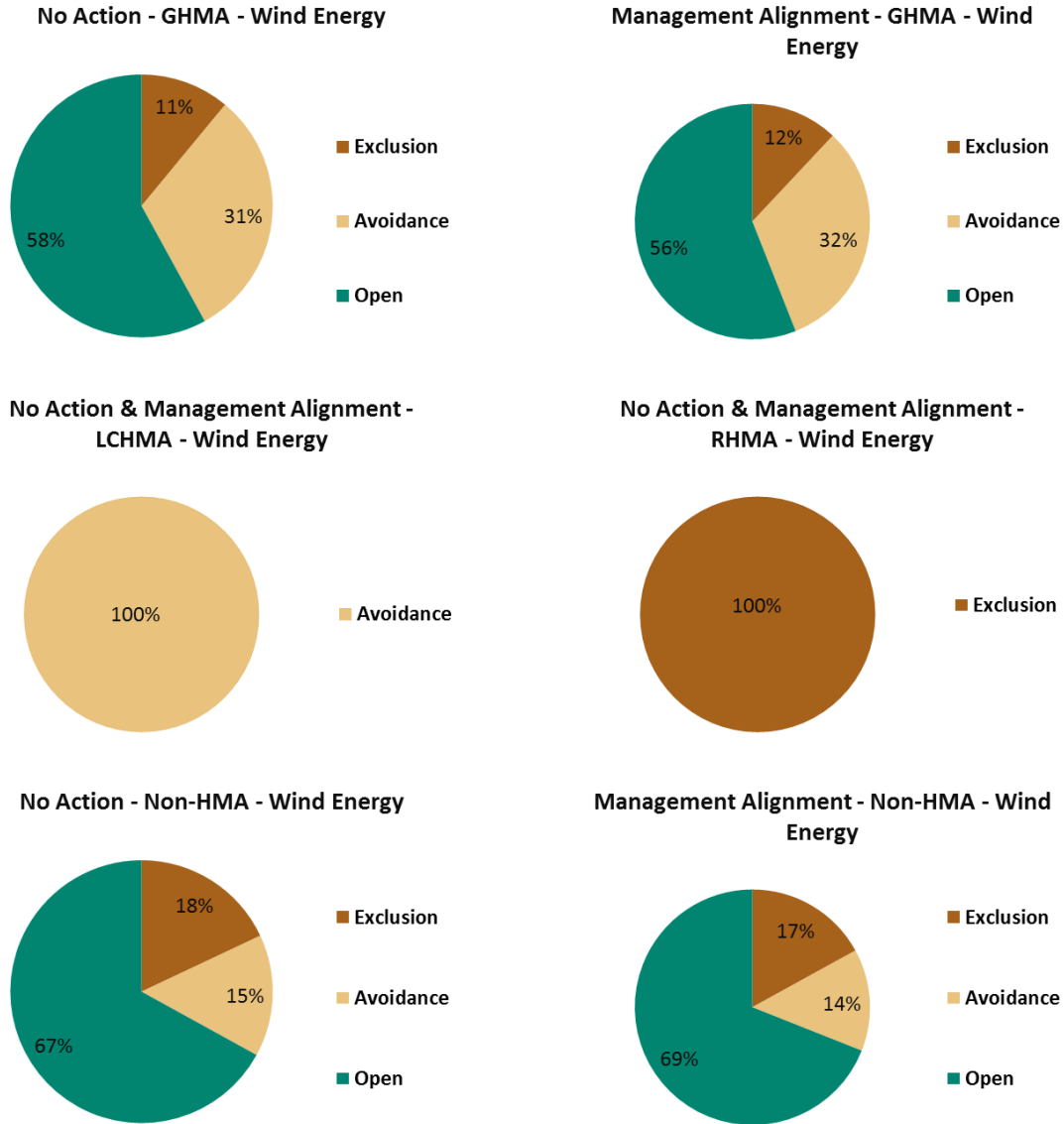


No Action & Management Alignment - IHMA - Wind Energy



**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.

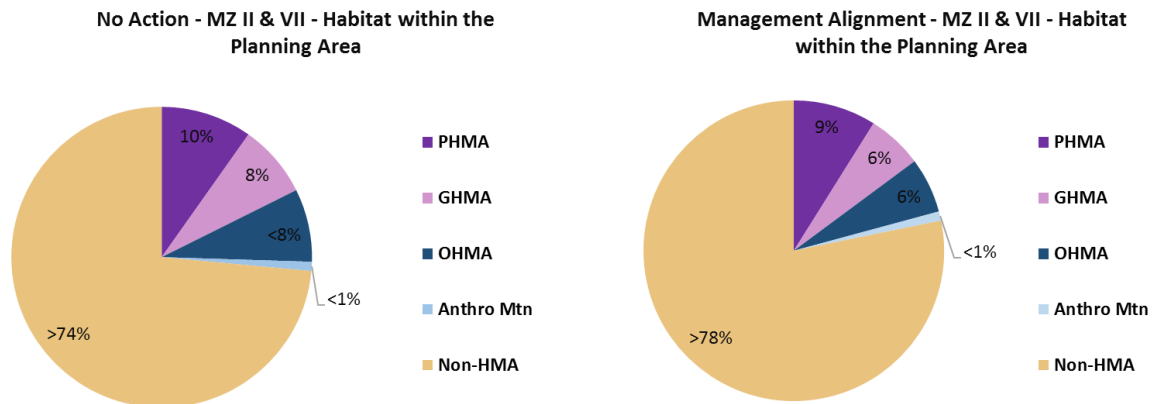
**H.2.3 Management Zone III – Utah, Nevada**

**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.

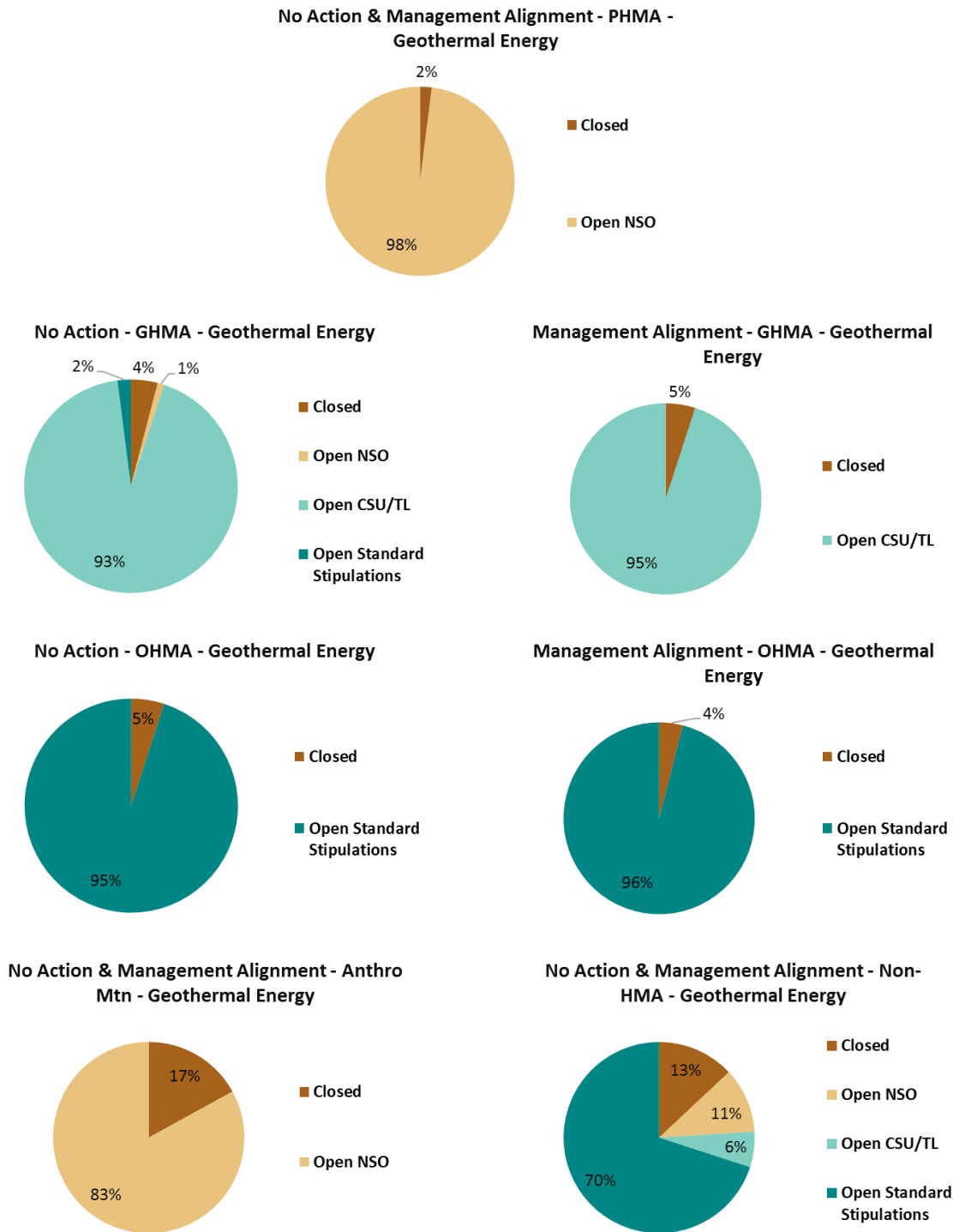
## II. Geothermal Energy

**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.

<b>Approximate Acres of Geothermal Energy Decisions in MZ III by Habitat Management Area Type</b>						
<b>Geothermal Energy</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	126,000	165,000	230,000	7,000	4,948,000	<b>5,476,000</b>
Open NSO	5,358,000	23,000	0	35,000	3,939,000	<b>9,354,000</b>
Open CSU/TL	0	3,628,000	0	0	2,135,000	<b>5,763,000</b>
Open Standard Stipulations	0	86,000	4,042,000	0	26,065,000	<b>30,193,000</b>
<b>Total</b>	<b>5,484,000</b>	<b>3,902,000</b>	<b>4,272,000</b>	<b>42,000</b>	<b>37,087,000</b>	<b>50,787,000</b>
<b>Geothermal Energy</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	124,000	176,000	159,000	7,000	4,990,000	<b>5,457,000</b>
Open NSO	5,483,000	0	0	35,000	3,961,000	<b>9,479,000</b>
Open CSU/TL	0	3,565,000	0	0	2,191,000	<b>5,756,000</b>
Open Standard Stipulations	0	0	3,534,000	0	26,554,000	<b>30,088,000</b>
<b>Total</b>	<b>5,607,000</b>	<b>3,741,000</b>	<b>3,693,000</b>	<b>42,000</b>	<b>37,696,000</b>	<b>50,780,000</b>
<b>Approximate % of Habitat Management Area by Geothermal Energy Decision in MZ III</b>						
<b>Geothermal Energy</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	2%	4%	5%	17%	13%	<b>11%</b>
Open NSO	98%	1%	0%	83%	11%	<b>18%</b>
Open CSU/TL	0%	93%	0%	0%	6%	<b>11%</b>
Open Standard Stipulations	0%	2%	95%	0%	70%	<b>59%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Geothermal Energy</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	2%	5%	4%	17%	13%	<b>11%</b>
Open NSO	98%	0%	0%	83%	11%	<b>19%</b>
Open CSU/TL	0%	95%	0%	0%	6%	<b>11%</b>
Open Standard Stipulations	0%	0%	96%	0%	70%	<b>59%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>





**Figure 27 – Geothermal Energy Decisions within MZ III**

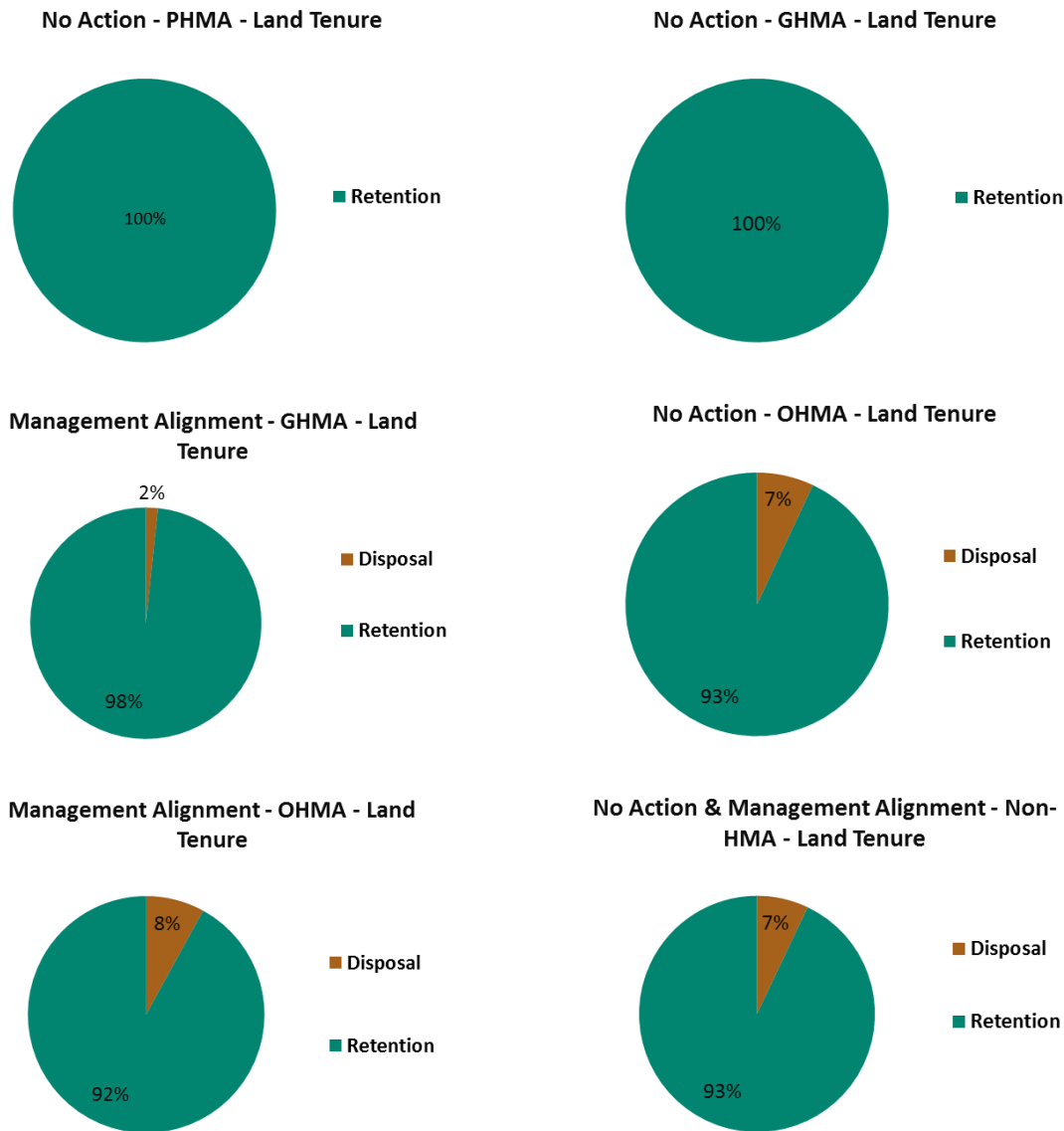
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for 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.

<b>Approximate Acres of Land Tenure Decisions in MZ III by Habitat Management Area Type</b>						
<b>Land Tenure</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Disposal	0	0	280,000	NA	2,178,000	<b>2,458,000</b>
Retention	4,722,000	3,875,000	3,992,000	NA	30,234,000	<b>42,824,000</b>
<b>Total</b>	<b>4,722,000</b>	<b>3,875,000</b>	<b>4,272,000</b>	<b>NA</b>	<b>32,413,000</b>	<b>45,283,000</b>
<b>Land Tenure</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Disposal	3,000	62,000	304,000	NA	2,214,000	<b>2,583,000</b>
Retention	4,844,000	3,679,000	3,389,000	NA	30,782,000	<b>42,694,000</b>
<b>Total</b>	<b>4,847,000</b>	<b>3,741,000</b>	<b>3,693,000</b>	<b>NA</b>	<b>32,996,000</b>	<b>45,277,000</b>
<b>Approximate % of Habitat Management Area by Land Tenure Decision in MZ III</b>						
<b>Land Tenure</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Disposal	0%	0%	7%	NA	7%	<b>5%</b>
Retention	100%	100%	93%	NA	93%	<b>95%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>
<b>Land Tenure</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Disposal	0%	2%	8%	NA	7%	<b>6%</b>
Retention	100%	98%	92%	NA	93%	<b>94%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>



**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.

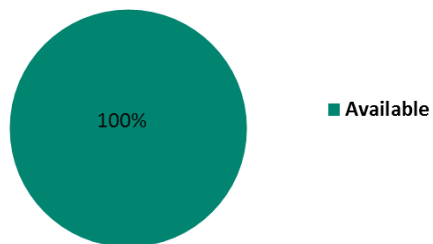
#### IV. Livestock Grazing

**Table 30 – Livestock Grazing Decisions within MZ III**

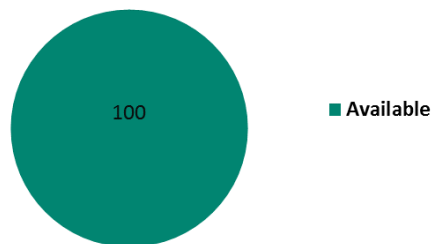
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

<b>Approximate Acres of Livestock Grazing Decisions in MZ III by Habitat Management Area Type</b>						
<b>Livestock Grazing</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Unavailable	0	0	0	NA	129,000	<b>129,000</b>
Available	4,722,000	3,868,000	4,265,000	NA	31,559,000	<b>44,415,000</b>
<b>Total</b>	<b>4,722,000</b>	<b>3,868,000</b>	<b>4,265,000</b>	<b>NA</b>	<b>31,688,000</b>	<b>44,544,000</b>
<b>Livestock Grazing</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Unavailable	0	0	0	NA	129,000	<b>129,000</b>
Available	4,845,000	3,741,000	3,690,000	NA	32,135,000	<b>44,410,000</b>
<b>Total</b>	<b>4,845,000</b>	<b>3,741,000</b>	<b>3,690,000</b>	<b>NA</b>	<b>32,264,000</b>	<b>44,539,000</b>
<b>Approximate % of Habitat Management Area by Livestock Grazing Decision in MZ III</b>						
<b>Livestock Grazing</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Unavailable	0%	0%	0%	NA	<1%	<b>&lt;1%</b>
Available	100%	100%	100%	NA	100%	<b>100%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>
<b>Livestock Grazing</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Unavailable	0%	0%	0%	NA	<1%	<b>&lt;1%</b>
Available	100%	100%	100%	NA	100%	<b>100%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>

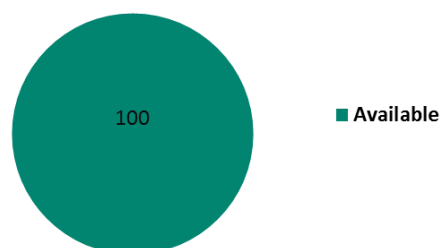
No Action & Management Alignment - PHMA - Livestock Grazing



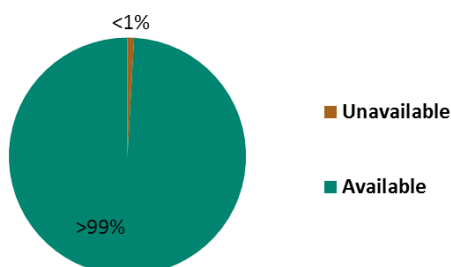
No Action & Management Alignment - GHMA - Livestock Grazing



No Action & Management Alignment - OHMA - Livestock Grazing



No Action & Management Alignment - Non-HMA - Livestock Grazing



**Figure 29 – Livestock Grazing Decisions within MZ III**

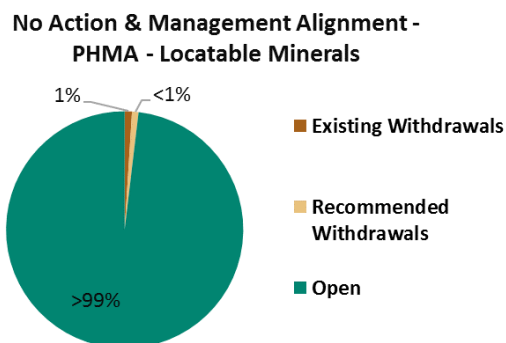
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

**V. Locatable Minerals**

**Table 31 – Locatable Minerals Decisions within MZ III**

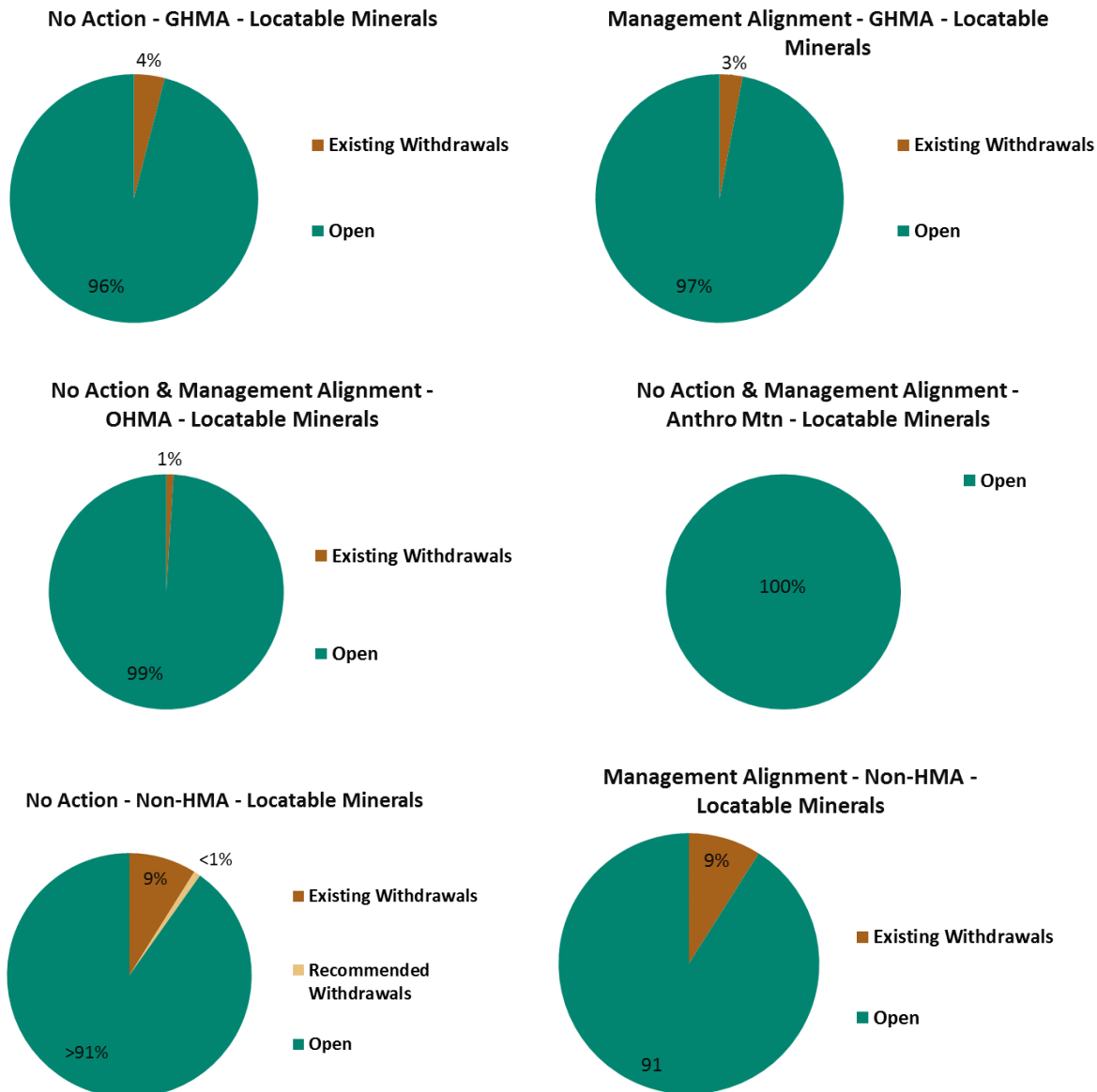
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

<b>Approximate Acres of Locatable Minerals Decisions in MZ III by Habitat Management Area Type</b>						
<b>Locatable Minerals</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Existing Withdrawals	56,000	143,000	52,000	0	3,350,000	<b>3,602,000</b>
Recommended Withdrawals	4,000	0	0	0	49,000	<b>53,000</b>
Open	5,429,000	3,788,000	4,219,000	42,000	34,853,000	<b>48,332,000</b>
<b>Total</b>	<b>5,489,000</b>	<b>3,931,000</b>	<b>4,272,000</b>	<b>42,000</b>	<b>38,253,000</b>	<b>51,987,000</b>
<b>Locatable Minerals</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Existing Withdrawals	61,000	100,000	42,000	0	3,398,000	<b>3,601,000</b>
Recommended Withdrawals	4,000	0	0	0	50,000	<b>53,000</b>
Open	5,552,000	3,641,000	3,650,000	42,000	35,444,000	<b>48,330,000</b>
<b>Total</b>	<b>5,617,000</b>	<b>3,741,000</b>	<b>3,693,000</b>	<b>42,000</b>	<b>38,892,000</b>	<b>51,985,000</b>
<b>Approximate % of Habitat Management Area by Geothermal Energy Decision in MZ III</b>						
<b>Locatable Minerals</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Existing Withdrawals	1%	4%	1%	0	9%	<b>7%</b>
Recommended Withdrawals	<1%	0%	0%	0%	<1%	<b>&lt;1%</b>
Open	99%	96%	99%	100%	91%	<b>93%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Locatable Minerals</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Existing Withdrawals	1%	3%	1%	0%	9%	<b>7%</b>
Recommended Withdrawals	<1%	0%	0%	0%	0%	<b>&lt;1%</b>
Open	99%	97%	99%	100%	91%	<b>93%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**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.

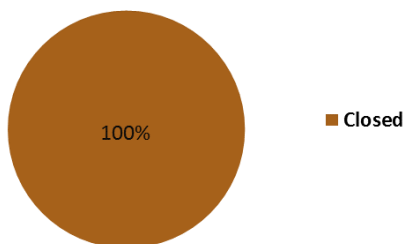
**VI. Non-Energy Leasable Minerals**

**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
<b>Total</b>	<b>5,486,000</b>	<b>3,931,000</b>	<b>4,272,000</b>	<b>42,000</b>	<b>38,256,000</b>	<b>51,987,000</b>
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
<b>Total</b>	<b>5,611,000</b>	<b>3,741,000</b>	<b>3,693,000</b>	<b>42,000</b>	<b>38,894,000</b>	<b>51,981,000</b>
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

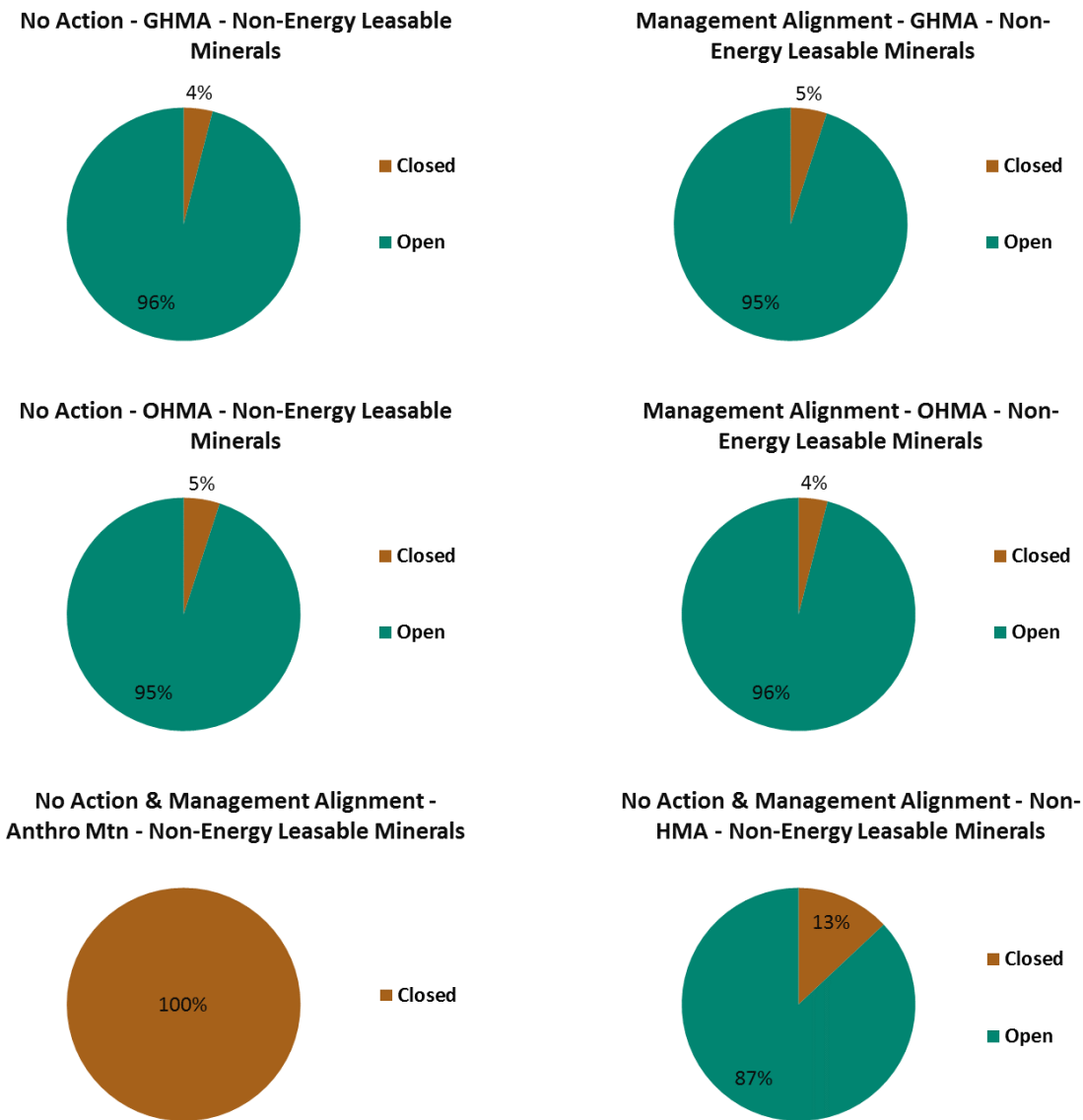
No Action & Management Alignment - PHMA - Non-Energy Leasable Minerals



**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**

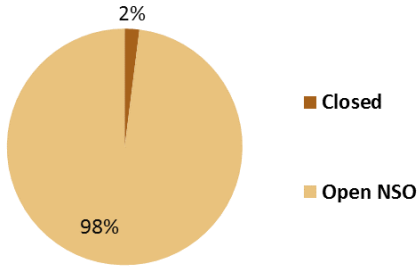
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

**VII. Fluid Minerals (Oil & Gas)****Table 33 – Fluid Mineral (Oil & Gas) Decisions within MZ III**

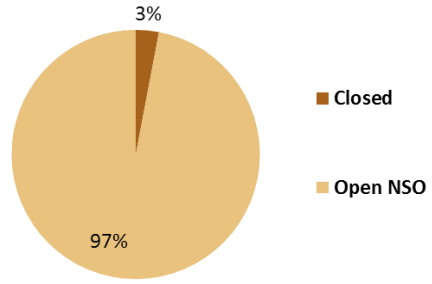
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

<b>Approximate Acres of Fluid Mineral (Oil &amp; Gas) Decisions in MZ III by Habitat Management Area Type</b>						
<b>Fluid Mineral (Oil &amp; Gas) Decisions</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	126,000	165,000	230,000	7,000	4,948,000	<b>5,476,000</b>
Open NSO	5,358,000	23,000	0	35,000	3,431,000	<b>8,847,000</b>
Open CSU/TL	0	3,628,000	0	0	2,135,000	<b>5,763,000</b>
Open Standard Stipulations	0	86,000	4,042,000	0	26,502,000	<b>30,630,000</b>
<b>Total</b>	<b>5,484,000</b>	<b>3,902,000</b>	<b>4,272,000</b>	<b>42,000</b>	<b>37,016,000</b>	<b>50,716,000</b>
<b>Fluid Mineral (Oil &amp; Gas) Decisions</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	144,000	176,000	159,000	7,000	4,990,000	<b>5,476,000</b>
Open NSO	5,464,000	0	0	35,000	3,454,000	<b>8,952,000</b>
Open CSU/TL	0	3,565,000	0	0	2,191,000	<b>5,756,000</b>
Open Standard Stipulations	0	0	3,534,000	0	26,991,000	<b>30,525,000</b>
<b>Total</b>	<b>5,607,000</b>	<b>3,741,000</b>	<b>3,693,000</b>	<b>42,000</b>	<b>37,626,000</b>	<b>50,710,000</b>
<b>Approximate % of Habitat Management Area by Fluid Mineral (Oil &amp; Gas) Decision in MZ III</b>						
<b>Fluid Mineral (Oil &amp; Gas) Decisions</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	2%	4%	5%	17%	13%	<b>11%</b>
Open NSO	98%	1%	0%	83%	9%	<b>17%</b>
Open CSU/TL	0%	93%	0%	0%	6%	<b>11%</b>
Open Standard Stipulations	0%	2%	95%	0%	72%	<b>60%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Fluid Mineral (Oil &amp; Gas) Decisions</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	3%	5%	4%	17%	13%	<b>11%</b>
Open NSO	97%	0%	0%	83%	9%	<b>18%</b>
Open CSU/TL	0%	95%	0%	0%	6%	<b>11%</b>
Open Standard Stipulations	0%	0%	96%	0%	72%	<b>60%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

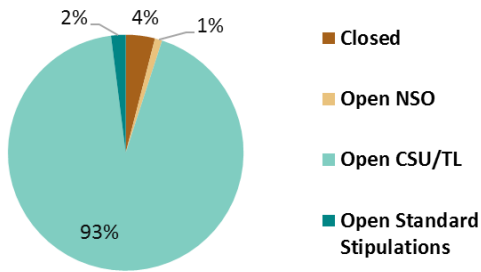
**No Action - PHMA - Fluid Mineral Leasing (Oil & Gas)**



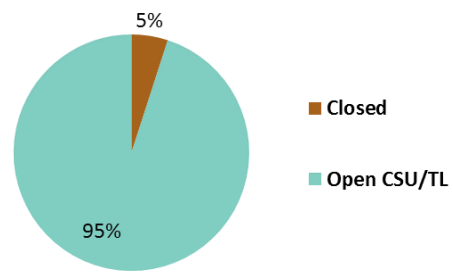
**Management Alignment - PHMA - Fluid Mineral Leasing (Oil & Gas)**



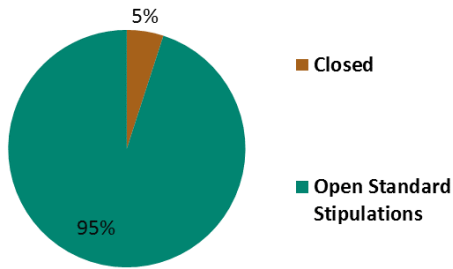
**No Action - GHMA - Fluid Mineral Leasing (Oil & Gas)**



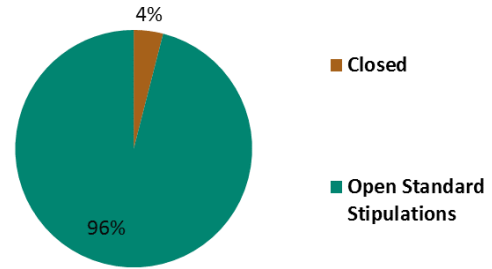
**Management Alignment - GHMA - Fluid Mineral Leasing (Oil & Gas)**



**No Action - OHMA - Fluid Mineral Leasing (Oil & Gas)**



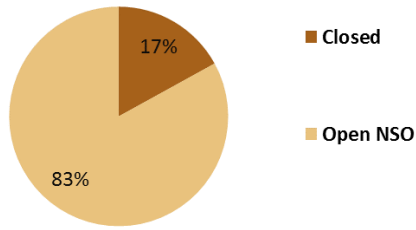
**Management Alignment - OHMA - Fluid Mineral Leasing (Oil & Gas)**



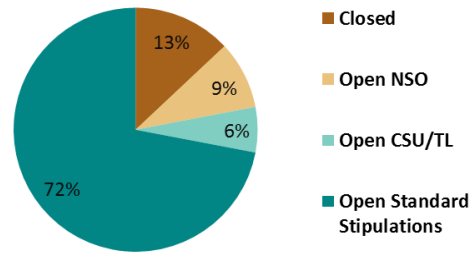
**Figure 32 – Fluid Mineral (Oil & Gas) Decisions within MZ III**

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.

No Action & Management Alignment - Anthro Mtn - Fluid Mineral Leasing (Oil & Gas)



No Action & Management Alignment - Non-HMA - Fluid Mineral Leasing (Oil & Gas)



**Figure 32 (cont'd) – Fluid Mineral (Oil & Gas) Decisions within MZ III**

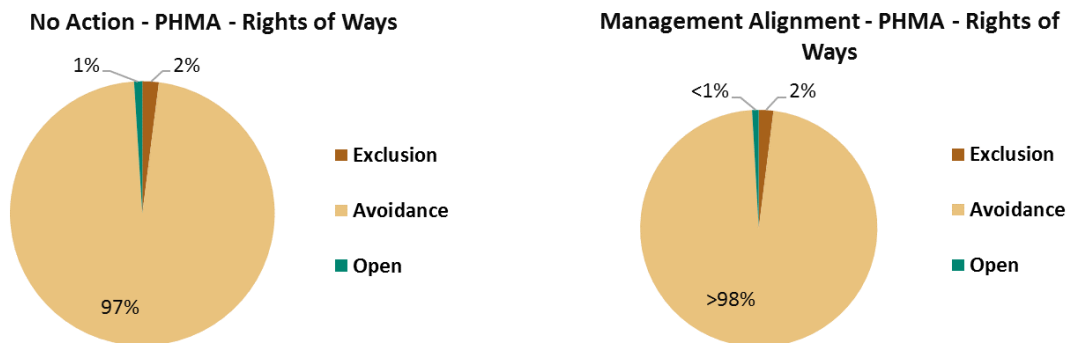
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

**VIII. Rights-of-Ways**

**Table 34 – Rights-of-Ways Decisions within MZ III**

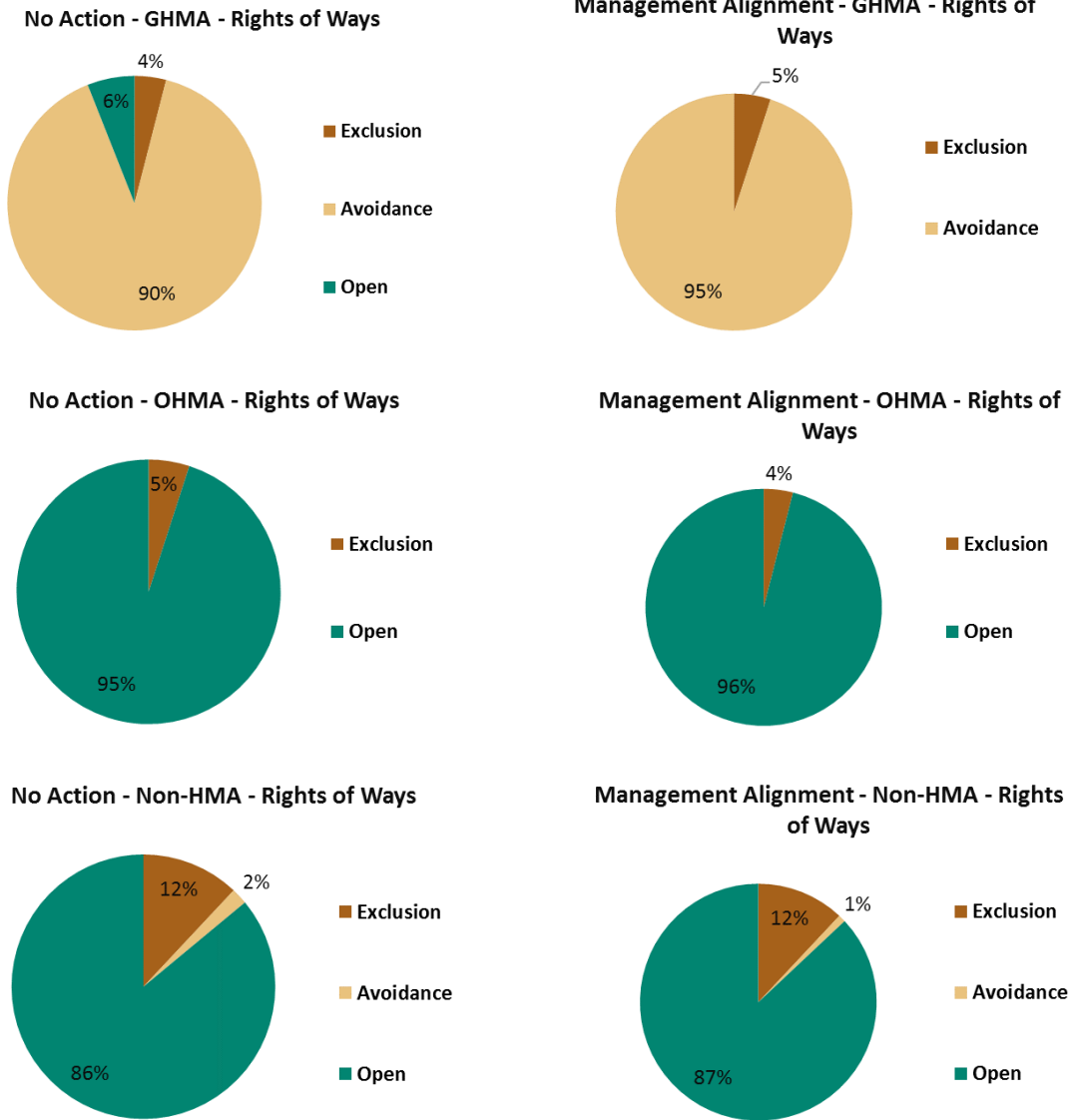
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

<b>Approximate Acres of Rights-of-Ways Decisions in MZ III by Habitat Management Area Type</b>						
<b>Rights-of-Ways</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Exclusion	86,000	164,000	230,000	NA	3,794,000	<b>4,274,000</b>
Avoidance	4,591,000	3,495,000	0	NA	799,000	<b>8,884,000</b>
Open	46,000	216,000	4,043,000	NA	27,890,000	<b>32,195,000</b>
<b>Total</b>	<b>4,722,000</b>	<b>3,875,000</b>	<b>4,272,000</b>	<b>NA</b>	<b>32,483,000</b>	<b>45,353,000</b>
<b>Rights-of-Ways</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Exclusion	104,000	176,000	159,000	NA	3,837,000	<b>4,275,000</b>
Avoidance	4,726,000	3,565,000	0	NA	373,000	<b>8,664,000</b>
Open	17,000	0	3,534,000	NA	28,857,000	<b>32,408,000</b>
<b>Total</b>	<b>4,847,000</b>	<b>3,741,000</b>	<b>3,693,000</b>	<b>NA</b>	<b>33,066,000</b>	<b>45,348,000</b>
<b>Approximate % of Habitat Management Area by Rights-of-Ways Decision in MZ III</b>						
<b>Rights-of-Ways</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Exclusion	2%	4%	5%	NA	12%	<b>9%</b>
Avoidance	97%	90%	0%	NA	2%	<b>20%</b>
Open	1%	6%	95%	NA	86%	<b>71%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>
<b>Rights-of-Ways</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Exclusion	2%	5%	4%	NA	12%	<b>9%</b>
Avoidance	98%	95%	0%	NA	1%	<b>19%</b>
Open	<1%	0%	96%	NA	87%	<b>71%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>



**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.

<b>Approximate Acres of Salable Minerals Materials Decisions in MZ III by Habitat Management Area Type</b>						
<b>Salable Minerals Materials</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	4,722,000	172,000	230,000	NA	4,646,000	<b>9,770,000</b>
Open	0	3,707,000	4,042,000	NA	27,834,000	<b>35,583,000</b>
<b>Total</b>	<b>4,723,000</b>	<b>3,878,000</b>	<b>4,272,000</b>	<b>NA</b>	<b>32,479,000</b>	<b>45,353,000</b>
<b>Salable Minerals Materials</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	4,847,000	176,000	159,000	NA	4,694,000	<b>9,876,000</b>
Open	0	3,565,000	3,534,000	NA	28,372,000	<b>35,471,000</b>
<b>Total</b>	<b>4,847,000</b>	<b>3,741,000</b>	<b>3,693,000</b>	<b>NA</b>	<b>33,066,000</b>	<b>45,347,000</b>
<b>Approximate % of Habitat Management Area by Non-Energy Leasable Minerals Decision in MZ III</b>						
<b>Salable Minerals Materials</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	100%	4%	5%	NA	14%	<b>22%</b>
Open	0%	96%	95%	NA	86%	<b>78%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>
<b>Salable Minerals Materials</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	100%	5%	4%	NA	14%	<b>22%</b>
Open	0%	95%	96%	NA	86%	<b>78%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>



**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.

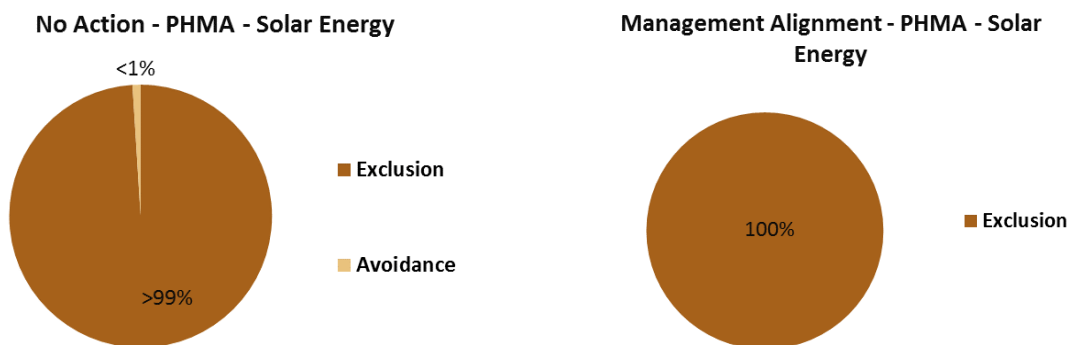


**X. Solar Energy**

**Table 36 – Solar Energy Decisions within MZ III**

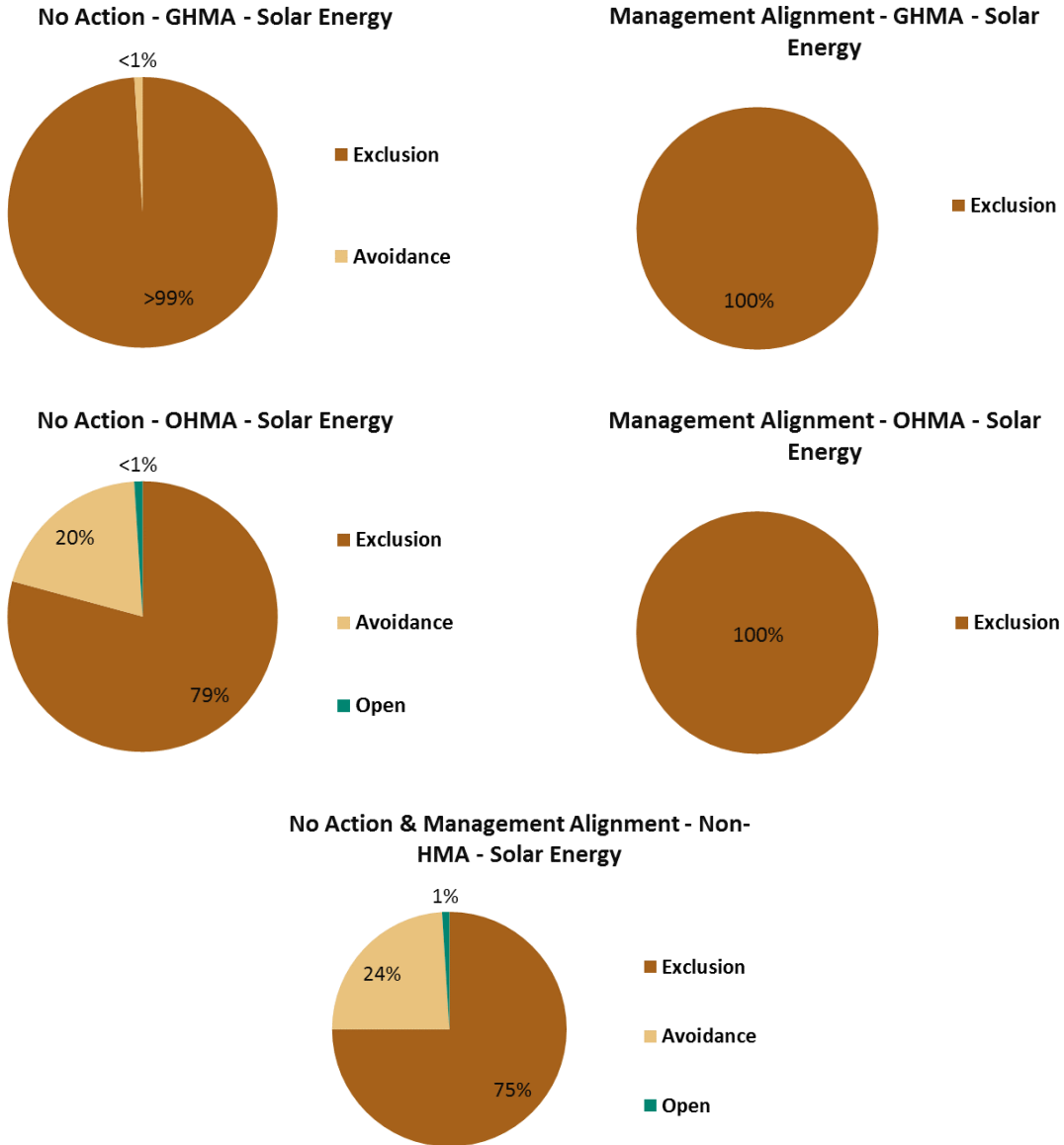
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual 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
<b>Total</b>	<b>4,732,000</b>	<b>3,889,000</b>	<b>4,274,000</b>	<b>NA</b>	<b>32,398,000</b>	<b>45,294,000</b>
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
<b>Total</b>	<b>4,858,000</b>	<b>3,748,000</b>	<b>3,699,000</b>	<b>NA</b>	<b>32,983,000</b>	<b>45,288,000</b>
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>



**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.



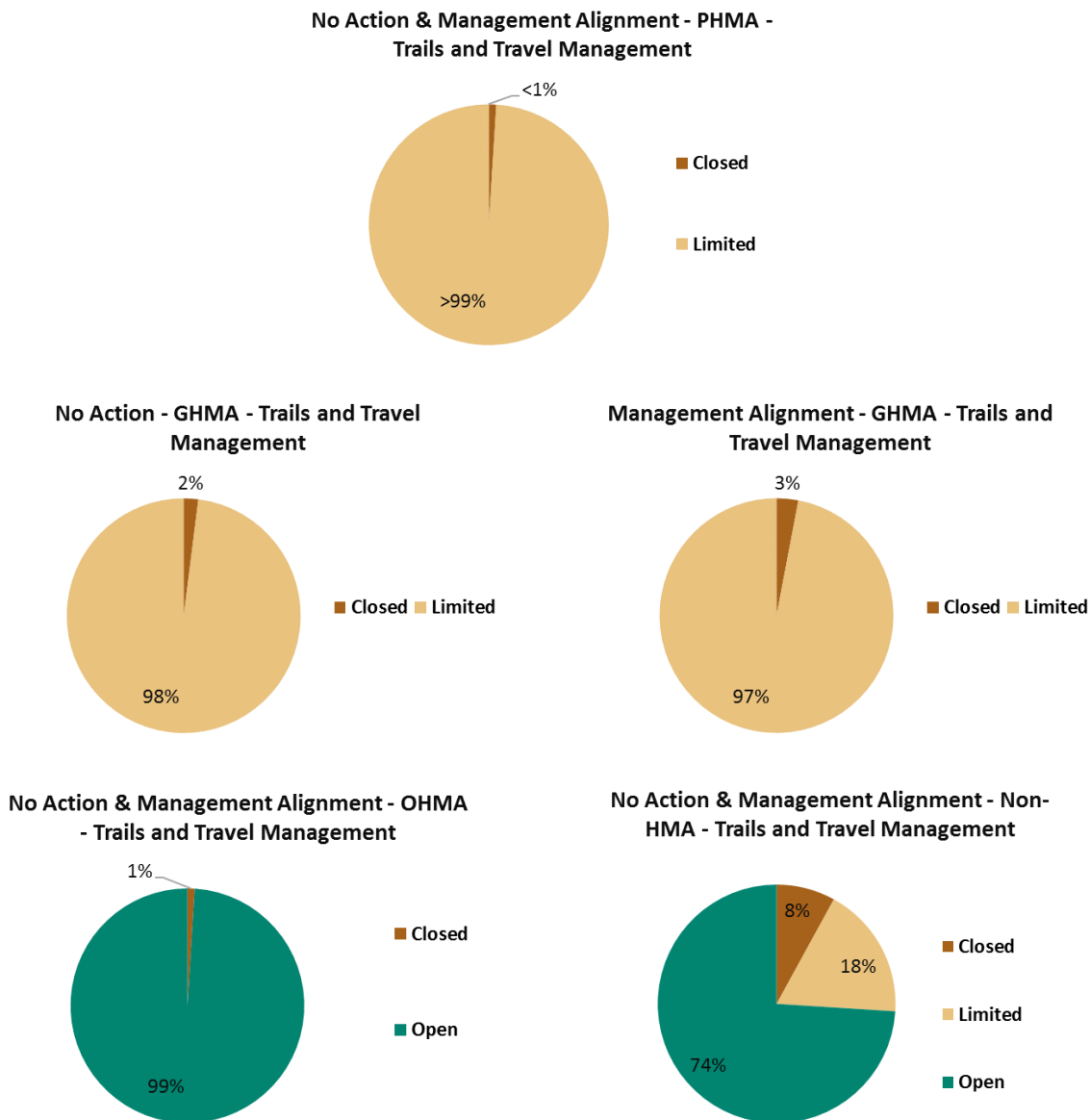
**Figure 35 (cont'd) – Solar Energy Decisions within MZ III**

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.

<b>Approximate Acres of Trails and Travel Management Decisions in MZ III by Habitat Management Area Type</b>						
<b>Trails and Travel Management Decisions</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	16,000	84,000	52,000	NA	2,517,000	<b>2,669,000</b>
Limited	4,702,000	3,791,000	1,000	NA	5,791,000	<b>14,285,000</b>
Open	0	0	4,219,000	NA	24,153,000	<b>28,372,000</b>
<b>Total</b>	<b>4,718,000</b>	<b>3,875,000</b>	<b>4,273,000</b>	<b>NA</b>	<b>32,461,000</b>	<b>45,326,000</b>
<b>Trails and Travel Management Decisions</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	21,000	100,000	42,000	NA	2,505,000	<b>2,668,000</b>
Limited	4,821,000	3,642,000	14,000	NA	6,095,000	<b>14,572,000</b>
Open	0	0	3,637,000	NA	24,429,000	<b>28,066,000</b>
<b>Total</b>	<b>4,842,000</b>	<b>3,741,000</b>	<b>3,693,000</b>	<b>NA</b>	<b>33,030,000</b>	<b>45,307,000</b>
<b>Approximate % of Habitat Management Area by Trails and Travel Management Decisions Decision in MZ III</b>						
<b>Trails and Travel Management Decisions</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	<1%	2%	1%	NA	8%	<b>6%</b>
Limited	100%	98%	0%	NA	18%	<b>32%</b>
Open	0%	0%	99%	NA	74%	<b>63%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>
<b>Trails and Travel Management Decisions</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	<1%	3%	1%	NA	8%	<b>6%</b>
Limited	100%	97%	0%	NA	18%	<b>32%</b>
Open	0%	0%	98%	NA	74%	<b>62%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>



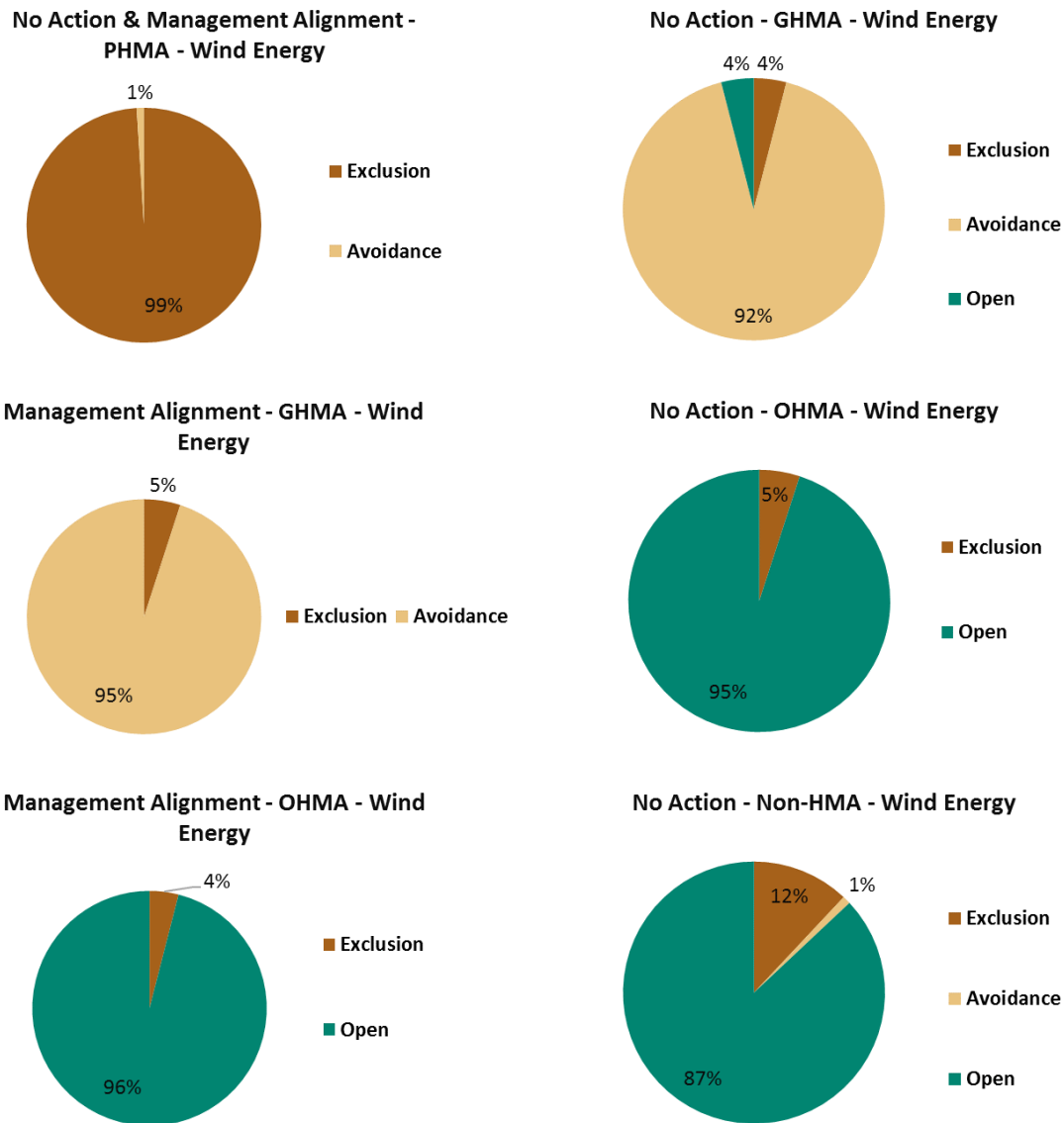
**Figure 36 – Trails and Travel Management Decisions within MZ III**

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.

<b>Approximate Acres of Wind Energy Decisions in MZ III by Habitat Management Area Type</b>						
<b>Wind Energy</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Exclusion	4,669,000	166,000	230,000	NA	3,939,000	<b>9,004,000</b>
Avoidance	0	3,572,000	0	NA	212,000	<b>3,784,000</b>
Open	54,000	137,000	4,042,000	NA	28,265,000	<b>32,498,000</b>
<b>Total</b>	<b>4,723,000</b>	<b>3,876,000</b>	<b>4,272,000</b>	<b>NA</b>	<b>32,415,000</b>	<b>45,286,000</b>
<b>Wind Energy</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Exclusion	4,793,000	176,000	159,000	NA	3,982,000	<b>9,110,000</b>
Avoidance	0	3,565,000	0	NA	212,000	<b>3,777,000</b>
Open	54,000	0	3,534,000	NA	28,805,000	<b>32,393,000</b>
<b>Total</b>	<b>4,847,000</b>	<b>3,741,000</b>	<b>3,693,000</b>	<b>NA</b>	<b>32,999,000</b>	<b>45,280,000</b>
<b>Approximate % of Habitat Management Area by Wind Energy Decision in MZ III</b>						
<b>Wind Energy</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Exclusion	0%	92%	0%	NA	1%	<b>8%</b>
Avoidance	99%	4%	5%	NA	12%	<b>20%</b>
Open	1%	4%	95%	NA	87%	<b>72%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>
<b>Wind Energy</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Anthro Mtn</b>	<b>Non-HMA</b>	<b>Total</b>
Exclusion	0%	95%	0%	NA	1%	<b>8%</b>
Avoidance	99%	5%	4%	NA	12%	<b>20%</b>
Open	1%	0%	96%	NA	87%	<b>72%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>NA</b>	<b>100%</b>	<b>100%</b>



**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.

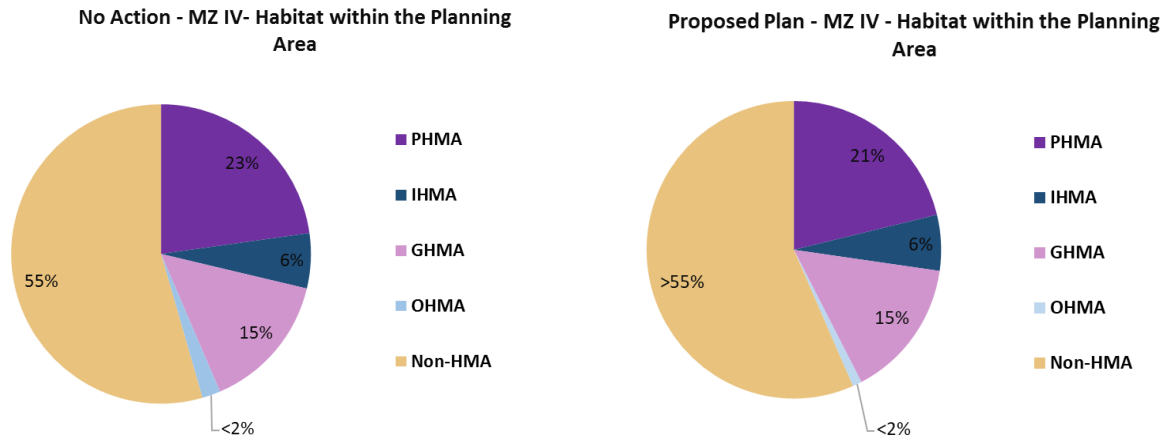
**H.2.4 Management Zone IV – Idaho, Utah, Nevada, Oregon**

**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

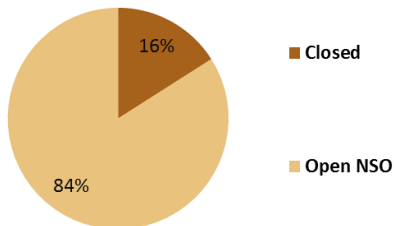
**Table 40 – Geothermal Energy Decisions within MZ IV**

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.

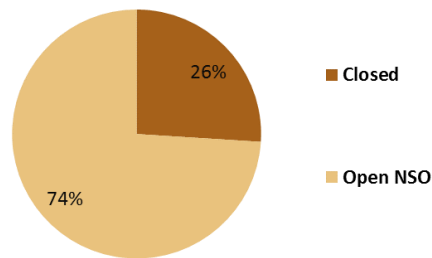
<b>Approximate Acres of Geothermal Energy Decisions in MZ IV by Habitat Management Area Type</b>						
<b>Geothermal Energy</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	1,923,000	918,000	1,130,000	4,000	9,440,000	<b>13,415,000</b>
Open NSO	10,256,000	2,638,000	424,000	0	1,125,000	<b>14,443,000</b>
Open CSU/TL	0	0	4,881,000	0	2,196,000	<b>7,077,000</b>
Open Standard Stipulations	0	3,000	20,000	704,000	4,529,000	<b>5,257,000</b>
<b>Total</b>	<b>12,178,000</b>	<b>3,560,000</b>	<b>6,455,000</b>	<b>708,000</b>	<b>17,290,000</b>	<b>40,191,000</b>
<b>Geothermal Energy</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	1,913,000	918,000	1,133,000	6,000	9,439,000	<b>13,410,000</b>
Open NSO	9,848,000	2,702,000	424,000	0	1,125,000	<b>14,099,000</b>
Open CSU/TL	0	0	4,974,000	0	2,196,000	<b>7,169,000</b>
Open Standard Stipulations	0	3,000	20,000	616,000	4,855,000	<b>5,494,000</b>
<b>Total</b>	<b>11,762,000</b>	<b>3,624,000</b>	<b>6,550,000</b>	<b>622,000</b>	<b>17,615,000</b>	<b>40,173,000</b>
<b>Approximate % of Habitat Management Area by Geothermal Energy Decision in MZ IV</b>						
<b>Geothermal Energy</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	16%	26%	18%	1%	55%	<b>33%</b>
Open NSO	84%	74%	7%	0%	7%	<b>36%</b>
Open CSU/TL	0%	0%	76%	0%	13%	<b>18%</b>
Open Standard Stipulations	0%	0%	0%	99%	26%	<b>13%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Geothermal Energy</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	16%	25%	17%	1%	54%	<b>33%</b>
Open NSO	84%	75%	6%	0%	6%	<b>35%</b>
Open CSU/TL	0%	0%	76%	0%	12%	<b>18%</b>
Open Standard Stipulations	0%	0%	0%	99%	28%	<b>14%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



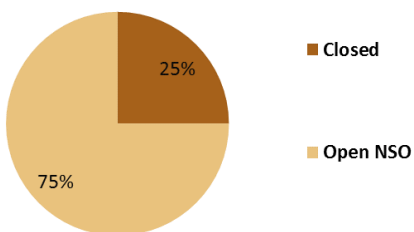
No Action & Management Alignment - PHMA - Geothermal Energy



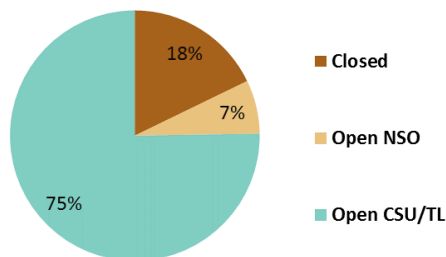
No Action - IHMA - Geothermal Energy



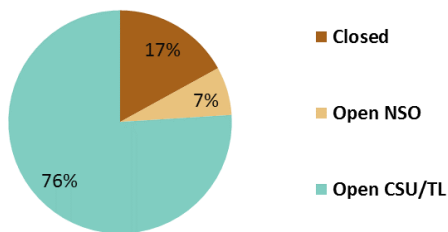
Management Alignment - IHMA - Geothermal Energy



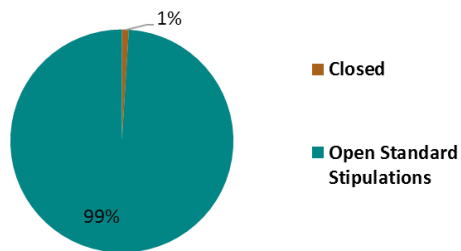
No Action - GHMA - Geothermal Energy



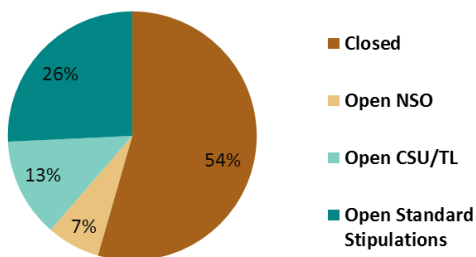
Management Alignment - GHMA - Geothermal Energy



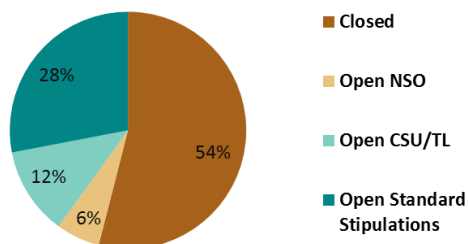
No Action & Management Alignment - OHMA - Geothermal Energy



No Action - Non-HMA - Geothermal Energy



Management Alignment - Non-HMA - Geothermal Energy



**Figure 39 – Geothermal Energy Decisions within MZ IV**

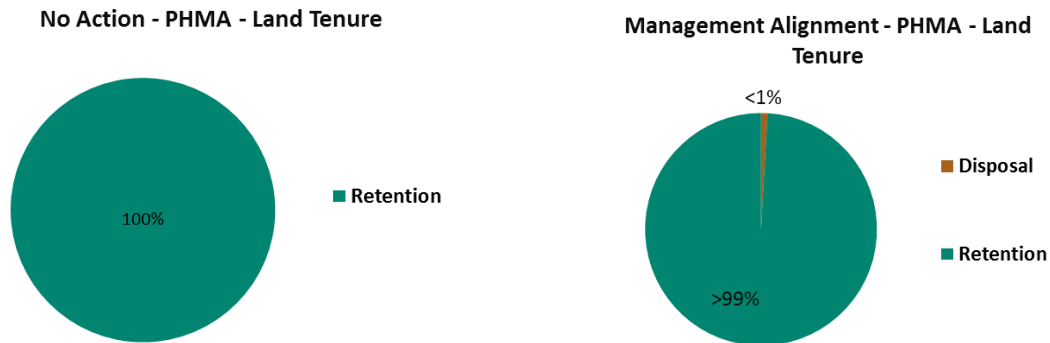
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

III. Land Tenure

**Table 41 – 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.

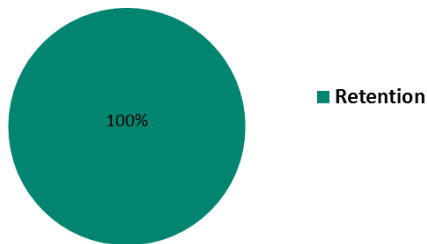
Approximate Acres of Land Tenure Decisions in MZ IV by Habitat Management Area Type						
Land Tenure	No Action					Total
	PHMA	IHMA	GHMA	OHMA	Non-HMA	
Disposal	0	0	1,000	146,000	659,000	805,000
Retention	10,726,000	2,719,000	4,948,000	562,000	4,277,000	23,232,000
<b>Total</b>	<b>10,727,000</b>	<b>2,719,000</b>	<b>4,949,000</b>	<b>708,000</b>	<b>4,935,000</b>	<b>24,038,000</b>
Land Tenure	Management Alignment					Total
	PHMA	IHMA	GHMA	OHMA	Non-HMA	
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
<b>Total</b>	<b>10,325,000</b>	<b>2,780,000</b>	<b>5,043,000</b>	<b>622,000</b>	<b>5,261,000</b>	<b>24,032,000</b>
Approximate % of Habitat Management Area by Land Tenure Decision in MZ III						
Land Tenure	No Action					Total
	PHMA	IHMA	GHMA	OHMA	Non-HMA	
Disposal	0%	0%	<1%	21%	13%	3%
Retention	100%	100%	100%	79%	87%	97%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Land Tenure	Management Alignment					Total
	PHMA	IHMA	GHMA	OHMA	Non-HMA	
Disposal	<1%	0%	<1%	14%	15%	4%
Retention	100%	100%	100%	86%	85%	96%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



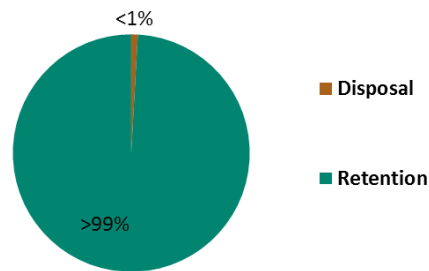
**Figure 40 – Land Tenure Decisions within MZ IV**

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.

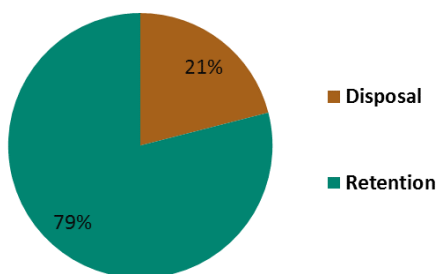
No Action & Management Alignment - IHMA  
- Land Tenure



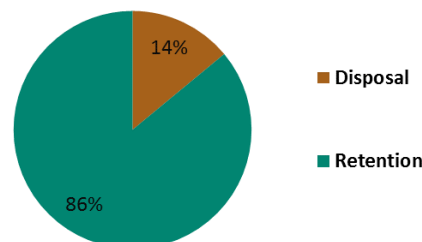
No Action & Management Alignment - GHMA - Land Tenure



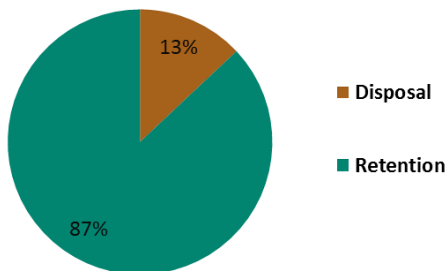
No Action - OHMA - Land Tenure



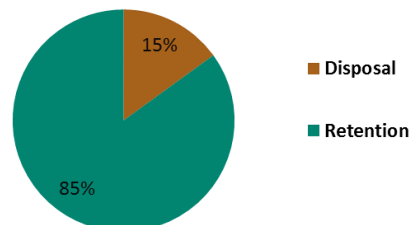
Management Alignment - OHMA - Land Tenure



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.

<b>Approximate Acres of Livestock Grazing Decisions in MZ IV by Habitat Management Area Type</b>						
<b>Livestock Grazing</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Unavailable	182,000	18,000	43,000	0	92,000	<b>335,000</b>
Available	10,515,000	2,701,000	4,923,000	709,000	4,562,000	<b>23,411,000</b>
<b>Total</b>	<b>10,697,000</b>	<b>2,719,000</b>	<b>4,966,000</b>	<b>709,000</b>	<b>4,655,000</b>	<b>23,746,000</b>
<b>Livestock Grazing</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Unavailable	182,000	18,000	43,000	0	92,000	<b>335,000</b>
Available	10,112,000	2,762,000	5,029,000	620,000	4,883,000	<b>23,406,000</b>
<b>Total</b>	<b>10,294,000</b>	<b>2,780,000</b>	<b>5,072,000</b>	<b>620,000</b>	<b>4,975,000</b>	<b>23,740,000</b>
<b>Approximate % of Habitat Management Area by Livestock Grazing Decision in MZ IV</b>						
<b>Livestock Grazing</b>	<b>No Action &amp; Management Alignment</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Unavailable	2%	1%	1%	0%	2%	<b>1%</b>
Available	98%	99%	99%	100%	98%	<b>99%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**Figure 41 – 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**

Acreages 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.

<b>Approximate Acres of Locatable Minerals Decisions in MZ IV by Habitat Management Area Type</b>						
<b>Locatable Minerals</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Existing Withdrawals	1,079,000	442,000	432,000	0	3,606,000	<b>5,560,000</b>
Recommended Withdrawals	4,836,000	0	2,000	0	0	<b>4,838,000</b>
Open	6,074,000	2,858,000	6,055,000	708,000	13,798,000	<b>29,492,000</b>
<b>Total</b>	<b>11,990,000</b>	<b>3,300,000</b>	<b>6,489,000</b>	<b>708,000</b>	<b>17,404,000</b>	<b>39,891,000</b>
<b>Locatable Minerals</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Existing Withdrawals	1,078,000	442,000	431,000	0	3,605,000	<b>5,556,000</b>
Recommended Withdrawals	0	0	2,000	0	0	<b>2,000</b>
Open	10,518,000	2,923,000	6,151,000	622,000	14,113,000	<b>34,327,000</b>
<b>Total</b>	<b>11,597,000</b>	<b>3,364,000</b>	<b>6,584,000</b>	<b>622,000</b>	<b>17,718,000</b>	<b>39,885,000</b>
<b>Approximate % of Habitat Management Area by Geothermal Energy Decision in MZ IV</b>						
<b>Locatable Minerals</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Existing Withdrawals	9%	13%	7%	0%	21%	<b>14%</b>
Recommended Withdrawals	40%	0%	0%	0%	0%	<b>12%</b>
Open	51%	87%	93%	100%	79%	<b>74%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Locatable Minerals</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Existing Withdrawals	9%	13%	9%	0%	20%	<b>14%</b>
Recommended Withdrawals	0%	0%	<1%	0%	0%	<b>0%</b>
Open	91%	87%	91%	100%	80%	<b>86%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**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

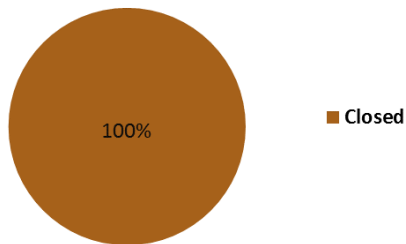
**Table 44 – Non-Energy Leasable Minerals Decisions within MZ IV**

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.

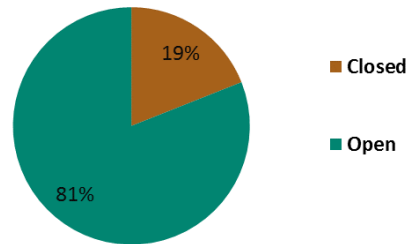
<b>Approximate Acres of Non-Energy Leasable Minerals Decisions in MZ IV by Habitat Management Area Type</b>						
<b>Non-Energy Leasable Minerals</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	12,180,000	682,000	1,059,000	4,000	9,139,000	<b>23,064,000</b>
Open	0	2,877,000	5,413,000	704,000	8,375,000	<b>17,369,000</b>
<b>Total</b>	<b>12,180,000</b>	<b>3,559,000</b>	<b>6,472,000</b>	<b>708,000</b>	<b>17,514,000</b>	<b>40,433,000</b>
<b>Non-Energy Leasable Minerals</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	11,775,000	682,000	1,062,000	6,000	9,138,000	<b>22,663,000</b>
Open	0	2,941,000	5,505,000	616,000	8,701,000	<b>17,763,000</b>
<b>Total</b>	<b>11,775,000</b>	<b>3,624,000</b>	<b>6,567,000</b>	<b>622,000</b>	<b>17,839,000</b>	<b>40,426,000</b>
<b>Approximate % of Habitat Management Area by Non-Energy Leasable Minerals Decision in MZ IV</b>						
<b>Non-Energy Leasable Minerals</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	100%	19%	16%	1%	52%	<b>57%</b>
Open	0%	81%	84%	99%	48%	<b>43%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Non-Energy Leasable Minerals</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	100%	19%	16%	1%	51%	<b>56%</b>
Open	0%	81%	84%	99%	49%	<b>44%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



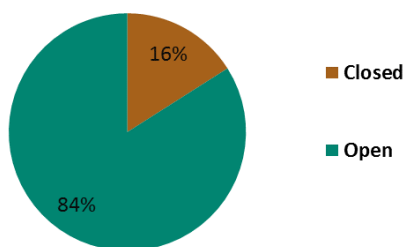
**No Action & Management Alignment - PHMA - Non-Energy Leasable Minerals**



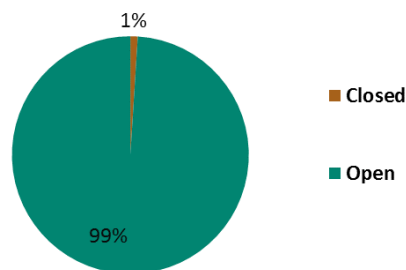
**Management Alignment - IHMA - Non-Energy Leasable Minerals**



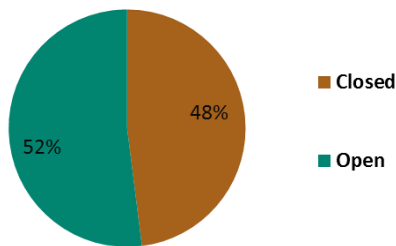
**Management Alignment - GHMA - Non-Energy Leasable Minerals**



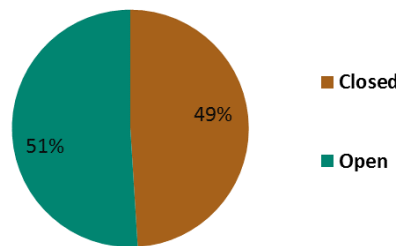
**Management Alignment - OHMA - Non-Energy Leasable Minerals**



**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**

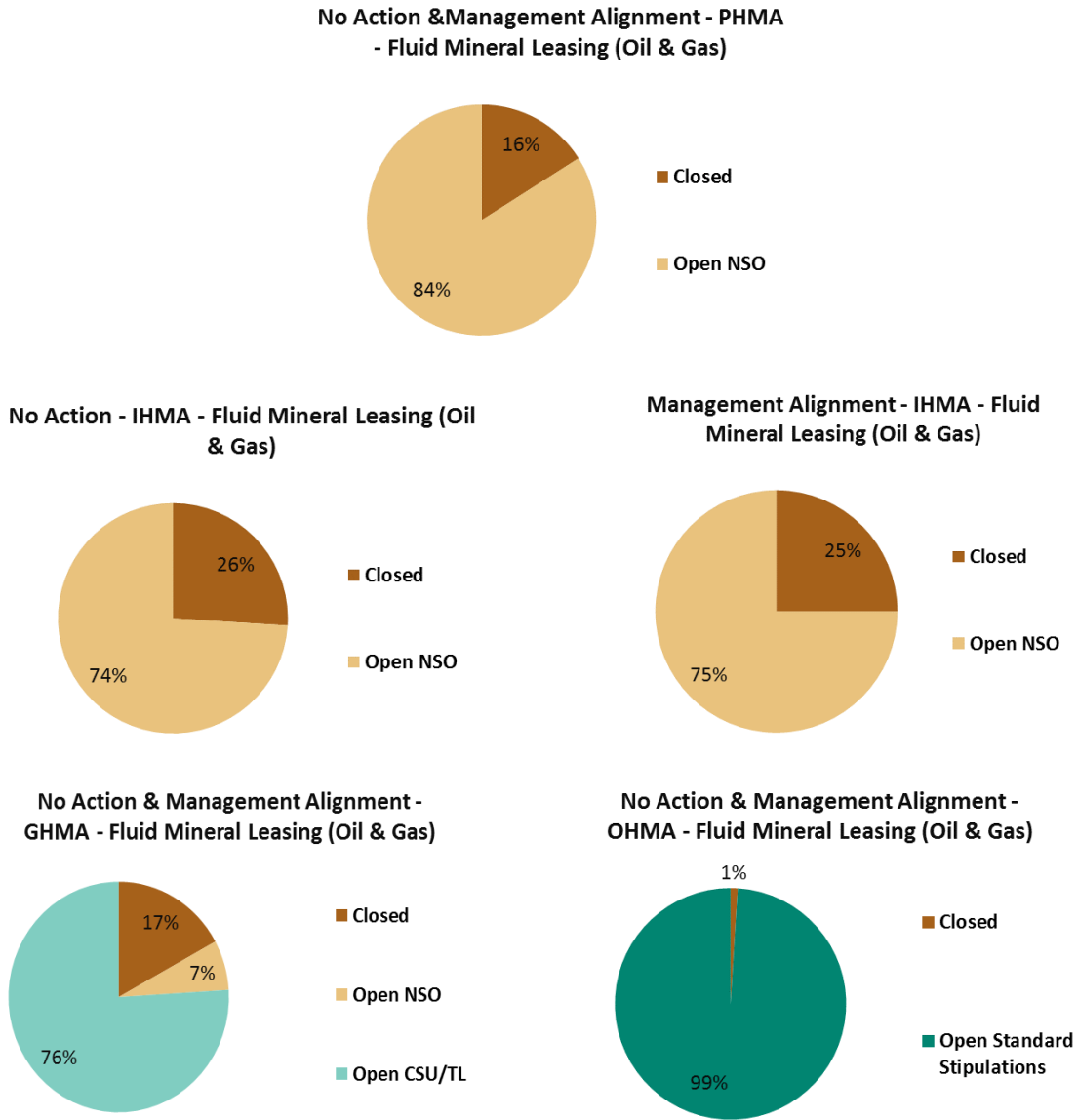
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for 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.

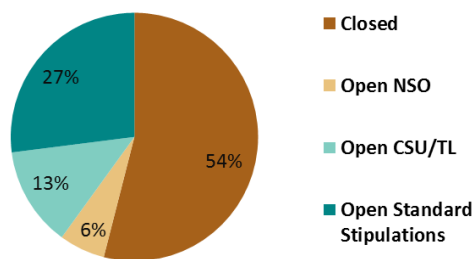
<b>Approximate Acres of Fluid Mineral (Oil &amp; Gas) Decisions in MZ IV by Habitat Management Area Type</b>						
<b>Fluid Mineral (Oil &amp; Gas) Decisions</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	1,924,000	1,136,000	1,136,000	4,000	9,542,000	<b>13,523,000</b>
Open NSO	10,245,000	436,000	436,000	0	1,164,000	<b>14,493,000</b>
Open CSU/TL	18,000	4,947,000	4,947,000	0	2,266,000	<b>7,230,000</b>
Open Standard Stipulations	1,000	3,000	3,000	704,000	4,729,000	<b>5,437,000</b>
<b>Total</b>	<b>12,187,000</b>	<b>6,522,000</b>	<b>6,522,000</b>	<b>708,000</b>	<b>17,701,000</b>	<b>40,683,000</b>
<b>Fluid Mineral (Oil &amp; Gas) Decisions</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	1,917,000	917,000	1,138,000	6,000	9,541,000	<b>13,520,000</b>
Open NSO	9,846,000	2,712,000	436,000	0	1,176,000	<b>14,171,000</b>
Open CSU/TL	17,000	0	5,039,000	0	2,266,000	<b>7,322,000</b>
Open Standard Stipulations	1,000	0	3,000	616,000	5,043,000	<b>5,663,000</b>
<b>Total</b>	<b>11,782,000</b>	<b>3,629,000</b>	<b>6,616,000</b>	<b>622,000</b>	<b>18,027,000</b>	<b>40,676,000</b>
<b>Approximate % of Habitat Management Area by Fluid Mineral (Oil &amp; Gas) Decision in MZ IV</b>						
<b>Fluid Mineral (Oil &amp; Gas) Decisions</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	16%	26%	17%	1%	54%	<b>33%</b>
Open NSO	84%	74%	7%	0%	7%	<b>36%</b>
Open CSU/TL	<1%	0%	76%	0%	13%	<b>18%</b>
Open Standard Stipulations	<1%	0%	<1%	99%	27%	<b>13%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Fluid Mineral (Oil &amp; Gas) Decisions</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	16%	25%	17%	1%	53%	<b>33%</b>
Open NSO	84%	75%	7%	0%	7%	<b>35%</b>
Open CSU/TL	<1%	0%	76%	0%	13%	<b>18%</b>
Open Standard Stipulations	<1%	0%	<1%	99%	28%	<b>14%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



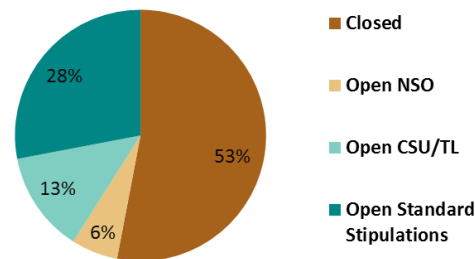
**Figure 44 – Fluid Mineral (Oil & Gas) Decisions within MZ IV**

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.

No Action - Non-HMA - Fluid Mineral Leasing (Oil & Gas)



Management Alignment - Non-HMA - Fluid Mineral Leasing (Oil & Gas)



**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.

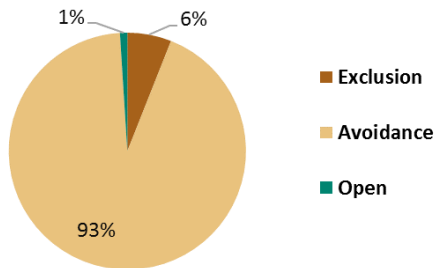
VIII. Rights-of-Ways

**Table 46 – Rights-of-Ways Decisions within MZ IV**

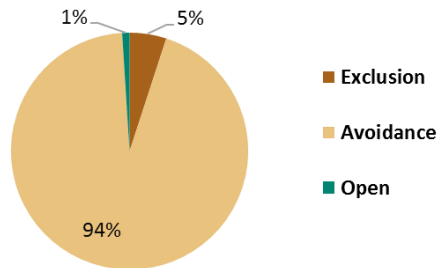
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for 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
<b>Total</b>	<b>10,728,000</b>	<b>2,719,000</b>	<b>5,192,000</b>	<b>708,000</b>	<b>5,088,000</b>	<b>24,435,000</b>
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
<b>Total</b>	<b>10,322,000</b>	<b>2,780,000</b>	<b>5,286,000</b>	<b>621,000</b>	<b>5,420,000</b>	<b>24,429,000</b>
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

No Action & Management Alignment - PHMA - Rights of Ways

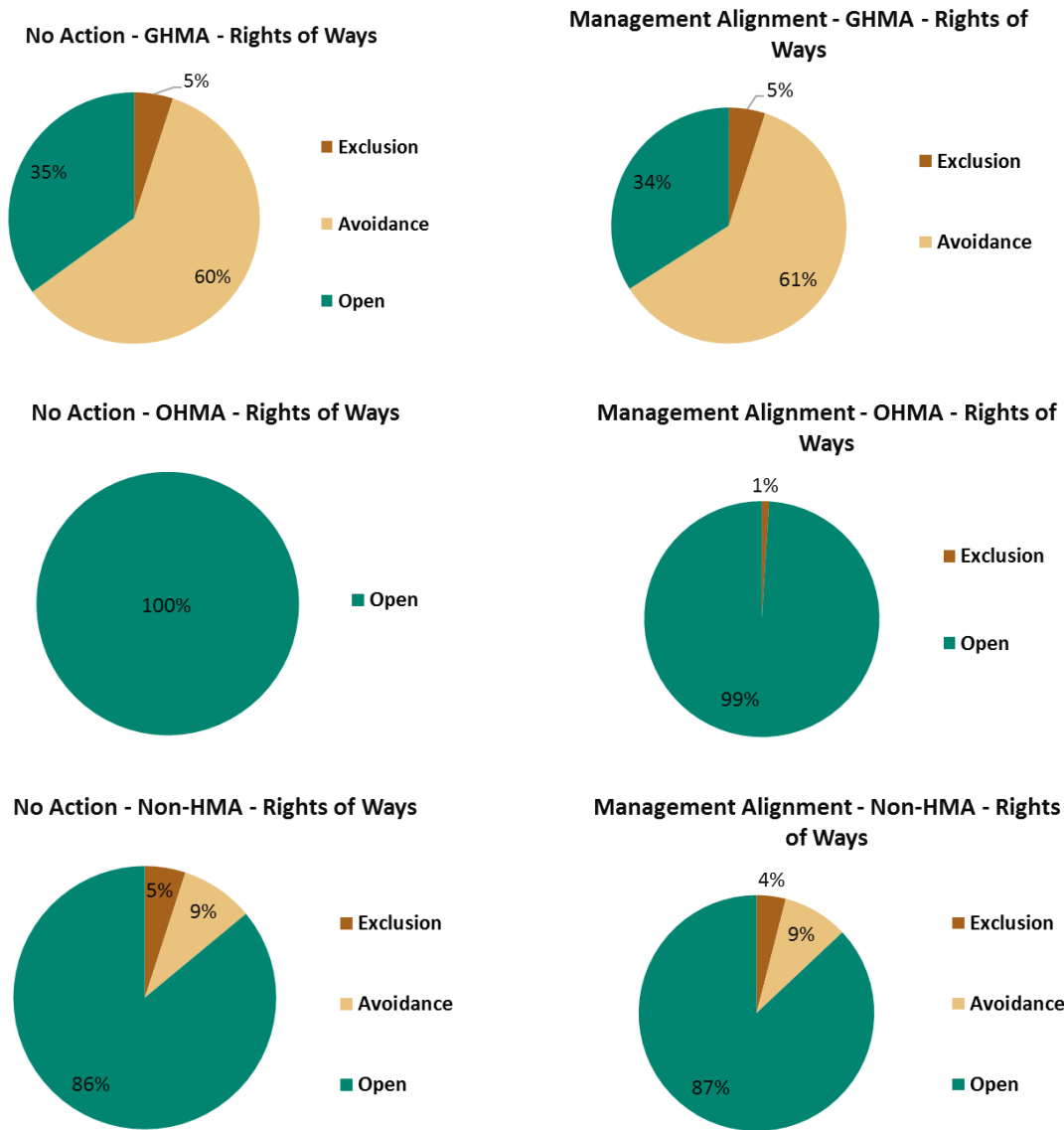


No Action & Management Alignment - IHMA - Rights of Ways



**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**

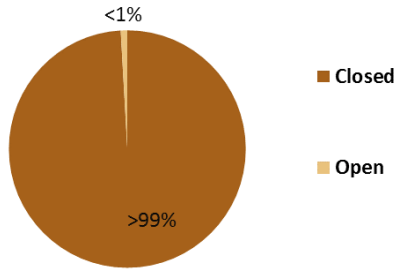
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

**IX. Salable Minerals Materials****Table 47 – Salable Minerals Materials Decisions within MZ IV**

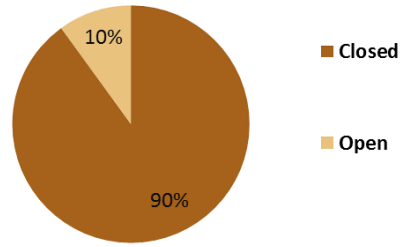
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

<b>Approximate Acres of Salable Minerals Materials Decisions in MZ IV by Habitat Management Area Type</b>						
<b>Salable Minerals Materials</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	11,494,000	313,000	682,000	4,000	830,000	<b>13,323,000</b>
Open	4,000	2,878,000	5,250,000	704,000	5,504,000	<b>14,339,000</b>
<b>Total</b>	<b>11,497,000</b>	<b>3,191,000</b>	<b>5,932,000</b>	<b>708,000</b>	<b>6,334,000</b>	<b>27,662,000</b>
<b>Salable Minerals Materials</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	11,089,000	313,000	684,000	6,000	829,000	<b>12,922,000</b>
Open	4,000	2,942,000	5,343,000	616,000	5,830,000	<b>14,734,000</b>
<b>Total</b>	<b>11,093,000</b>	<b>3,255,000</b>	<b>6,027,000</b>	<b>622,000</b>	<b>6,659,000</b>	<b>27,656,000</b>
<b>Approximate % of Habitat Management Area by Non-Energy Leasable Minerals Decision in MZ IV</b>						
<b>Salable Minerals Materials</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	100%	10%	11%	1%	13%	<b>48%</b>
Open	<1%	90%	89%	99%	87%	<b>52%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Salable Minerals Materials</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	100%	10%	11%	1%	12%	<b>47%</b>
Open	<1%	90%	89%	99%	88%	<b>53%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

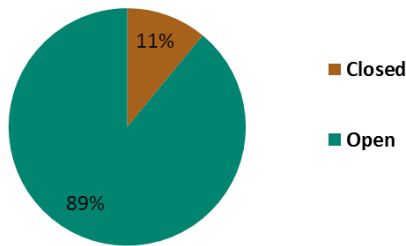
No Action & Management Alignment - PHMA - Salable Minerals Materials



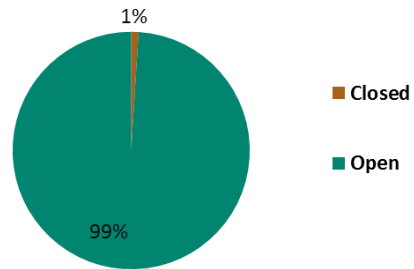
No Action & Management Alignment - IHMA - Salable Minerals Materials



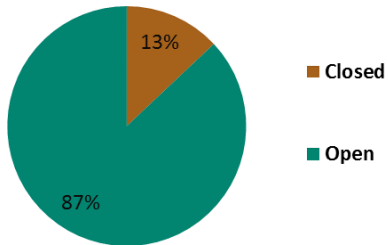
No Action & Management Alignment - GHMA - Salable Minerals Materials



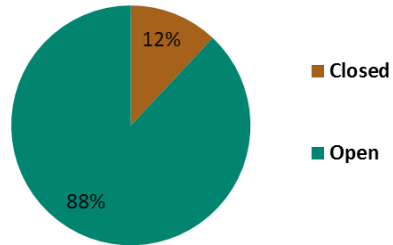
No Action & Management Alignment - OHMA - Salable Minerals Materials



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.



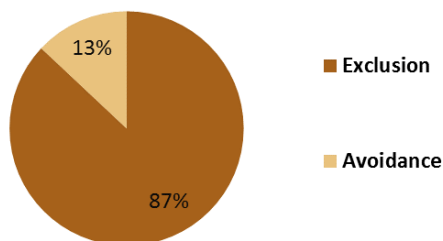
**X. Solar Energy**

**Table 48 – Solar Energy Decisions within MZ IV**

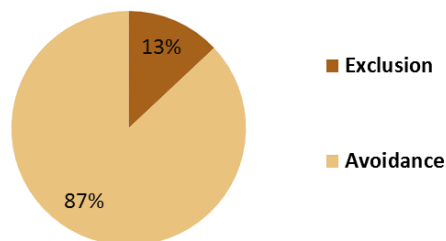
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Solar Energy Decisions in MZ IV by Habitat Management Area Type						
Solar Energy	No Action					Total
	PHMA	IHMA	GHMA	OHMA	Non-HMA	
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
<b>Total</b>	<b>10,731,000</b>	<b>2,719,000</b>	<b>4,945,000</b>	<b>707,000</b>	<b>4,919,000</b>	<b>24,021,000</b>
Solar Energy	Management Alignment					Total
	PHMA	IHMA	GHMA	OHMA	Non-HMA	
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
<b>Total</b>	<b>10,326,000</b>	<b>2,780,000</b>	<b>5,039,000</b>	<b>622,000</b>	<b>5,248,000</b>	<b>24,015,000</b>
Approximate % of Habitat Management Area by Solar Energy Decision in MZ IV						
Solar Energy	No Action					Total
	PHMA	IHMA	GHMA	OHMA	Non-HMA	
Exclusion	87%	13%	24%	100%	46%	58%
Avoidance	13%	87%	45%	0%	3%	25%
Open	0%	0%	30%	0%	51%	17%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Solar Energy	Management Alignment					Total
	PHMA	IHMA	GHMA	OHMA	Non-HMA	
Exclusion	87%	13%	26%	100%	50%	58%
Avoidance	13%	87%	44%	0%	2%	26%
Open	0%	0%	30%	0%	48%	17%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

No Action & Management Alignment - PHMA - Solar Energy

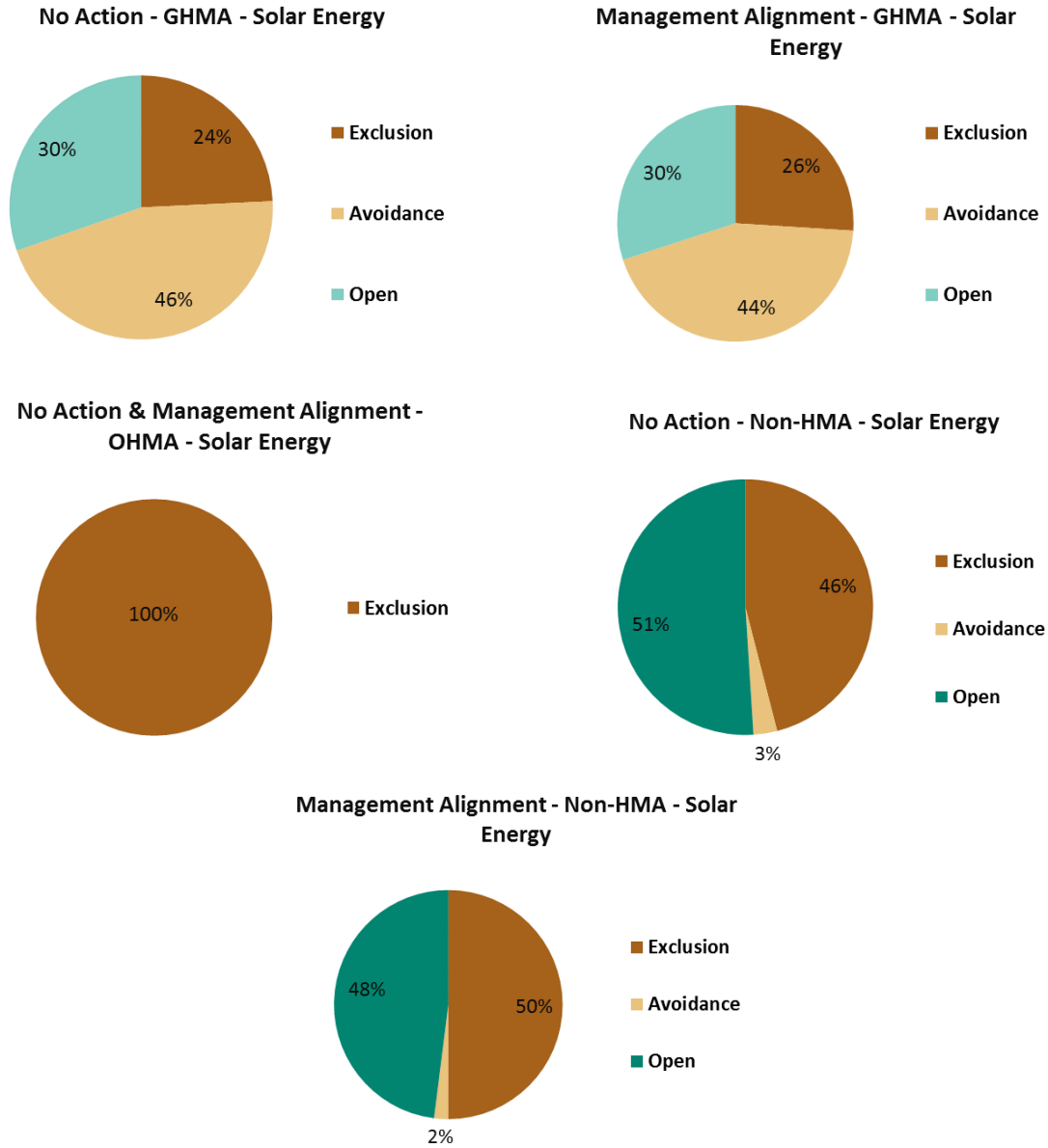


No Action & Management Alignment - IHMA - Solar Energy



**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**

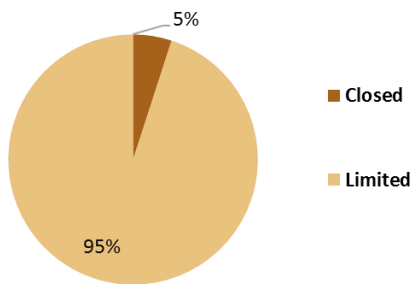
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

**XI. Trails and Travel Management****Table 49 — Trails and Travel Management Decisions within MZ IV**

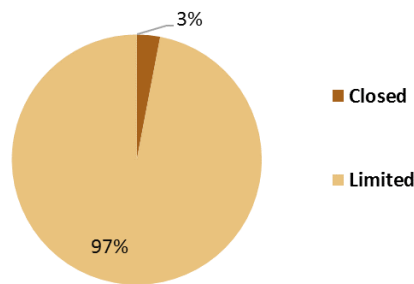
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

<b>Approximate Acres of Trails and Travel Management Decisions in MZ IV by Habitat Management Area Type</b>						
<b>Trails and Travel Management Decisions</b>	<b>No Action</b>					<b>Total</b>
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	
Closed	560,000	83,000	85,000	1,000	215,000	<b>943,000</b>
Limited	10,169,000	2,633,000	4,866,000	1,000	3,101,000	<b>20,770,000</b>
Open	0	3,000	0	707,000	1,619,000	<b>2,329,000</b>
<b>Total</b>	<b>10,729,000</b>	<b>2,719,000</b>	<b>4,951,000</b>	<b>708,000</b>	<b>4,935,000</b>	<b>24,042,000</b>
<b>Trails and Travel Management Decisions</b>	<b>Management Alignment</b>					<b>Total</b>
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	
Closed	559,000	83,000	84,000	0	214,000	<b>940,000</b>
Limited	9,768,000	2,694,000	4,961,000	5,000	3,188,000	<b>20,617,000</b>
Open	0	3,000	0	617,000	1,859,000	<b>2,479,000</b>
<b>Total</b>	<b>10,327,000</b>	<b>2,780,000</b>	<b>5,046,000</b>	<b>622,000</b>	<b>5,261,000</b>	<b>24,036,000</b>
<b>Approximate % of Habitat Management Area by Trails and Travel Management Decisions Decision in MZ IV</b>						
<b>Trails and Travel Management Decisions</b>	<b>No Action</b>					<b>Total</b>
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	
Closed	5%	3%	2%	<1%	4%	<b>4%</b>
Limited	95%	97%	98%	<1%	63%	<b>86%</b>
Open	0%	<1%	0%	100%	33%	<b>10%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Trails and Travel Management Decisions</b>	<b>Management Alignment</b>					<b>Total</b>
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	
Closed	5%	3%	2%	0%	4%	<b>4%</b>
Limited	95%	97%	98%	1%	61%	<b>86%</b>
Open	0%	0%	0%	99%	35%	<b>10%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

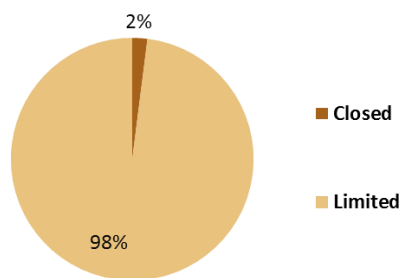
No Action & Management Alignment - PHMA - Trails and Travel Management



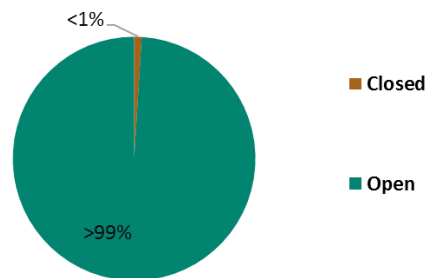
No Action & Management Alignment - IHMA - Trails and Travel Management



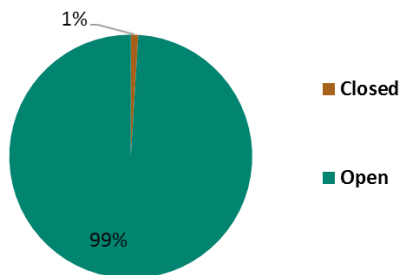
No Action & Management Alignment - GHMA - Trails and Travel Management



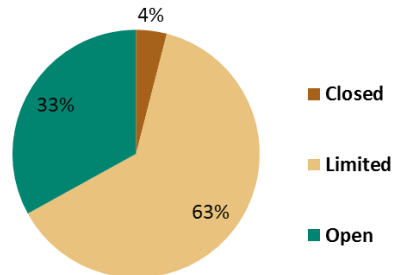
No Action - OHMA - Trails and Travel Management



Management Alignment - OHMA - Trails and Travel Management

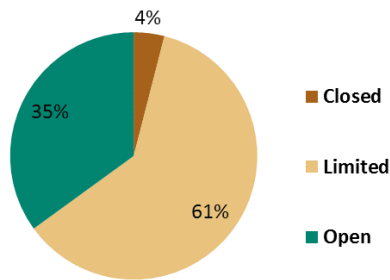


No Action - Non-HMA - Trails and Travel Management



**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.

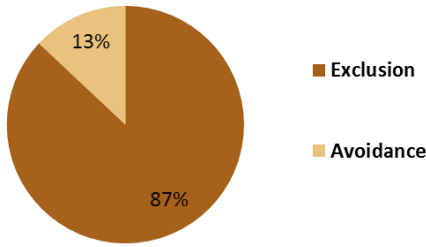
## XII. Wind Energy

**Table 50 – Wind Energy Decisions within MZ IV**

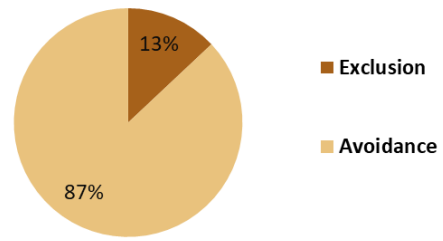
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

<b>Approximate Acres of Wind Energy Decisions in MZ IV by Habitat Management Area Type</b>						
<b>Wind Energy</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Exclusion	9,339,000	363,000	392,000	4,000	1,035,000	<b>11,133,000</b>
Avoidance	1,390,000	2,357,000	3,051,000	0	123,000	<b>6,920,000</b>
Open	0	0	1,501,000	704,000	3,769,000	<b>5,973,000</b>
<b>Total</b>	<b>10,728,000</b>	<b>2,719,000</b>	<b>4,944,000</b>	<b>708,000</b>	<b>4,926,000</b>	<b>24,026,000</b>
<b>Wind Energy</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Exclusion	8,938,000	363,000	395,000	6,000	1,046,000	<b>10,748,000</b>
Avoidance	1,390,000	2,417,000	3,144,000	0	123,000	<b>7,073,000</b>
Open	0	0	1,501,000	616,000	4,083,000	<b>6,199,000</b>
<b>Total</b>	<b>10,327,000</b>	<b>2,780,000</b>	<b>5,039,000</b>	<b>622,000</b>	<b>5,252,000</b>	<b>24,020,000</b>
<b>Approximate % of Habitat Management Area by Wind Energy Decision in MZ IV</b>						
<b>Wind Energy</b>	<b>No Action</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Exclusion	87%	13%	8%	1%	21%	<b>46%</b>
Avoidance	13%	87%	62%	0%	2%	<b>29%</b>
Open	0%	0%	30%	99%	77%	<b>25%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Wind Energy</b>	<b>Management Alignment</b>					
	<b>PHMA</b>	<b>IHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Exclusion	87%	13%	8%	1%	20%	<b>45%</b>
Avoidance	13%	87%	62%	0%	2%	<b>29%</b>
Open	0%	0%	30%	99%	78%	<b>26%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

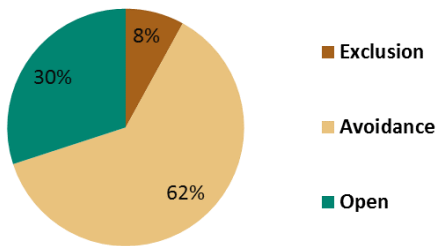
No Action & Management Alignment - PHMA - Wind Energy



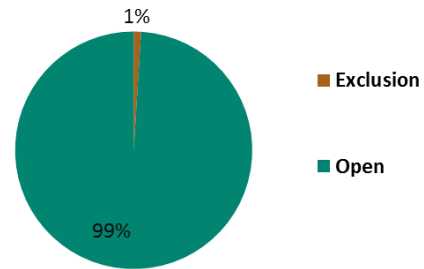
No Action & Proposed Plan - IHMA - Wind Energy



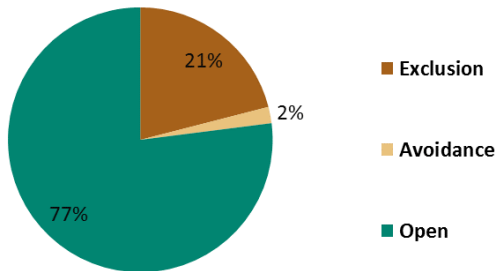
No Action & Management Alignment - GHMA - Wind Energy



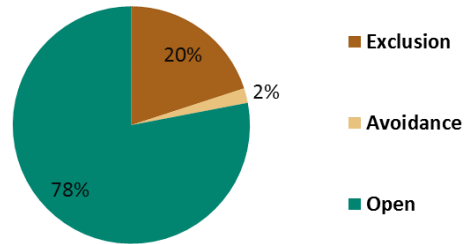
No Action & Management Alignment - OHMA - Wind Energy



No Action - Non-HMA - Wind Energy



Management Alignment - Non-HMA - Wind Energy



**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.

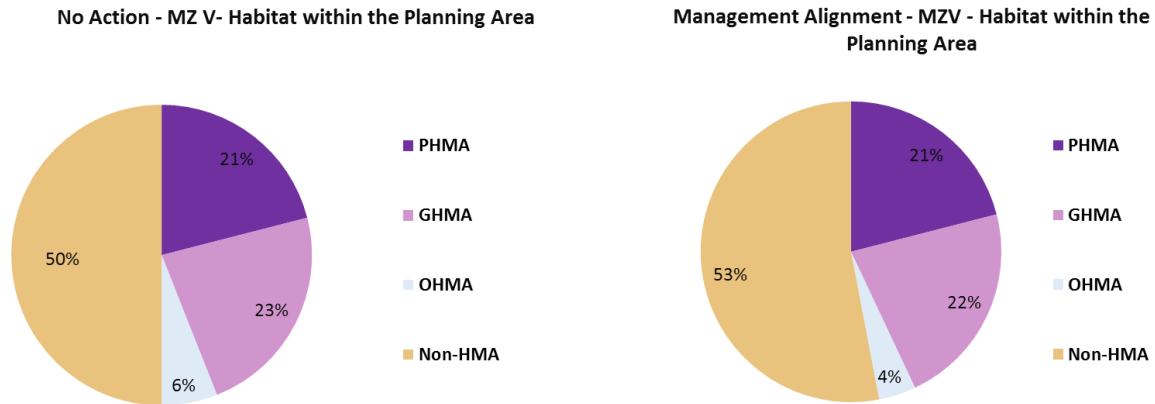
**H.2.5 Management Zone V – Oregon, Nevada, California**

**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.



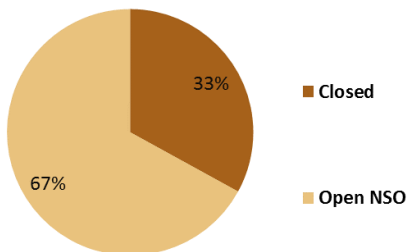
## II. Geothermal Energy

**Table 52 – Geothermal Energy Decisions within MZ V**

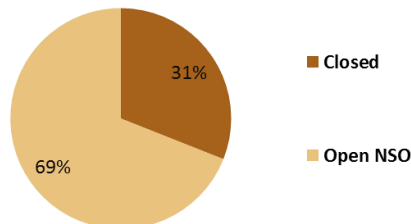
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

<b>Approximate Acres of Geothermal Energy Decisions in MZ V by Habitat Management Area Type</b>					
<b>Geothermal Energy</b>	<b>No Action</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	1,626,000	1,359,000	158,000	898,000	<b>4,042,000</b>
Open NSO	3,350,000	379,000	0	164,000	<b>3,893,000</b>
Open CSU/TL	0	3,287,000	0	335,000	<b>3,622,000</b>
Open Standard Stipulations	5,000	0	744,000	2,367,000	<b>3,117,000</b>
<b>Total</b>	<b>4,982,000</b>	<b>5,026,000</b>	<b>903,000</b>	<b>3,764,000</b>	<b>14,674,000</b>
<b>Geothermal Energy</b>	<b>Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	1,569,000	1,373,000	141,000	935,000	<b>4,018,000</b>
Open NSO	3,566,000	379,000	0	164,000	<b>4,110,000</b>
Open CSU/TL	0	3,185,000	0	335,000	<b>3,520,000</b>
Open Standard Stipulations	0	0	423,000	2,598,000	<b>3,021,000</b>
<b>Total</b>	<b>5,136,000</b>	<b>4,937,000</b>	<b>564,000</b>	<b>4,032,000</b>	<b>14,668,000</b>
<b>Approximate % of Habitat Management Area by Geothermal Energy Decision in MZ V</b>					
<b>Geothermal Energy</b>	<b>No Action</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	33%	27%	17%	24%	<b>28%</b>
Open NSO	67%	8%	0%	4%	<b>27%</b>
Open CSU/TL	0%	65%	0%	9%	<b>25%</b>
Open Standard Stipulations	<1%	0%	82%	63%	<b>21%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Geothermal Energy</b>	<b>Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	31%	28%	25%	23%	<b>27%</b>
Open NSO	69%	8%	0%	4%	<b>28%</b>
Open CSU/TL	0%	65%	0%	8%	<b>24%</b>
Open Standard Stipulations	0%	0%	75%	64%	<b>21%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

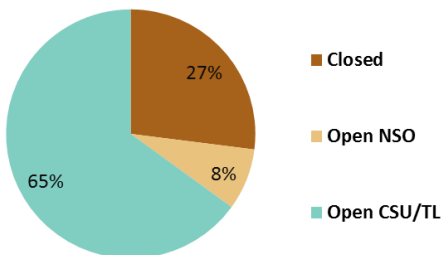
No Action - PHMA - Geothermal Energy



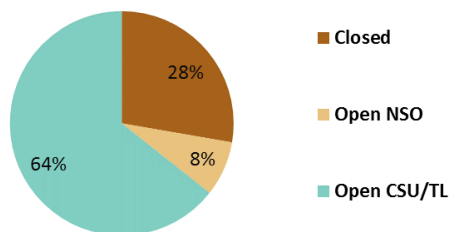
Management Alignment - PHMA - Geothermal Energy



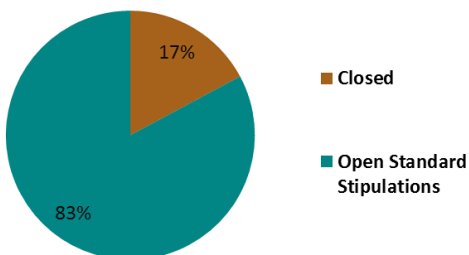
No Action - GHMA - Geothermal Energy



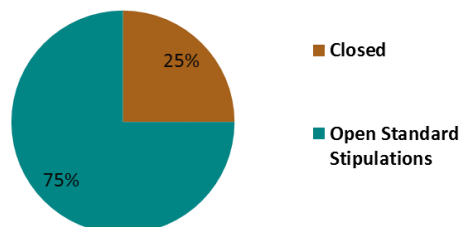
Management Alignment - GHMA - Geothermal Energy



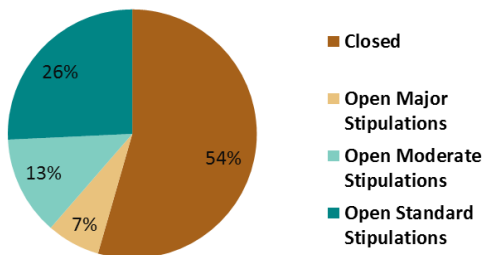
No Action - OHMA - Geothermal Energy



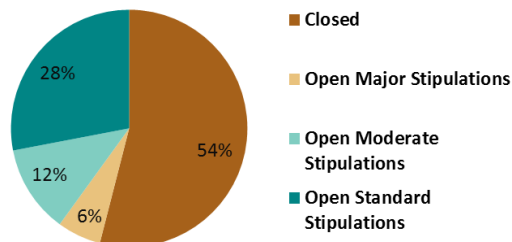
Management Alignment - OHMA - Geothermal Energy



No Action - Non-HMA - Geothermal Energy



Management Alignment - Non-HMA - Geothermal Energy



**Figure 5I – Geothermal Energy Decisions within MZ V**

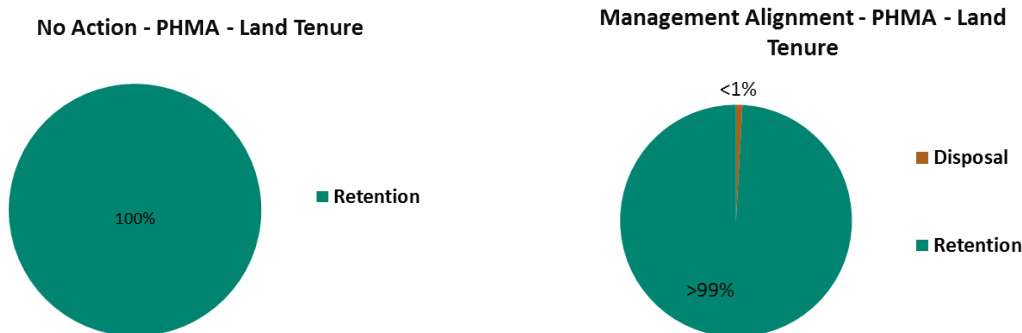
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

**III. Land Tenure**

**Table 53 – Land Tenure Decisions within MZ V**

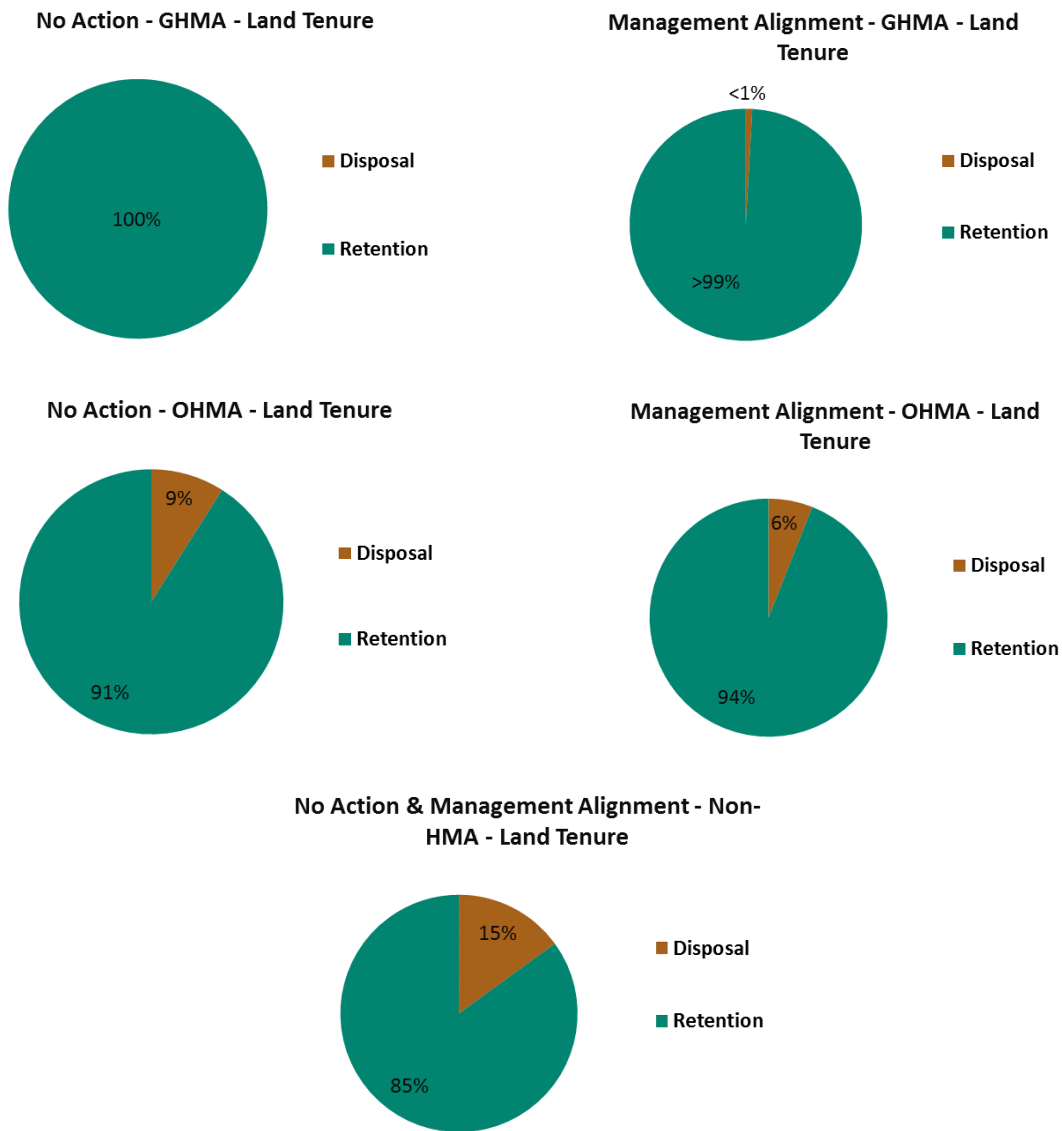
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual 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
<b>Total</b>	<b>4,649,000</b>	<b>4,896,000</b>	<b>901,000</b>	<b>3,565,000</b>	<b>14,011,000</b>
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
<b>Total</b>	<b>4,804,000</b>	<b>4,806,000</b>	<b>562,000</b>	<b>3,833,000</b>	<b>14,005,000</b>
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Land Tenure	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Disposal	<1%	<1%	6%	15%	5%
Retention	100%	100%	94%	85%	95%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**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.

<b>Approximate Acres of Livestock Grazing Decisions in MZ V by Habitat Management Area Type</b>					
<b>Livestock Grazing</b>	<b>No Action</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Unavailable	47,000	102,000	0	84,000	<b>232,000</b>
Available	4,582,000	4,762,000	883,000	3,233,000	<b>13,461,000</b>
<b>Total</b>	<b>4,629,000</b>	<b>4,864,000</b>	<b>883,000</b>	<b>3,317,000</b>	<b>13,694,000</b>
<b>Livestock Grazing</b>	<b>Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Unavailable	47,000	102,000	0	84,000	<b>232,000</b>
Available	4,736,000	4,671,000	550,000	3,493,000	<b>13,450,000</b>
<b>Total</b>	<b>4,783,000</b>	<b>4,772,000</b>	<b>550,000</b>	<b>3,577,000</b>	<b>13,682,000</b>
<b>Approximate % of Habitat Management Area by Livestock Grazing Decision in MZ V</b>					
<b>Livestock Grazing</b>	<b>No Action</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Unavailable	1%	2%	0%	3%	<b>2%</b>
Available	99%	98%	100%	97%	<b>98%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Livestock Grazing</b>	<b>Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Unavailable	1%	2%	0%	2%	<b>2%</b>
Available	99%	98%	100%	98%	<b>98%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**Figure 53 – Livestock Grazing Decisions within MZ V**

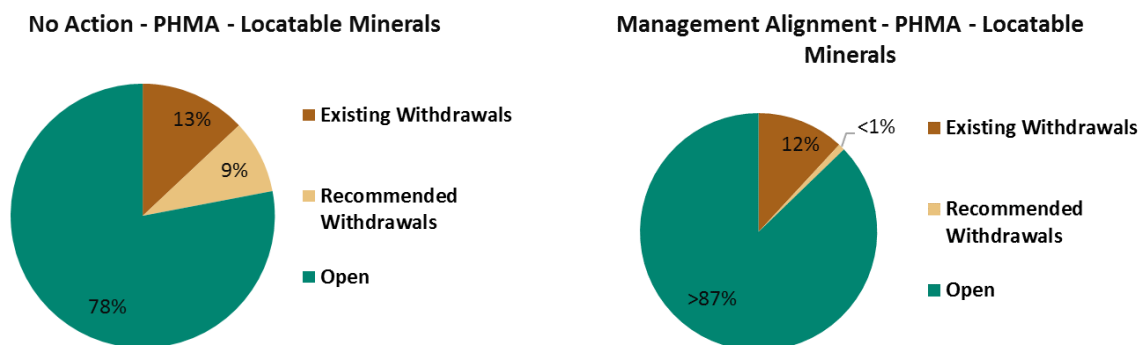
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual 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.

<b>Approximate Acres of Locatable Minerals Decisions in MZ V by Habitat Management Area Type</b>					
<b>Locatable Minerals</b>	<b>No Action</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Existing Withdrawals	631,000	687,000	59,000	486,000	<b>1,864,000</b>
Recommended Withdrawals	435,000	5,000	0	0	<b>440,000</b>
Open	3,885,000	4,329,000	842,000	3,048,000	<b>12,104,000</b>
<b>Total</b>	<b>4,951,000</b>	<b>5,022,000</b>	<b>901,000</b>	<b>3,534,000</b>	<b>14,408,000</b>
<b>Locatable Minerals</b>	<b>Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Existing Withdrawals	626,000	687,000	64,000	487,000	<b>1,864,000</b>
Recommended Withdrawals	12,000	5,000	0	0	<b>17,000</b>
Open	4,469,000	4,240,000	499,000	3,314,000	<b>12,522,000</b>
<b>Total</b>	<b>5,106,000</b>	<b>4,932,000</b>	<b>562,000</b>	<b>3,801,000</b>	<b>14,403,000</b>
<b>Approximate % of Habitat Management Area by Geothermal Energy Decision in MZ V</b>					
<b>Locatable Minerals</b>	<b>No Action</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Existing Withdrawals	13%	14%	7%	14%	<b>13%</b>
Recommended Withdrawals	9%	0%	0%	0%	<b>3%</b>
Open	78%	86%	93%	86%	<b>84%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Locatable Minerals</b>	<b>Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Existing Withdrawals	12%	14%	11%	13%	<b>13%</b>
Recommended Withdrawals	0%	0%	0%	0%	<b>0%</b>
Open	88%	86%	89%	87%	<b>87%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**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.

<b>Approximate Acres of Non-Energy Leasable Minerals Decisions in MZ V by Habitat Management Area Type</b>					
<b>Non-Energy Leasable Minerals</b>	<b>No Action</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	4,980,000	1,388,000	158,000	898,000	<b>7,423,000</b>
Open	0	3,635,000	744,000	2,866,000	<b>7,247,000</b>
<b>Total</b>	<b>4,980,000</b>	<b>5,024,000</b>	<b>903,000</b>	<b>3,764,000</b>	<b>14,671,000</b>
<b>Non-Energy Leasable Minerals</b>	<b>Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	5,135,000	1,402,000	141,000	935,000	<b>7,613,000</b>
Open	0	3,532,000	423,000	3,097,000	<b>7,052,000</b>
<b>Total</b>	<b>5,135,000</b>	<b>4,934,000</b>	<b>564,000</b>	<b>4,032,000</b>	<b>14,665,000</b>
<b>Approximate % of Habitat Management Area by Non-Energy Leasable Minerals Decision in MZ V</b>					
<b>Non-Energy Leasable Minerals</b>	<b>No Action</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	100%	28%	17%	24%	<b>51%</b>
Open	0%	72%	82%	76%	<b>49%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Non-Energy Leasable Minerals</b>	<b>Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	100%	28%	25%	23%	<b>52%</b>
Open	0%	72%	75%	77%	<b>48%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**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.

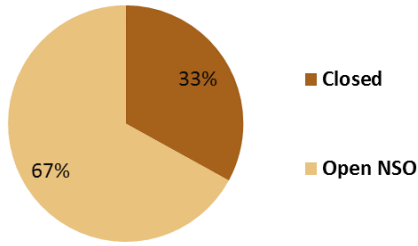
## VII. Fluid Minerals (Oil & Gas)

**Table 57 – Fluid Mineral (Oil & Gas) Decisions within MZ V**

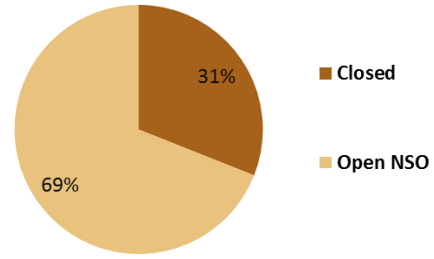
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

<b>Approximate Acres of Fluid Mineral (Oil &amp; Gas) Decisions in MZ V by Habitat Management Area Type</b>					
<b>Fluid Mineral (Oil &amp; Gas) Decisions</b>	<b>No Action</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	1,590,000	1,373,000	141,000	935,000	<b>4,039,000</b>
Open NSO	3,542,000	379,000	0	164,000	<b>4,085,000</b>
Open CSU/TL	0	3,184,000	0	335,000	<b>3,519,000</b>
Open Standard Stipulations	0	0	423,000	2,598,000	<b>3,021,000</b>
<b>Total</b>	<b>5,133,000</b>	<b>4,936,000</b>	<b>564,000</b>	<b>4,032,000</b>	<b>14,664,000</b>
<b>Fluid Mineral (Oil &amp; Gas) Decisions</b>	<b>Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	1,626,000	1,359,000	158,000	898,000	<b>4,042,000</b>
Open NSO	3,354,000	379,000	0	164,000	<b>3,898,000</b>
Open CSU/TL	0	3,287,000	0	335,000	<b>3,622,000</b>
Open Standard Stipulations	0	0	743,000	2,365,000	<b>3,108,000</b>
<b>Total</b>	<b>4,981,000</b>	<b>5,026,000</b>	<b>902,000</b>	<b>3,762,000</b>	<b>14,670,000</b>
<b>Approximate % of Habitat Management Area by Fluid Mineral (Oil &amp; Gas) Decision in MZ V</b>					
<b>Fluid Mineral (Oil &amp; Gas) Decisions</b>	<b>No Action</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	33%	27%	18%	24%	<b>28%</b>
Open NSO	67%	8%	0%	4%	<b>27%</b>
Open CSU/TL	0%	65%	0%	9%	<b>25%</b>
Open Standard Stipulations	0%	0%	82%	63%	<b>21%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Fluid Mineral (Oil &amp; Gas) Decisions</b>	<b>Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	31%	28%	25%	23%	<b>28%</b>
Open NSO	69%	8%	0%	4%	<b>28%</b>
Open CSU/TL	0%	65%	0%	8%	<b>24%</b>
Open Standard Stipulations	0%	0%	75%	64%	<b>21%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

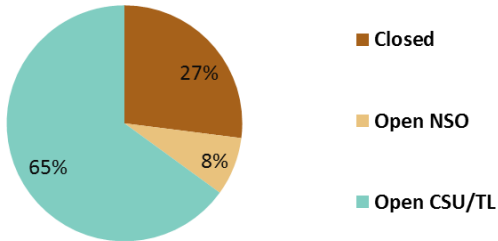
No Action - PHMA - Fluid Mineral Leasing (Oil & Gas)



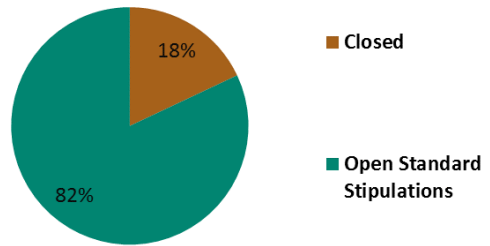
Management Alignment - PHMA - Fluid Mineral Leasing (Oil & Gas)



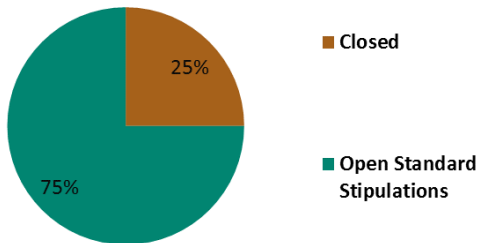
No Action & Management Alignment - GHMA - Fluid Mineral Leasing (Oil & Gas)



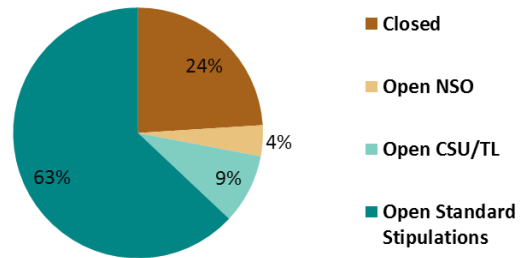
No Action - OHMA - Fluid Mineral Leasing (Oil & Gas)



Management Alignment - OHMA - Fluid Mineral Leasing (Oil & Gas)



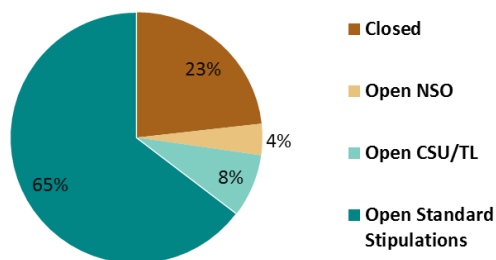
No Action - Non-HMA - Fluid Mineral Leasing (Oil & Gas)



**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.

Management Alignment - Non-HMA - Fluid  
Mineral Leasing (Oil & Gas)



**Figure 56 (cont'd) – Fluid Mineral (Oil & Gas) Decisions within MZ V**

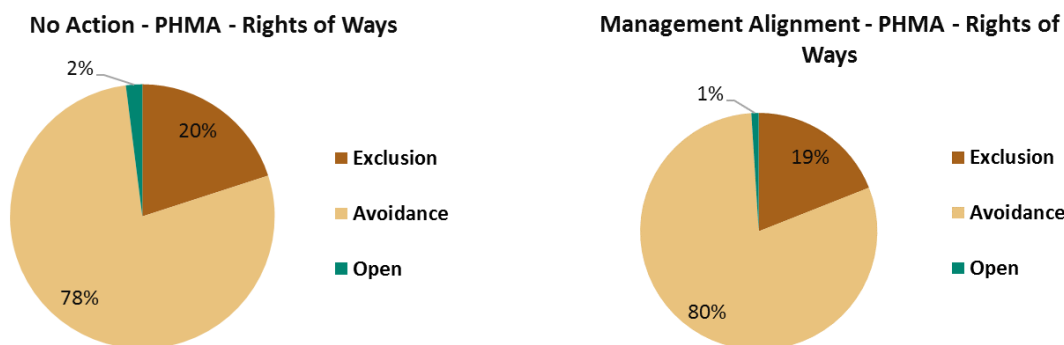
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

**VIII. Rights-of-Ways**

**Table 58 – Rights-of-Ways Decisions within MZ V**

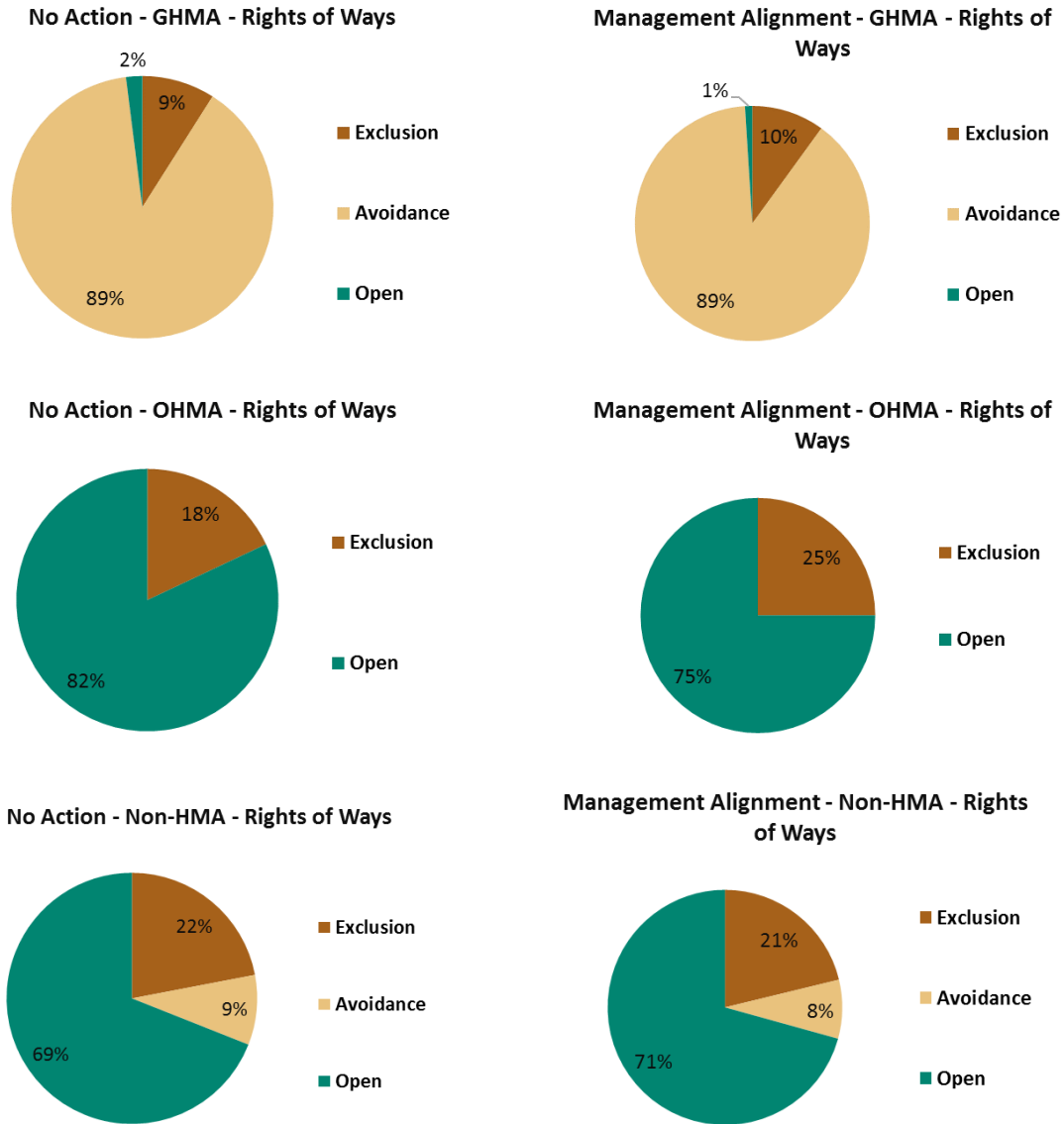
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual 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
<b>Total</b>	<b>4,677,000</b>	<b>4,900,000</b>	<b>902,000</b>	<b>3,561,000</b>	<b>14,040,000</b>
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
<b>Total</b>	<b>4,827,000</b>	<b>4,809,000</b>	<b>564,000</b>	<b>3,834,000</b>	<b>14,034,000</b>
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**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.

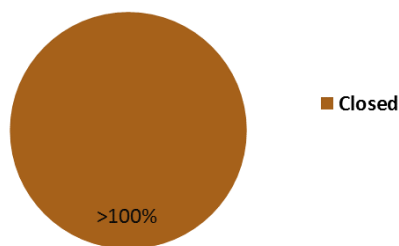
**IX. Salable Minerals Materials**

**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	<b>7,475,000</b>
Open	1,000	3,621,000	744,000	2,827,000	<b>7,194,000</b>
<b>Total</b>	<b>4,980,000</b>	<b>5,024,000</b>	<b>903,000</b>	<b>3,762,000</b>	<b>14,669,000</b>
Salable Minerals Materials	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	5,135,000	1,416,000	141,000	972,000	<b>7,664,000</b>
Open	0	3,518,000	423,000	3,057,000	<b>6,998,000</b>
<b>Total</b>	<b>5,135,000</b>	<b>4,934,000</b>	<b>564,000</b>	<b>4,030,000</b>	<b>14,663,000</b>
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%	<b>51%</b>
Open	<1%	72%	83%	75%	<b>49%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Salable Minerals Materials	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	100%	29%	25%	24%	<b>52%</b>
Open	0%	71%	75%	76%	<b>48%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

No Action & Management Alignment - PHMA - Salable Minerals Materials

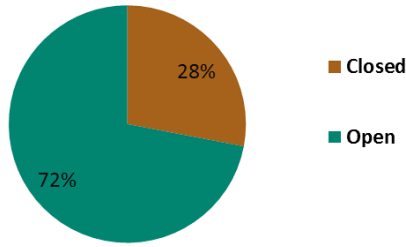


**Figure 58 – Salable Minerals Materials Decisions within MZ V**

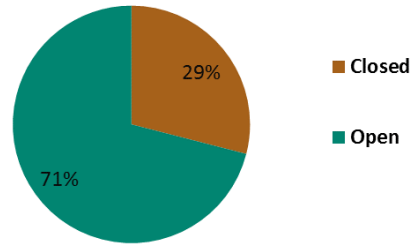
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.



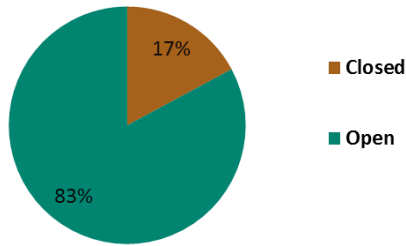
No Action - GHMA - Salable Minerals Materials



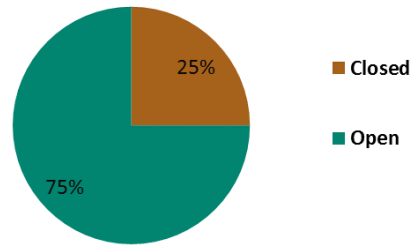
Management Alignment - GHMA - Salable Minerals Materials



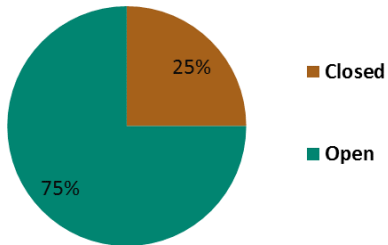
No Action - OHMA - Salable Minerals Materials



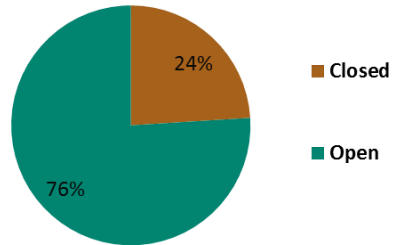
Management Alignment - OHMA - Salable Minerals Materials



No Action - Non-HMA - Salable Minerals Materials



Management Alignment - Non-HMA - Salable Minerals Materials



**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.

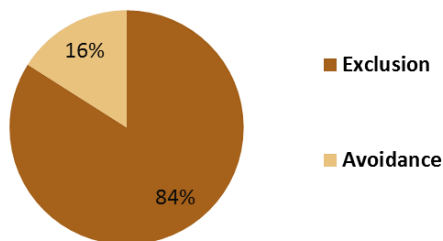
**X. Solar Energy**

**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.

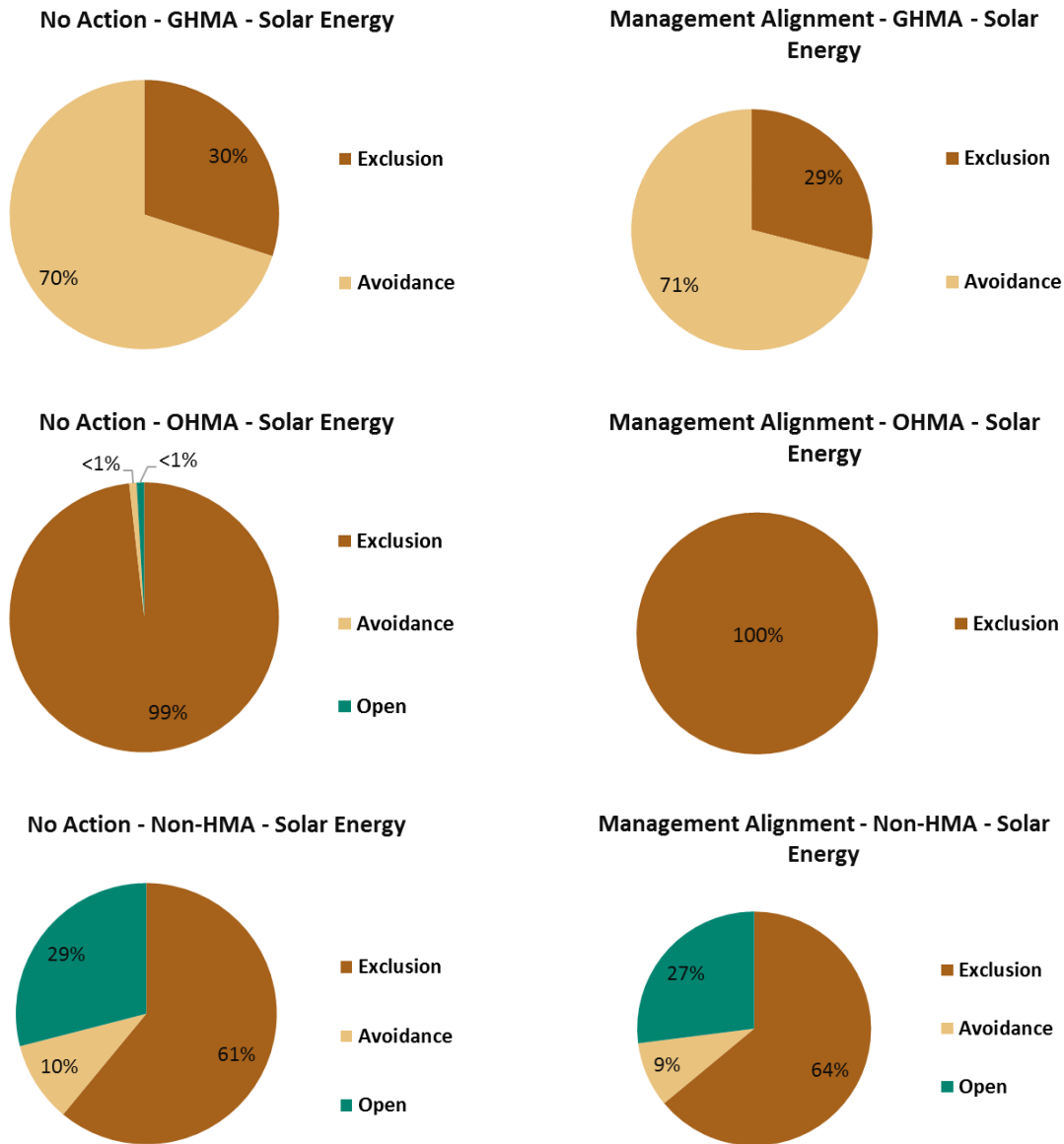
Approximate Acres of Solar Energy Decisions in MZ V by Habitat Management Area Type					
Solar Energy	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	3,932,000	1,466,000	897,000	2,191,000	8,487,000
Avoidance	750,000	3,438,000	1,000	348,000	4,537,000
Open	0	0	4,000	1,032,000	1,036,000
<b>Total</b>	<b>4,683,000</b>	<b>4,904,000</b>	<b>903,000</b>	<b>3,571,000</b>	<b>14,060,000</b>
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
<b>Total</b>	<b>4,838,000</b>	<b>4,810,000</b>	<b>564,000</b>	<b>3,841,000</b>	<b>14,054,000</b>
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

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.



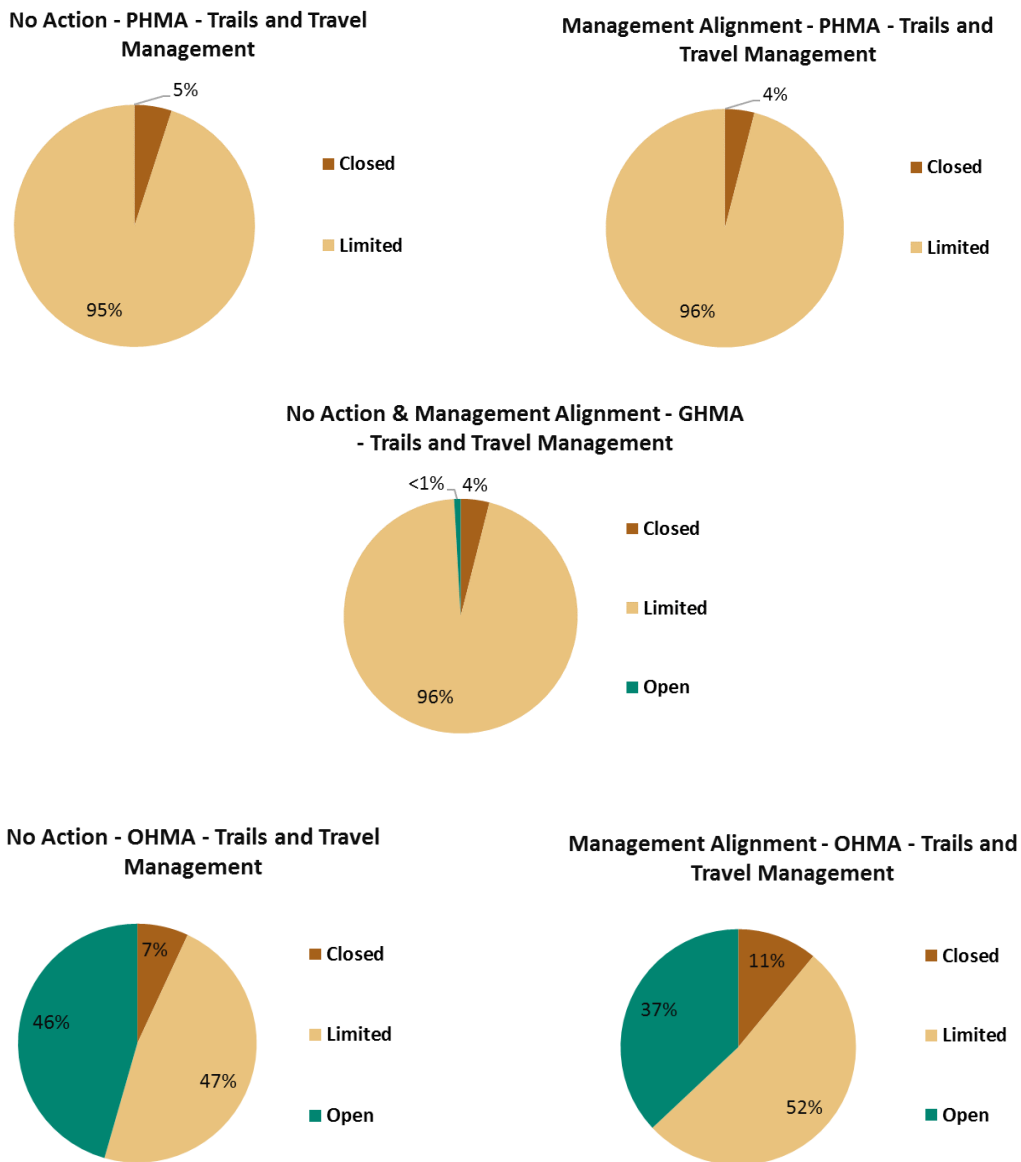
**Figure 59 (cont'd) – Solar Energy Decisions within MZ V**

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.

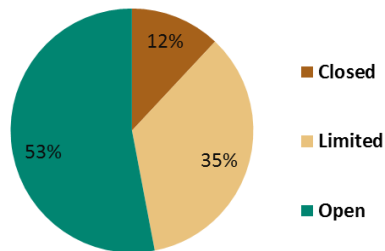
<b>Approximate Acres of Trails and Travel Management Decisions in MZ V by Habitat Management Area Type</b>					
<b>Trails and Travel Management Decisions</b>	<b>No Action</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	220,000	215,000	59,000	423,000	<b>917,000</b>
Limited	4,452,000	4,681,000	428,000	1,257,000	<b>10,818,000</b>
Open	0	2,000	414,000	1,888,000	<b>2,304,000</b>
<b>Total</b>	<b>4,672,000</b>	<b>4,897,000</b>	<b>901,000</b>	<b>3,568,000</b>	<b>14,038,000</b>
<b>Trails and Travel Management Decisions</b>	<b>Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	215,000	214,000	64,000	424,000	<b>917,000</b>
Limited	4,613,000	4,591,000	290,000	1,280,000	<b>10,774,000</b>
Open	0	2,000	209,000	2,131,000	<b>2,342,000</b>
<b>Total</b>	<b>4,828,000</b>	<b>4,807,000</b>	<b>562,000</b>	<b>3,836,000</b>	<b>14,032,000</b>
<b>Approximate % of Habitat Management Area by Trails and Travel Management Decisions Decision in MZ V</b>					
<b>Trails and Travel Management Decisions</b>	<b>No Action</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	5%	4%	7%	12%	<b>7%</b>
Limited	95%	96%	48%	35%	<b>77%</b>
Open	0%	<1%	46%	53%	<b>16%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Trails and Travel Management Decisions</b>	<b>Management Alignment</b>				
	<b>PHMA</b>	<b>GHMA</b>	<b>OHMA</b>	<b>Non-HMA</b>	<b>Total</b>
Closed	4%	4%	11%	11%	<b>7%</b>
Limited	96%	96%	52%	33%	<b>77%</b>
Open	0%	<1%	37%	56%	<b>17%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



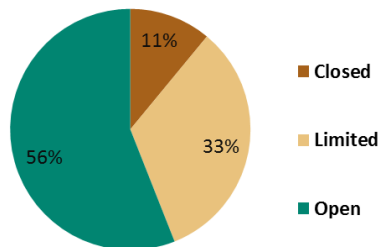
**Figure 60 – Trails and Travel Management Decisions within MZ V**

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.

No Action - Non-HMA - Trails and Travel Management



Management Alignment- Non-HMA - Trails and Travel Management



**Figure 60 (cont'd) – Trails and Travel Management Decisions within MZ V**

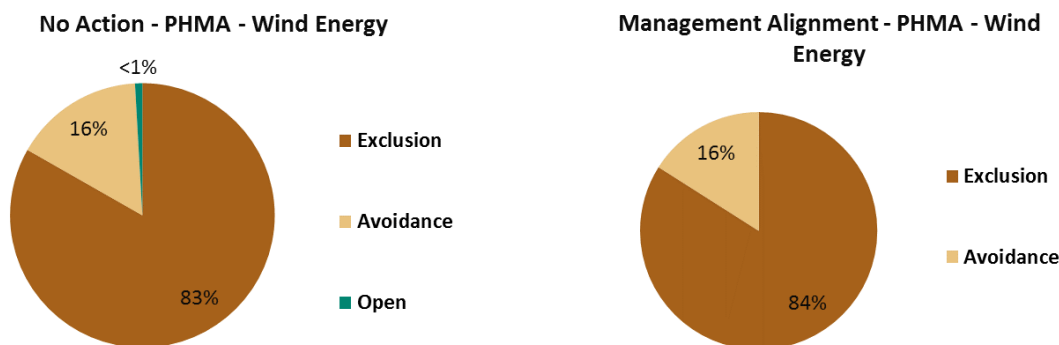
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

**XII. Wind Energy**

**Table 62 – Wind Energy Decisions within MZ V**

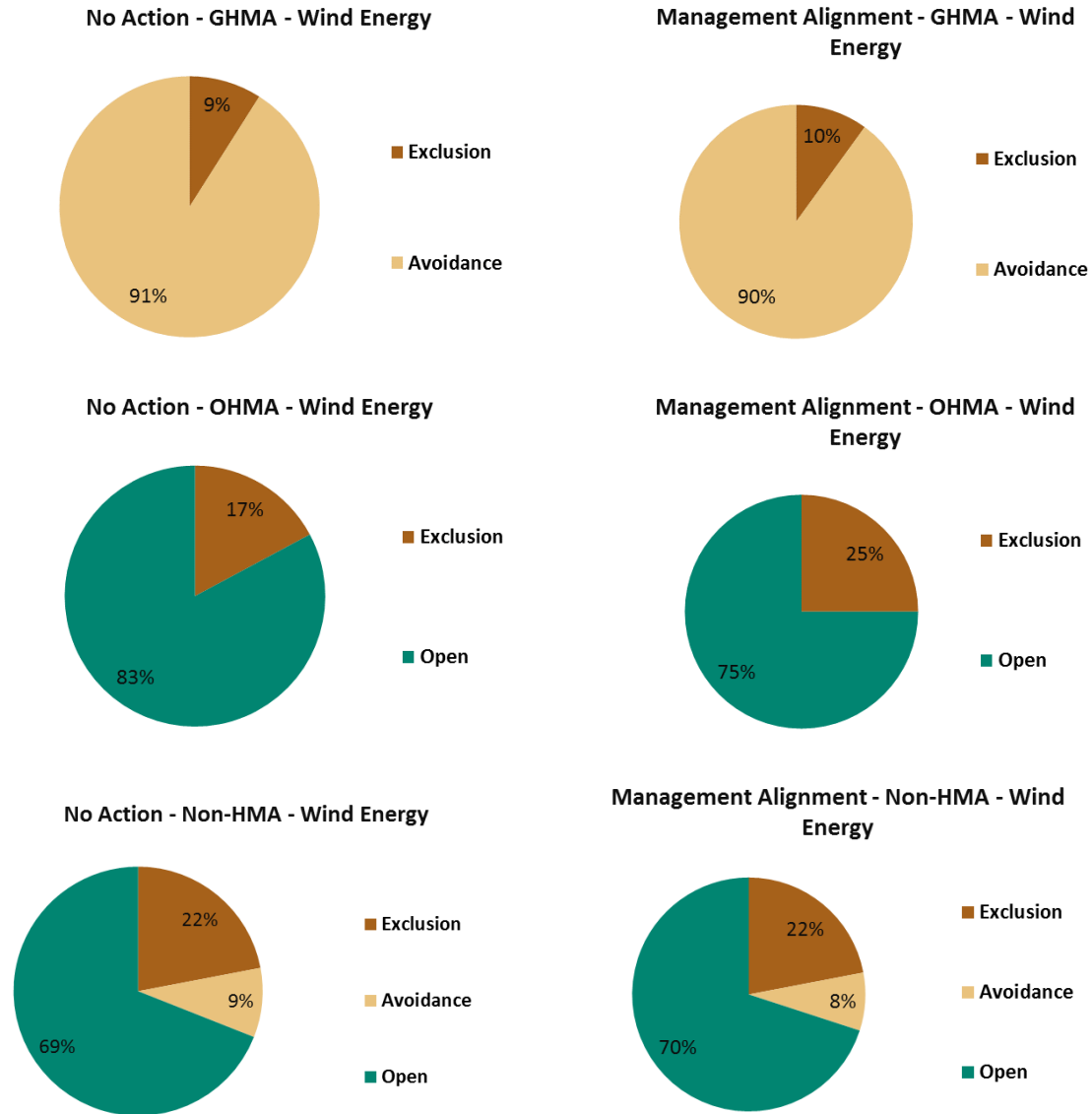
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual 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
<b>Total</b>	<b>4,678,000</b>	<b>4,900,000</b>	<b>903,000</b>	<b>3,568,000</b>	<b>14,048,000</b>
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
<b>Total</b>	<b>4,833,000</b>	<b>4,809,000</b>	<b>564,000</b>	<b>3,836,000</b>	<b>14,042,000</b>
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
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%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**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.