Idaho and Southwestern Montana Greater Sage-Grouse

Proposed Land Use Plan Amendment and Final Environmental Impact Statement

Volume I

BLM

Forest Service

US Department of the Interior
Bureau of Land Management

US Department of Agriculture
Forest Service

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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.

The Forest Service mission is to sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations.

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Idaho and Southwestern Montana Greater Sage-Grouse
Proposed Land Use Plan Amendment and
Final Environmental Impact Statement

Responsible Agencies: United States Department of the Interior
Bureau of Land Management (Lead Agency)

United States Department of Agriculture
Forest Service

Type of Action: Administrative (X) Legislative ( )

Document Status: Draft ( ) Final (X)

Abstract: This Proposed Land Use Plan Amendment (LUPA) and Final Environmental Impact Statement (EIS) has been prepared by the United States Department of the Interior, Bureau of Land Management (BLM) and United States Department of Agriculture, Forest Service (Forest Service) with input from 26 cooperating agencies. This document is considering amendments to 26 BLM and 8 Forest Service land use plans to address management of Greater Sage-Grouse habitat in Idaho and portions of Montana and Utah. The Proposed LUPA and Final EIS describe and analyzes alternatives for managing Greater Sage-Grouse habitat on approximately 9.2 million acres of BLM-administered lands and 1.9 million acres of National Forest System lands. Major planning issues addressed include energy and minerals, lands and realty (including rights-of-way), wildfire, vegetation management (including invasive species and conifer encroachment), livestock grazing, recreation and travel management, and socioeconomics. To assist the agencies decision makers and the public in focusing on appropriate solutions to the planning issues, the Final EIS considers 7 alternative LUPAs. **Alternative A** is a continuation of current management (No Action Alternative); use of public lands and resources would continue to be managed under the current BLM and Forest Service land use plans, as amended. **Alternative B** is based on management actions from the Sage-Grouse National Technical Team's *A Report on National Greater Sage-Grouse Conservation Measures*. **Alternative C** is based on management actions submitted by various groups during public scoping. **Alternative D** was developed by the agencies' interdisciplinary team to address local ecological site variability and address conservation of Greater Sage-Grouse in context with other competing human interests. **Alternative E** is based on the State of Idaho's Governor's Alternative, developed from recommendations by the State of Idaho's Greater Sage-Grouse Task Force. Similar to Alternative C, **Alternative F** was derived from individual and conservation group scoping comments. The **Proposed Plan** is a mix of management actions selected from the range of alternatives in the Draft LUPA/EIS and is based on best science, public scoping comments, public comments on the Draft LUPA/EIS and internal agency discussion. **Alternatives D and E** were the agencies' co-preferred alternatives in the Draft EIS.

Protest Period: 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 Idaho website: http://www.blm.gov/id/st/en/sage-grouse_rmp_revision.html.

For further information, contact:

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June 2015

Dear Reader:

Enclosed is the Idaho and Southwestern Montana Sub-regional Greater Sage-Grouse (GRSG) Proposed Land Use Plan Amendment (Proposed LUPA) and Final Environmental Impact Statement (FEIS), one of fifteen sub-regional efforts being conducted as part of the Bureau of Land Management (BLM) and Forest Service National Greater-Sage Planning Strategy. The BLM and Forest Service prepared the Proposed LUPA/FEIS in consultation with cooperating agencies, taking into account public comments received during this planning effort.

The purpose of the Proposed LUPA is to amend the following: (1) BLM Idaho Resource Management Plans (RMPs) Birds of Prey National Conservation Area Resource Management Plan (RMP) (2008); Bruneau RMP revision (and existing 1983 Bruneau RMP); Challis RMP (1999); Craters of the Moon National Monument RMP (2006); Four Rivers RMP revision (and existing 1988 Cascade and 1983 Kuna RMPs); Jarbidge RMP revision; Jarbidge RMP Revision, Lemhi RMP (1987); Owyhee RMP (1999); Pocatello RMP; Shoshone-Burley RMP revision (and existing 1980 Bennett Hills/Timmerman Hills, 1985 Cassia, 1975 Magic, 1985 Monument, 1981 Sun Valley, and 1982 Twin Falls Management Framework Plan (MFPs)/RMPs); Upper Snake RMP revision (and existing 1983 Big Lost, 1985 Medicine Lodge, 1981 Big Desert, 1981 Little Lost-Birch Creek MFPs/RMPs) and the Dillon (MT) RMP; and (2) the following Forest Service Land and Resource Management Plans (LRMPs) Boise Revised Forest Plan (2010), Beaverhead-Deerlodge Forest Plan (2009), Revised Caribou Forest Plan (2003), Curlew National Grassland Plan (2002), Challis Forest Plan (1987), Salmon Forest Plan (1988), Sawtooth Revised Forest Plan (2012), Targhee Revised Forest Plan (1997), to identify and incorporate appropriate conservation measures to conserve, enhance and/or restore GRSG habitat by reducing, eliminating, or minimizing threats to that habitat. The need for action is in response to the U.S. Fish and Wildlife Service's (USFWS) March 2010, "warranted, but precluded" Endangered Species Act listing petition. The USFWS found that the inadequacy of regulatory mechanisms was identified as a significant threat to GRSG in their finding on the petition to list the GRSG. Land use plan conservation measures were identified as the BLM's and Forest Service's principal regulatory mechanism.

This Proposed LUPA/FEIS has been developed in accordance with the National Environmental Policy Act of 1969, as amended, the Federal Land Policy and Management Act of 1976, as amended, and the National Forest Management Act of 1976, as amended. The Proposed LUPA is largely based on Alternatives D and E, the co-preferred alternatives in the Draft LUPA/DEIS, which was released on November 1, 2013. The Proposed LUPA/FEIS contains the Proposed Plan, a summary of changes made between the Draft LUPA/DEIS and Proposed LUPA/FEIS, impacts of the Proposed Plan, a summary of the written and verbal comments received during the public review period for the Draft LUPA/DEIS, and responses to the comments.

In accordance with 36 C.F.R. § 219.59, the Forest Service will waive their objection procedures of this subpart and instead adopt the BLM's protest procedures outlined in 43 C.F.R. § 1610.5-2.

Pursuant to the BLM's planning regulations at 43 CFR 1610.5-2, any person who participated in the planning process for this Proposed LUPA and has an interest which is or may be adversely affected by the planning decisions may protest approval of the planning decisions within 30 days from date the Environmental Protection Agency (EPA) publishes the Notice of Availability of the FEIS in the Federal Register. For further information on filing a protest, please see the accompanying protest regulations in the pages that follow (labeled as Attachment #1). The regulations specify the required elements of your protest. Take care to document all relevant facts. As much as possible, reference or cite the planning documents or available planning records (e.g. meeting minutes or summaries, correspondence, etc.).

Emailed protests will not be accepted as valid protests unless the protesting party also provides the original letter by either regular mail or overnight delivery postmarked by the close of the protest period. Under these conditions, the BLM will consider the emailed protest as an advance copy and will afford it full consideration. If you wish to provide the BLM with such advance notification, please direct emailed protests to: protest@blm.gov.

All protests must be in writing and mailed to one of the following addresses:

Regular Mail:	Overnight Delivery:
Director (210)	Director (210)
Attn: Protest Coordinator	Attn: Protest Coordinator
P.O. Box 71383	20 M Street SE, Room 2134LM
Washington, D.C. 20024-1383	Washington, D.C. 20003

Before including your address, phone number, email 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, in agreement with the responsible official for the Forest Service, 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 decisions.

Upon resolution of all land use plan amendment protests, the BLM and the Forest Service will issue an Approved LUPA and Record of Decision (ROD). The Approved LUPA and ROD will be mailed or made available electronically to all who participated in the planning process and will be available on the BLM website at http://www.blm.gov/id/st/en/prog/nepa_register/sage-grouse_rmp_revision.html and the Forest Service website at http://www.fs.usda.gov/detail/r4/home/?cid=STELPRD3815825

Unlike land use planning decisions, implementation decisions included in this Proposed LUPA are not subject to protest under the BLM planning regulations, but are subject to an administrative review process, through appeals to the Office of Hearings and Appeals (OHA), Interior Board of Land Appeals (IBLA) pursuant to 43 CFR, Part 4 Subpart E. Implementation decisions generally constitute the BLM's and the Forest Service's final approval allowing on-the-ground actions to proceed. Where implementation decisions are made as part of the land use planning process, they are still subject to the appeals process or other administrative review as prescribed by specific resource program regulations once the BLM and the Forest Service resolves the protests to land use planning decisions and issues an Approved LUPA and ROD. The Approved LUPA and ROD will therefore identify the implementation decisions made in the plan that may be appealed to the Office of Hearing and Appeals.

Sincerely,

Jeffery L. Foss
Acting Idaho State Director
Bureau of Land Management

Jamie E. Connell
Montana State Director
Bureau of Land Management

(For) Nora Rasure
Regional Forester
U.S. Forest Service
Intermountain Region

Attachment 1

Protest Regulations

[CITE: 43CFR1610.5-2]

TITLE 43--PUBLIC LANDS: INTERIOR
CHAPTER II--BUREAU OF LAND MANAGEMENT, DEPARTMENT OF THE INTERIOR
PART 1600--PLANNING, PROGRAMMING, BUDGETING--Table of Contents
Subpart 1610--Resource Management Planning
Sec. 1610.5-2 Protest procedures.

(a) Any person who participated in the planning process and has an interest which is or may be adversely affected by the approval or amendment of a resource management plan may protest such approval or amendment. A protest may raise only those issues which were submitted for the record during the planning process.

(1) The protest shall be in writing and shall be filed with the Director. The protest shall be filed within 30 days of the date the Environmental Protection Agency published the notice of receipt of the final environmental impact statement containing the plan or amendment in the Federal Register. For an amendment not requiring the preparation of an environmental impact statement, the protest shall be filed within 30 days of the publication of the notice of its effective date.

(2) The protest shall contain:

(i) The name, mailing address, telephone number and interest of the person filing the protest;
(ii) A statement of the issue or issues being protested;
(iii) A statement of the part or parts of the plan or amendment being protested;
(iv) A copy of all documents addressing the issue or issues that were submitted during the planning process by the protesting party or an indication of the date the issue or issues were discussed for the record; and
(v) A concise statement explaining why the State Director's decision is believed to be wrong.

(3) The Director shall promptly render a decision on the protest.

(b) The decision shall be in writing and shall set forth the reasons for the decision. The decision shall be sent to the protesting party by certified mail, return receipt requested. The decision of the Director shall be the final decision of the Department of the Interior.

EXECUTIVE SUMMARY

ES.1 INTRODUCTION

The Federal Land Policy and Management Act of 1976 (FLPMA) directs the United States (US) Department of the Interior (DOI), Bureau of Land Management (BLM) to develop and periodically revise or amend its resource management plans (RMPs), which guide management of BLM-administered lands. The National Forest Management Act of 1976 (NFMA) directs the US Department of Agriculture, Forest Service (Forest Service) to develop and periodically revise or amend its land and resource management plans (LRMPs), which guide management of National Forest System lands. These two agencies' plans will be generically referred to as land use plans (LUPs) throughout the remainder of this document, unless the reference is to a specific BLM or Forest Service LUP.

The BLM and Forest Service Idaho and Southwestern Montana Greater Sage-Grouse Proposed Plan provides a layered management approach that offers the highest level of protection for Greater Sage-Grouse (GRSG) in the most valuable habitat. Land use allocations in the Proposed Plan would limit or eliminate new surface disturbance in Priority Habitat Management Areas (PHMA) and Important Habitat Management Areas (IHMA), while minimizing disturbance in General Habitat Management Areas (GHMA). In addition to establishing protective land use allocations, the Proposed Plan would implement a suite of management tools, such as disturbance limits, GRSG habitat objectives and monitoring, mitigation approaches, adaptive management triggers and responses, and other protective measures throughout the range. These overlapping and reinforcing conservation measures will work in concert to improve and restore GRSG habitat condition and provide consistency in how the BLM and Forest Service will manage activities in GRSG habitat in the planning area.

ES.1.1 Rationale for the Greater Sage-Grouse Planning Strategy and Land Use Plan Amendment

This land use plan amendment is the result of the March 2010 US Fish and Wildlife Service (USFWS) 12-Month Finding for Petitions to List the Greater Sage-Grouse (*Centrocercus urophasianus*) as Threatened or Endangered (75 *Federal Register* 13910, March 23, 2010). In that finding, the USFWS concluded that GRSG was "warranted, but precluded" for listing as a threatened or endangered species. A "warranted, but precluded" determination is one of three results that may occur after a petition is filed by the public to list a species under the Endangered Species Act (ESA). This finding indicates that immediate publication of a proposed rule to list the species is precluded by higher-priority listing proposals; that is, a species should be listed based on the available science, but listing other species takes priority because they are more in need of protection.

The USFWS reviewed the status of and threats to the GRSG in relation to the five listing factors provided in Section 4(a)(1) of the ESA. Of the five listing factors reviewed, the USFWS determined that Factor A, "the present or threatened destruction, modification, or curtailment of the habitat or range of the GRSG," and Factor D, "the inadequacy of existing regulatory mechanisms," posed "a significant threat to the GRSG now and in the foreseeable future" (75 *Federal Register* 13910, March 23, 2010). The USFWS identified the principal regulatory mechanisms for the BLM and Forest Service as conservation measures in LUPs.

Consistent with the National Greater Sage-Grouse Planning Strategy (BLM 2011),[1] the BLM as the lead agency, together with the Forest Service as a cooperating agency, is preparing 15 environmental impact statements (EISs), with associated plan amendments and revisions. These documents provide a set of management alternatives focused on specific conservation measures across the range of the GRSG (see **Figure ES-1**, Greater Sage-Grouse Planning Strategy Boundaries).

Science-based decision making and collaboration with state and local partners are fundamental to the Greater Sage-Grouse Planning Strategy. The 15 GRSG LUP/EISs address threats to GRSG identified by state fish and wildlife agencies, the BLM National Technical Team, and the USFWS in the context of its listing and Forest Service GRSG LUP/EISs (USFWS 2013),[2]. Where consistent with conservation objectives, the GRSG LUP/EISs adopt unique state and stakeholder developed approaches and priorities. Additional science-based reviews by the

[1] BLM (US Department of the Interior, Bureau of Land Management). 2011. Instruction Memorandum 2012-044, BLM National. Greater Sage-Grouse Land Use Planning Strategy. Washington, DC. December 27, 2011.
[2] USFWS (US Department of the Interior, Fish and Wildlife Service). 2013. Greater Sage-grouse *(Centrocercus urophasianus)* Conservation Objectives: Final Report. USFWS, Denver, CO. February 2013.

Figure ES-1

US Geological Survey and related scientific literature provided further guidance on specific issues that arose in developing the final BLM and Forest Service decision and the Conservation Objectives Team (COT) report. The COT report was prepared by wildlife biologists from state and federal agencies and provides a blueprint for the overall conservation approach set forth in the BLM GRSG LUP/EISs. In addition, regular meetings with the Western Governors Association Sage-Grouse Task Force provided additional opportunities for coordination with member states.[3]

ES.1.2 Description of the Planning Area and Habitat Management Areas

The planning area is the geographic area within which the BLM and Forest Service will make decisions during this planning effort. The planning area boundary includes all lands regardless of jurisdiction. The Idaho and Southwestern Montana Sub-regional GRSG planning area covers all or portions of 28 counties in Idaho, 6 counties in southwestern Montana, and 1 county in northern Utah. While the planning area consists of all lands regardless of ownership, decisions resulting from this land use plan amendment (LUPA)

[3] The Western Governors Association Sage-Grouse Task Force works to identify and implement high priority conservation actions and integrate ongoing actions necessary to preclude the need for the GRSG to be listed under the ESA. The Task Force includes designees from the 11 western states where GRSG is found as well as representatives from USFWS, BLM, Natural Resources Conservation Service, Forest Service, United States Geological Survey, and Department of the Interior.

would apply only to BLM-administered and National Forest System lands in GRSG habitats (decision area), including surface and split-estate lands with BLM-administered subsurface mineral rights. **Chapter 3**, Affected Environment, describes the current resource and resource use conditions in the planning area.

GRSG habitat on BLM-administered and National Forest System lands in the decision area consists of lands allocated as PHMA, IHMA, and GHMA (**Figure ES-2** Greater Sage-Grouse Habitat Management Areas – Idaho and Southwestern Montana GRSG LUPA/EIS, **Table ES-1** Habitat Management Areas in the Idaho and Southwestern Montana Planning Area). PHMA, IHMA, and GHMA are defined as follows:

- PHMA (5,192,600 acres): BLM-administered and National Forest System lands identified as having the highest value to maintaining sustainable GRSG populations. The boundaries and management strategies for PHMA are derived from and generally follow the Preliminary Priority Habitat boundaries (see **Chapter 3**) identified in the Draft LUPA/EIS, but may be modified based on the objectives of each alternative. Areas of PHMA largely coincide with areas identified as Priority Areas for Conservation in the COT report.
- IHMA (3,153,300 acres): BLM-administered and National Forest System lands that provide a management buffer for PHMA and connect patches of PHMA. IHMA encompasses areas of generally moderate to high conservation value habitat and/or populations, but that are not as important as PHMA. There are no IHMAs designated within southwestern Montana. The IHMA boundaries and management strategies are derived from and generally follow the Preliminary Medial Management Area (PMMA) and Important Habitat Zone (IHZ) boundaries identified in Alternatives D and E, respectively, of the Draft LUPA/EIS, but may be modified based on the objectives of each alternative. These lands serve a critical role in the adaptive management strategy developed by the State of Idaho and adopted in the Proposed Plan.
- GHMA (2,760,500 acres): BLM-administered and National Forest System lands that require some special management to sustain GRSG populations. The GHMA boundaries and management strategies are derived from and generally follow the Preliminary General Habitat boundaries (see **Chapter 3**) identified in the Draft LUPA/EIS, but may be modified based on the objectives of each alternative.

The planning area includes other BLM-administered and National Forest System lands that are not allocated as habitat management areas for GRSG. The Idaho

and Southwestern Montana LUPA/EIS does not establish any additional management for these lands; these lands will be managed according to the existing, underlying land use plan for the area.

Figure ES-2 Greater Sage-Grouse Habitat Management Areas – Idaho and Southwestern Montana GRSG LUPA/EIS

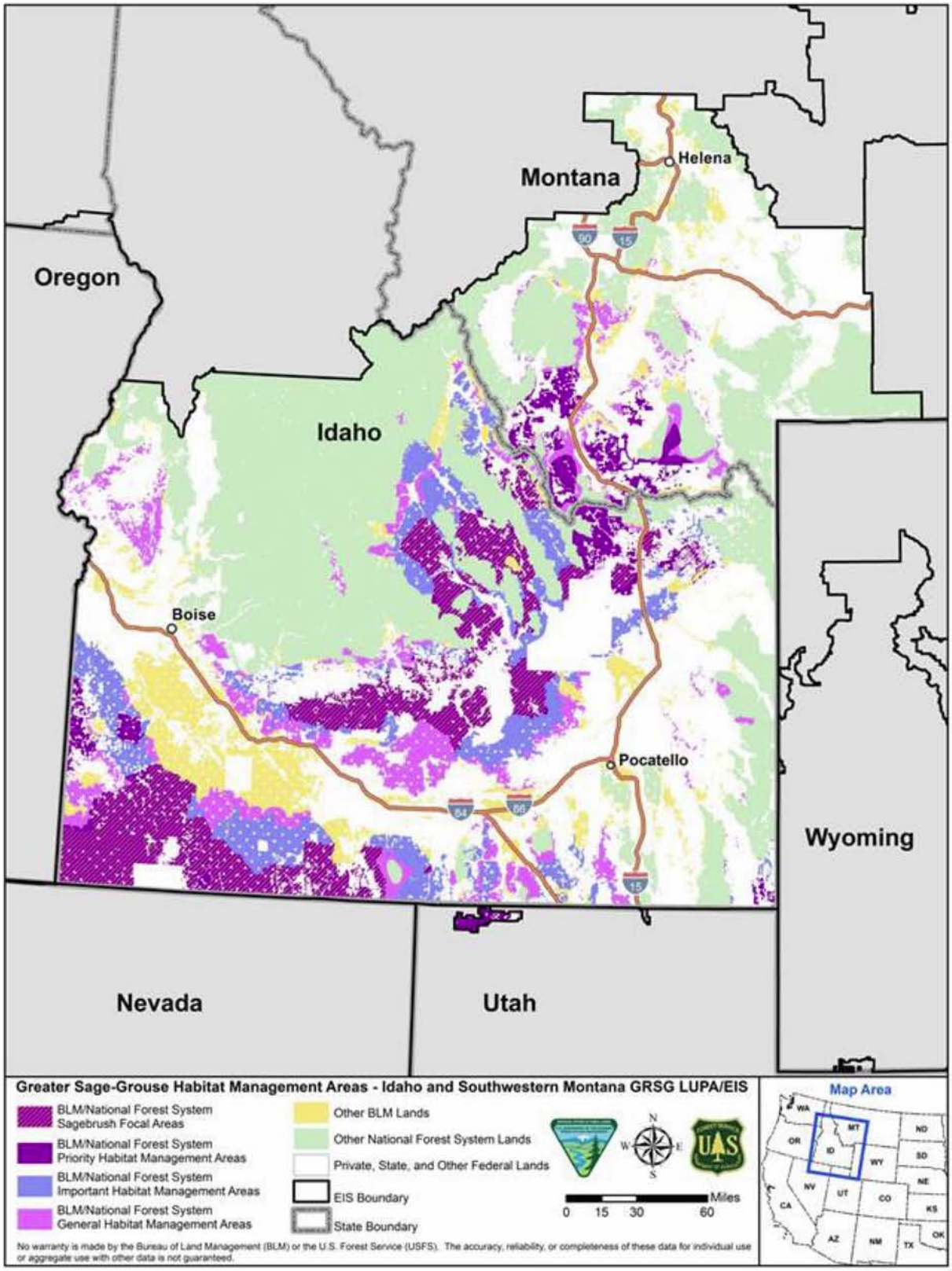

Table ES-1
Habitat Management Areas in the Idaho and Southwestern Montana Planning Area

Habitat Management Area	Acres of BLM-administered/National Forest System Lands	Percent of BLM-administered/National Forest System Lands in Planning Area
PHMA	5,192,600	20
IHMA	3,153,300	12
GHMA	2,760,500	11
Other BLM-administered/National Forest System lands	14,605,400	57

The Proposed Plan also identifies specific Sagebrush Focal Areas (SFA) (3,842,900 acres), which are a subset of PHMA. The SFAs were derived from Greater Sage-Grouse "stronghold" areas described in a USFWS memorandum to the BLM and Forest Service titled *Greater Sage-Grouse: Additional Recommendations to Refine Land Use Allocations in Highly Important Landscapes* (USFWS 2014).[4] The memorandum and associated maps provided by the USFWS identify areas that represent recognized "strongholds" for GRSG that have been noted and referenced as having the highest densities of GRSG and other criteria important for the persistence of the species.

In its listing decision, the USFWS noted that changes in management of GRSG habitats are necessary to avoid the continued decline of GRSG populations. Changes in land allocations and conservation measures in the BLM and Forest Service LUPs provide a means to implement regulatory mechanisms to address the inadequacy identified by the USFWS.

ES.3 PROPOSED ACTION

The proposed federal action is the Proposed Plan, which identifies resource management actions in accordance with the multiple-use and sustained-yield mandates of FLPMA and the NFMA. The proposed action is intended to provide a consistent framework for managing GRSG and its habitat on BLM-administered and National Forest System lands. The alternatives, including the Proposed Plan, comprise desired future outcomes, and a range of management actions, allowable uses, and land use allocations that guide management on BLM-administered and National Forest System lands to conserve, restore, and enhance GRSG habitat. The Proposed Plan (see **Section ES.6,** Greater Sage-Grouse Habitat Management Proposed Plan and Environmental Effects, and **Section 2.6.2**, Proposed Plan Amendment), represents the agencies' approach for addressing the purpose and need.

[4] USFWS (US Department of the Interior, Fish and Wildlife Service). 2014. Memorandum: Greater Sage-Grouse: Additional Recommendations to Refine Land Use Allocations in Highly Important Landscapes. October 27, 2014.

ES.4 DEVELOPMENT OF THE LUPA/EIS

ES.4.1 Scoping

The BLM and Forest Service initiated the LUPA/EIS process on December 9, 2011, with the publication in the Federal Register of a Notice of Intent (NOI) to begin a planning effort. A public scoping process began in January 2012 and included a series of seven public meetings in various locations throughout the planning area. Scoping is an early and open process for determining the scope, or range, of issues to be addressed and for identifying the significant issues to consider in the planning process. The scoping process included soliciting input from interested state and local governments, tribal governments, other federal agencies and organizations, and individuals to identify the scope of issues to be addressed in the plan amendment, and to assist in the formulation of a reasonable range of alternatives (See **Section 6.2.2**, Public Notification of Scoping and **Section 6.2.3**, Public Scoping Open Houses).

The final Scoping Summary Report, available online at *http://www.blm.gov/wo/st/en/prog/more/sagegrouse.html*, prepared in conjunction with all the GRSG LUPAs, summarizes the scoping and issue-identification process and describes 13 broad issue categories identified during the scoping process (see also **Section 1.5.2**, Issues Identified for Consideration in the Idaho and Southwestern Montana Sub-Region).

ES.4.2 Cooperating Agency Collaboration

Throughout this planning effort, the BLM and Forest Service have engaged with multiple federal, state, and local government agencies as well as Native American tribes. Consistent with the BLM Land Use Planning Handbook (H-1601-1) and FLPMA and the Forest Service Manual 1920 and NFMA, cooperating agencies share knowledge and resources to achieve desired outcomes for public lands and communities within statutory and regulatory frameworks. A total of 26 agencies and counties signed Memoranda of Understanding (MOU) to formalize their cooperating agency relationship. The BLM and Forest Service met with and provided relevant information to cooperating agencies throughout the planning process. For more information, see **Chapter 6**, Consultation and Coordination.

ES.4.3 Development of the Draft LUPA/EIS

Development of Management Alternatives

In accordance with NEPA and the CEQ implementing regulations (40 CFR 1500), the Idaho and Southwestern Montana GRSG LUPA/EIS planning team considered public input and developed a reasonable range of alternatives for the Draft LUPA/EIS.

The planning team developed six unique alternatives, including one No Action Alternative and five action alternatives, which were subsequently analyzed in the Draft LUPA/EIS. Each of the preliminary action alternatives was designed to:

- Respond to USFWS-identified issues and threats to GRSG and its habitat, including specific threats identified in the COT report
- Address the 13 range-wide planning issues
- Fulfill the purpose and need for the LUPA
- Meet the mandates of the FLPMA and the NFMA

Collectively, the five action alternatives (Alternatives B, C, D, E, and F) analyzed in the Draft LUPA/EIS offer a range of possible management approaches for responding to the purpose and need as well as the planning issues and concerns identified through public scoping. While the overarching goal of the long-term conservation of GRSG and its habitat is the same across alternatives, each alternative contains a discrete set of objectives and management actions, which if selected as the final plan, would constitute a unique LUPA.

Publication of Draft LUPA/EIS

Public Comment Period

A Notice of Availability (NOA) for the Draft LUPA/EIS was published in the Federal Register on November 1, 2013. The NOA initiated a 90-day public comment period, which ended on January 29, 2014. The BLM and Forest Service also held seven 2-hour public comment open houses for the Draft LUPA/EIS in January 2014.

Comment Analysis

During the Draft LUPA/EIS 90-day public comment period, the BLM and Forest Service received thousands of written comments by mail, email, and submissions at the public meetings. Comments covered a wide spectrum of thoughts, opinions, ideas, and concerns. Upon receipt, the BLM and Forest Service reviewed the comments, grouped similar substantive comments under an appropriate topic heading, and evaluated and wrote summary responses addressing the comment topics. The response indicated whether or not the commenters' points would result in new information or changes being included in the Proposed LUPA/FEIS. **Section 6.2.5**, Public Comment on the Draft LUPA/EIS, provides a detailed description of the comment analysis methodology and an overview of the public comments received on the Draft LUPA/EIS. Complete comment summaries and responses, including rationale and any associated changes made in the Proposed LUPA/FEIS, can be found in **Appendix T**.

ES.5 LUPA/EIS ALTERNATIVES AND ENVIRONMENTAL EFFECTS

ES.5.1 Alternative A: No Action

Under Alternative A, neither the BLM nor Forest Service would develop new management actions to protect GRSG habitat. Management of existing threats to GRSG populations and habitat, such as infrastructure, invasive species, grazing, mineral development, and wildfire, would continue in accordance with existing land use planning documents.

ES.5.2 Alternative B

Alternative B is based on the conservation measures developed by the BLM National Technical Team (NTT) planning effort described in Instruction Memorandum (IM) No. WO-2012-044. As directed in the IM, the conservation measures developed by the NTT must be considered and analyzed, as appropriate, through the land use planning and NEPA processes by all BLM state and field offices that contain occupied GRSG habitat. Alternative B would apply management actions to PHMA and GHMA, including actions that would exclude ROW development in PHMA and avoid development in GHMA, close PHMA to fluid mineral leasing, mineral material sales, and nonenergy leasable minerals, and recommend proposed withdrawal from locatable mineral entry in PHMA. These management actions would reduce surface disturbance in PHMA and would minimize disturbance in GHMA, thereby maintaining GRSG habitat.

Management actions for wildfire would focus on suppression in PHMA and GHMA, while limiting certain types of fuels treatments. Vegetation management would emphasize sagebrush restoration. Collectively, vegetation and wildfire management would conserve GRSG habitat. Grazing would continue with similar impacts under Alternative B as Alternative A.

ES.5.3 Alternative C

Alternative C is the most restrictive approach to GRSG conservation. Alternative C would eliminate all future ROWs, fluid mineral leasing, nonenergy leasable mineral development, and mineral material sales on GRSG habitat. Alternative C would also recommend proposed withdrawal from locatable mineral entry for all GRSG habitat. Alternative C would manage all GRSG habitat as PHMA. This alternative would substantially reduce surface disturbance in all GRSG habitat.

Under Alternative C, the BLM and Forest Service would take a passive management approach to vegetation management and fuels treatments. Additionally, all GRSG habitat would be unavailable for livestock grazing.

ES.5.4 Alternative D

Alternative D, one of the agencies' co-preferred alternatives from the Draft LUPA/EIS, presents a balanced approach to maintaining and enhancing GRSG populations and habitat.

Alternative D would limit disturbance in GRSG habitat by excluding wind and solar energy development, avoiding all other ROW development, closing no and low potential areas within PHMA to fluid mineral leasing, applying no surface occupancy stipulations to fluid mineral development within 0.6 miles of leks in PHMA, closing GRSG habitat to mineral material sales within 3 kilometers of an occupied lek, and closing PHMA and IHMA to future nonenergy leasable mineral development. These management actions would protect GRSG habitat while allowing other activities, subject to conditions.

Under Alternative D, the BLM and Forest Service management would support sagebrush/perennial grass ecosystems enhancements, increase fire suppression in PHMA, IHMA, and GHMA, and manage livestock grazing to maintain or enhance sagebrush and perennial grass ecosystems.

ES.5.5 Alternative E

Alternative E incorporates proposed GRSG protection measures recommended by the States of Idaho and Utah. Management in Montana would remain unchanged from the current LUPs (Alternative A). Alternative E addresses the following primary threats: fire, invasive weeds, and infrastructure development. It also includes guidance for several secondary GRSG threats such as recreation, improper livestock grazing, and West Nile virus for BLM and Forest Service programs that affect GRSG or its habitat. In Montana, there would be no new regulatory mechanisms to address GRSG conservation.

ES.5.6 Alternative F

Alternative F would restrict development in ways similar to those proposed under Alternative B. Alternative F would limit surface disturbance in PHMA and GHMA.

The BLM and Forest Service, under Alternative F, would prioritize wildfire suppression in PHMA, while limiting certain types of fuels treatments necessary to protect GRSG habitat. Concurrent vegetation management would emphasize sagebrush restoration and enhancement. Alternative F would reduce livestock utilization by 25 percent within PHMA and GHMA.

ES.6 Greater Sage-Grouse Habitat Management Proposed Plan and Environmental Effects

In consideration of public comments, best available science, cooperating agency coordination, and internal review of the Draft LUPA/EIS, the BLM and Forest Service developed this Greater Sage-Grouse Habitat Management Proposed Plan (Proposed Plan). The Proposed Plan represents the BLM's and Forest Service's proposed approach for meeting the purpose and need consistent with the agencies' legal and policy mandates.

The BLM and Forest Service Proposed Plans address threats (as described in the COT report) to GRSG and its habitat. The Proposed Plans seek to provide greater regulatory certainty for management actions intended to conserve the

GRSG (**Table ES-2**, Key Components of the Idaho and Southwestern Montana Proposed Plan Addressing COT Report Threats). In making its determination of whether the GRSG is warranted to be listed as threatened or endangered under the ESA, the USFWS will evaluate the degree to which the land use planning decisions proposed in this LUPA/EIS address threats to GRSG and its habitat.

The Proposed Plan would maintain and enhance GRSG populations and habitat. The Proposed Plan would apply management actions, subject to valid existing rights, to other uses and resources, such as:

- Providing a framework for prioritizing areas in PHMA, IHMA, and GHMA for wildfire, invasive annual grass, and conifer treatments;
- Managing areas as ROW avoidance or exclusion for certain types of lands and realty uses, requiring specific design features, and limiting new development where a disturbance cap has been reached;
- Adjusting grazing practices as necessary based on GRSG habitat objectives, Land Health Standards, and ecological site potential; and
- Applying no surface occupancy stipulations, with limited exceptions, to fluid mineral development in PHMA and closing PHMA to nonenergy leasable development and mineral material sales.

The Proposed Plan would also establish exception and development criteria and conditions for new anthropogenic activities in PHMA, IHMA, and GHMA to ensure a net conservation gain to GRSG. The Proposed Plan would reduce habitat disturbance and fragmentation through limitations on surface-disturbing activities, while addressing changes in resource condition and use through monitoring and adaptive management.

The Proposed Plan adopts important aspects of the State of Idaho's Alternative E by establishing conservation measures as well as developing a three-tiered habitat map (i.e., PHMA, IHMA, and GHMA) that directs disturbance out of the best GRSG habitat where possible. The three-tiered map also serves as the foundation for an adaptive management approach that includes habitat and population hard and soft triggers in areas most valuable to the GRSG and the shifting of IHMA to PHMA when triggers are hit.

For a full description of the BLM and Forest Service Proposed Plan Amendments, see **Section 2.6.2** and **Section 2.6.3**.

Table ES-2
Key Components of the Idaho and Southwestern Montana Proposed Plan Addressing COT Report Threats

Threats to GRSG and its Habitat (from COT Report)	Key Component of the Idaho and Southwestern Montana Proposed Plan
All Threats	• Implement the Adaptive Management Plan, which allows for more restrictive land use allocations and management actions to be implemented in IHMA if habitat or population hard triggers are met. • Require and ensure mitigation that provides a net conservation gain to GRSG. • Monitor implementation and effectiveness of conservation measures in GRSG habitats according to the Habitat Assessment Framework. • Apply buffers necessary based on project type and location to address impacts on leks when authorizing actions in GRSG habitat. • Apply Required Design Features (RDFs) when authorizing actions in GRSG habitat. (BLM only) • Incorporate RDFs as land use plan guidelines. (Forest Service only) • Prioritize the leasing and development of fluid mineral resources outside of GRSG habitat. (BLM only) • Work with the operator to locate fluid mineral development outside GRSG habitat. (Forest Service only)
All development threats, including mining, infrastructure, and energy development	• PHMA: Implement an anthropogenic disturbance cap of 3% within the Biologically Significant Unit (BSU) and proposed project analysis areas (Idaho and Montana). Apply Anthropogenic Disturbance Exception Criteria and Anthropogenic Disturbance Development Criteria (Idaho only). • PHMA/IHMA: Implement a density cap of an average of 1 energy and mining facility per 640 acres. • IHMA: Implement the 3% disturbance cap. Apply Anthropogenic Disturbance Development Criteria.
Energy Development—Fluid Minerals, including geothermal resources	• PHMA: Open to fluid mineral leasing subject to No Surface Occupancy (NSO) stipulation without waiver or modification, and with limited exception. In SFAs, NSO without waiver, modification, or exception. • IHMA: Open to fluid mineral leasing subject to NSO stipulation without waiver or modification, and with limited exception. • GHMA: Open to fluid mineral leasing subject to Controlled Surface Use (CSU) and Timing Limitation (TL) stipulations.
Energy Development—Wind Energy	• PHMA: Exclusion area (not available for wind energy development under any conditions) • IHMA: Avoidance area (may be available for wind energy development with special stipulations) • GHMA in Montana: Avoidance area
Energy Development—Solar Energy	• PHMA: Exclusion area (not available for solar energy development under any conditions) • IHMA: Avoidance area (may be available for solar energy development

Table ES-2
Key Components of the Idaho and Southwestern Montana Proposed Plan
Addressing COT Report Threats

Threats to GRSG and its Habitat (from COT Report)	Key Component of the Idaho and Southwestern Montana Proposed Plan
	with special stipulations) • GHMA in Montana: Avoidance area
Infrastructure – major Rights-of-Way (ROW)	• PHMA: Avoidance area (may be available for major ROWs with special stipulations) • IHMA: Avoidance area (may be available for major ROWs with special stipulations) • GHMA in Montana: Avoidance area (may be available for major ROWs with special stipulations)
Infrastructure – minor ROWs	• PHMA: Avoidance area (may be available for minor ROWs with special stipulations) • IHMA: Avoidance area (may be available for minor ROWs with special stipulations)
Mining—locatable minerals	• SFA: Recommend withdrawal from the Mining Law of 1872
Mining—non-energy leasable minerals	• PHMA: Closed area (not available for non-energy leasable minerals)
Mining—saleable minerals	• PHMA: Closed area (not available for saleable mineral development) with a limited exception (may remain open to free use permits and expansion of existing active pits if criteria are met)
Mining—coal	• Not applicable in the Idaho and Southwestern Montana Sub-region.
Livestock Grazing	• Prioritize the review and processing of grazing permits/leases in SFAs followed by PHMA. (BLM only) • Adjust grazing management to move towards desired habitat conditions consistent with ecological site capability. (Forest Service only) • The NEPA analysis for renewals and modifications of grazing permits/leases will include specific management thresholds, based on the GRSG Habitat Objectives Table, Land Health Standards, and ecological site potential, to allow adjustments to grazing that have already been subjected to NEPA analysis. (BLM only) • Consider closure of grazing allotments, pastures, or portions of pastures, or managing the allotment as a forage reserve as opportunities arise under applicable regulations, where removal of livestock grazing would enhance the ability to achieve desired habitat conditions. (Forest Service only) • Prioritize field checks in SFAs followed by PHMA to ensure compliance with the terms and conditions of grazing permits. (BLM only)
Free-Roaming Equid Management	• Manage Herd Management Areas (HMAs) in GRSG habitat within established Appropriate Management Level (AML) ranges to achieve and

Table ES-2
Key Components of the Idaho and Southwestern Montana Proposed Plan Addressing COT Report Threats

Threats to GRSG and its Habitat (from COT Report)	Key Component of the Idaho and Southwestern Montana Proposed Plan
	maintain GRSG habitat objectives. • Prioritize rangeland health assessment, gathers and population growth suppression techniques, monitoring, and review and adjustment of AMLs and preparation of Herd Management Area Plans in GRSG habitat.
Range Management Structures	• Allow range improvements which do not impact GRSG, or which provide a conservation benefit to GRSG such as fences for protecting important seasonal habitats.
Recreation	• PHMA and IHMA: Do not construct new recreation facilities.
Fire	• Identify and prioritize areas that are vulnerable to wildfires and prescribe actions important for GRSG protection. (BLM only) • Protection of GRSG habitat should receive high consideration, along with other high values, when positioning resources. (Forest Service only) • Prioritize post-fire treatments in PHMA, IHMA, and GHMA. (BLM only) • Design fuel treatments to restore, enhance, or maintain GRSG habitat. (Forest Service only)
Nonnative, Invasive Plants Species	• Improve GRSG habitat by treating annual grasses. • Treat sites in GRSG habitat that contain invasive species infestations through an integrated pest management approach.
Sagebrush Removal	• PHMA: Maintain a minimum of 70 percent of lands capable of producing sagebrush with 10 to 30 percent sagebrush canopy cover. • All BLM use authorizations will contain terms and conditions regarding the actions needed to meet or progress toward meeting the habitat objectives for GRSG.
Pinyon and/or Juniper Expansion	• Remove conifers encroaching into sagebrush habitats, prioritizing occupied GRSG habitat.
Agricultural Conversion and Ex-Urban Development	• GRSG habitat will be retained in federal management.

ES.7 SUMMARY

Since the release of the Draft LUPA/EIS, the BLM and Forest Service have continued to work closely with a broad range of governmental partners, including the United States Department of Agriculture Natural Resources Conservation Service, the USFWS and US Geological Survey in DOI, Indian tribes, governors, state agencies, and county commissioners. Through this cooperation, the BLM and Forest Service have developed the Proposed Plan

that, in accordance with applicable law, achieves the long-term conservation of GRSG and its habitat.

Conservation of the GRSG is a large-scale challenge that requires a landscape-scale solution that spans 11 western states. The Idaho and Southwestern Montana GRSG LUPA/EIS achieves consistent, range-wide conservation objectives as outlined below. Additionally, the Idaho and Southwestern Montana GRSG LUPA/EIS aligns with the States of Idaho and Montana's priorities and land management approaches consistent with conservation of GRSG. The Proposed Plan incorporates adaptive management habitat and population hard and soft triggers as well as management actions to reduce surface disturbance.

Minimize additional surface disturbance. The most effective way to conserve the GRSG is to protect existing, intact habitat. The BLM and Forest Service aim to reduce habitat fragmentation and protect key habitat areas. The Idaho and Southwestern Montana GRSG LUPA/EIS minimizes surface disturbance on over 11 million acres of BLM-administered and National Forest System lands by allocating lands as SFA, PHMA, IHMA, and GHMA with decisions that aim to conserve GRSG habitat.

The Proposed Plan includes numerous management actions and strategies to reduce surface disturbance. Some key components include applying a 3 percent anthropogenic disturbance cap, requiring RDFs, implementing anthropogenic disturbance exception and development criteria, requiring mitigation to provide a net conservation gain to GRSG, and prioritizing oil and gas development outside of GRSG habitat.

Improve habitat condition. While restoring sagebrush habitat can be very difficult in the short term, particularly in the most arid areas, it is often possible to enhance habitat quality through purposeful management. The Idaho and Southwestern Montana GRSG LUPA/EIS commits to management actions necessary to achieve science-based vegetation and GRSG habitat management objectives established in the Proposed Plan.

The Proposed Plan includes numerous management actions and strategies to improve habitat condition. Some key components include specifying decadal treatment objectives for mechanical, prescribed fire, and grass restoration treatments; incorporating GRSG seasonal habitat objectives into the design of projects or activities; using the Wildland Fire and Invasive Species Assessments to identify priority areas for fuels management, fire management, and restoration; and managing livestock grazing and wild horses to achieve GRSG habitat objectives.

Reduce threat of rangeland fire to GRSG and sagebrush habitat. Rangeland fire can destroy sagebrush habitat and lead to the conversion of previously healthy habitat into nonnative cheatgrass-dominated landscapes.

Experts have identified fire as one of the greatest threats to sagebrush habitat, particularly in the Great Basin.

The Idaho and Southwestern Montana GRSG LUPA/EIS incorporates Secretarial Order 3336 and adopts the specific provisions related to rangeland fire prevention, suppression, and restoration applicable to the planning area contained in "An Integrated Strategy for Rangeland Fire Management: Final Report to the Secretary" to improve the BLM's and Forest Service's ability to protect GRSG habitat from damaging wildfire. The BLM and Forest Service also support the development and implementation of Rangeland Fire Protection Associations in coordination with the State of Idaho.

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CC Forest Service Biological Evaluation and Wildlife Specialist Report
EE Comparison between Proposed Plan and Co-Preferred Alternatives

Chapter 1

Introduction

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Changes to Chapter 1 between Draft LUPA/EIS and Proposed LUPA/Final EIS

- General corrections (e.g., typographical errors), clarifications, and acreage recalculations were included.
- Additions and clarifications to the planning criteria (Section 1.6.1) and Memoranda of Understanding (Section 1.7.5).
- A discussion of USFWS was expanded to include the Priority Areas for Conservation and how they relate to GRSG management areas in the LUPA as well as a discussion of Sagebrush Focal Areas (Section 1.1.2).
- A discussion was added to describe a new USGS report published regarding lek buffers since the DEIS (Section 1.1.3).
- Text was added to describe the Montana Executive Order related to GRSG (Section 1.1.4).

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Chapter 1. Introduction

1.1 Background

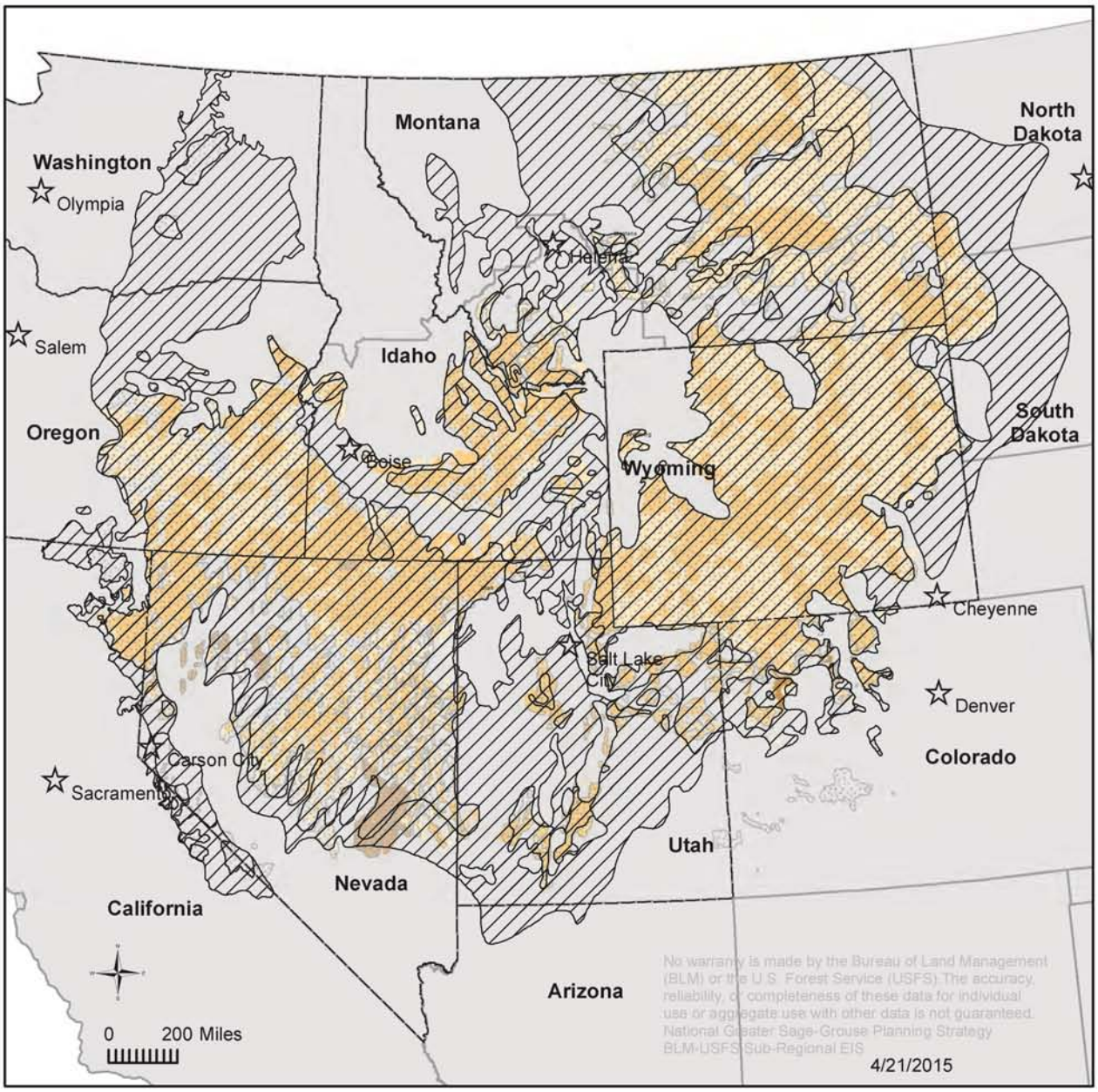
Greater Sage-Grouse (GRSG; *Centrocerus urophasianus*) are large, ground-dwelling birds that reside primarily in sagebrush ecosystems. Sagebrush ecosystems were and, in some respects, still are ubiquitous across the intermountain regions of western North America. While historical Euro-American settlement of these lands has been slower and sparser than in other regions of the country, habitat conversion to suit human purposes has contributed to widespread loss and decline of sagebrush habitat availability or quality and associated wildlife populations. These human purposes include agriculture and urban development, energy and mineral resource development, and a long history of dispersed (but sometimes intensive) uses such as domestic grazing.

More recently, large wildfires, often fueled or exacerbated by invasive plant species such as cheatgrass, have led to large areas of sagebrush loss in the intermountain west and Great Basin. The estimated distribution of contiguous sagebrush habitats, prior to Euro-American contact (Schroeder et al. 2004), was nearly twice that which is available today. This influences the availability of habitat for GRSG across the species' range (**Figure 1-1**, Greater Sage-Grouse Distribution). Although early documentation is sparse and possibly unreliable, it is suspected that GRSG were similarly more abundant historically at a continental scale (Schroeder et al. 2004). GRSG population trends are variable across their distribution, and while some populations appear stable, population numbers show long-term declines collectively across several regions (Connelly et al. 2004). Proximate reasons for population declines differ across the range-wide distribution of GRSG, but ultimately, the underlying cause is loss of suitable sagebrush habitat (Connelly and Braun 1997; Leonard et al. 2000; Aldridge et al. 2008).

The Federal Land Policy and Management Act of 1976 (FLPMA) directs the United States (US) Department of the Interior, Bureau of Land Management (BLM) to develop and periodically revise or amend its Land Use Plans (LUPs), which guide management of BLM-administered lands. The National Forest Management Act of 1976 (NFMA) directs the US Department of Agriculture (USDA) Forest Service to develop and periodically revise or amend its Land and Resource Management Plans (LRMPs), which guide management of National Forest System lands. For the purpose of this document, the term LUP applies to all BLM Resource Management Plans (RMPs) and older Management Framework Plans (MFPs) and Forest Service LRMPs.

This plan amendment effort is the result of the August 2011, BLM National Greater Sage-Grouse Planning Strategy (Strategy) (BLM 2011). The Strategy responds to the March 2010, US Fish and Wildlife Service (USFWS) *12-Month Finding for Petitions to List the Greater Sage-Grouse (*Centrocercus urophasianus*) as Threatened or Endangered* (75 *Federal Register* [FR] 13910, March 23, 2010) (2010 Finding). In the 2010 Finding, the USFWS concluded that GRSG was "warranted, but precluded" for listing as a threatened or endangered species. The USFWS reviewed the status and threats to GRSG in relation to the five Listing Factors

Figure 1-1
Greater Sage-Grouse Distribution



Sub-Regional EIS Boundary

Sage-Grouse Historic Distribution

Sage-Grouse Current Distribution

Consolidated Preliminary Priority and Preliminary General Habitat June 26, 2012

Priliminary Priority Habitat

Preliminary General Habitat

CO SG Population Linkage Areas

NV PPH/PGH Analysis Ongoing

Sub-Regional EIS Boundary

WAFWA Zone

MZ I

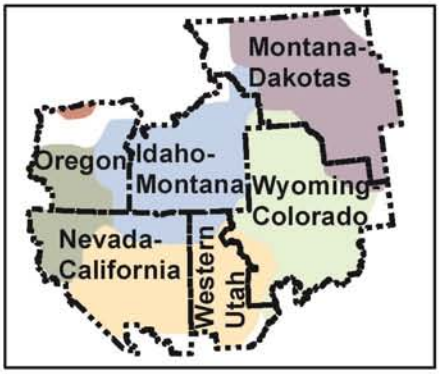
MZ II and VII

MZ III

MZ IV

MZ V

MZ VI



provided in Section 4(a)(1) of the Endangered Species Act (ESA). Of the five Listing Factors reviewed, the USFWS determined that Factor A, "*the present or threatened destruction, modification, or curtailment of the habitat or range of the Greater Sage-Grouse,"* and Factor D, "*the inadequacy of existing regulatory mechanisms"* posed "*a significant threat to the Greater Sage-Grouse now and in the foreseeable future"* (USFWS 2010) (emphasis added). The USFWS identified the conservation measures in LUPs as the principal regulatory mechanisms for the BLM and Forest Service.

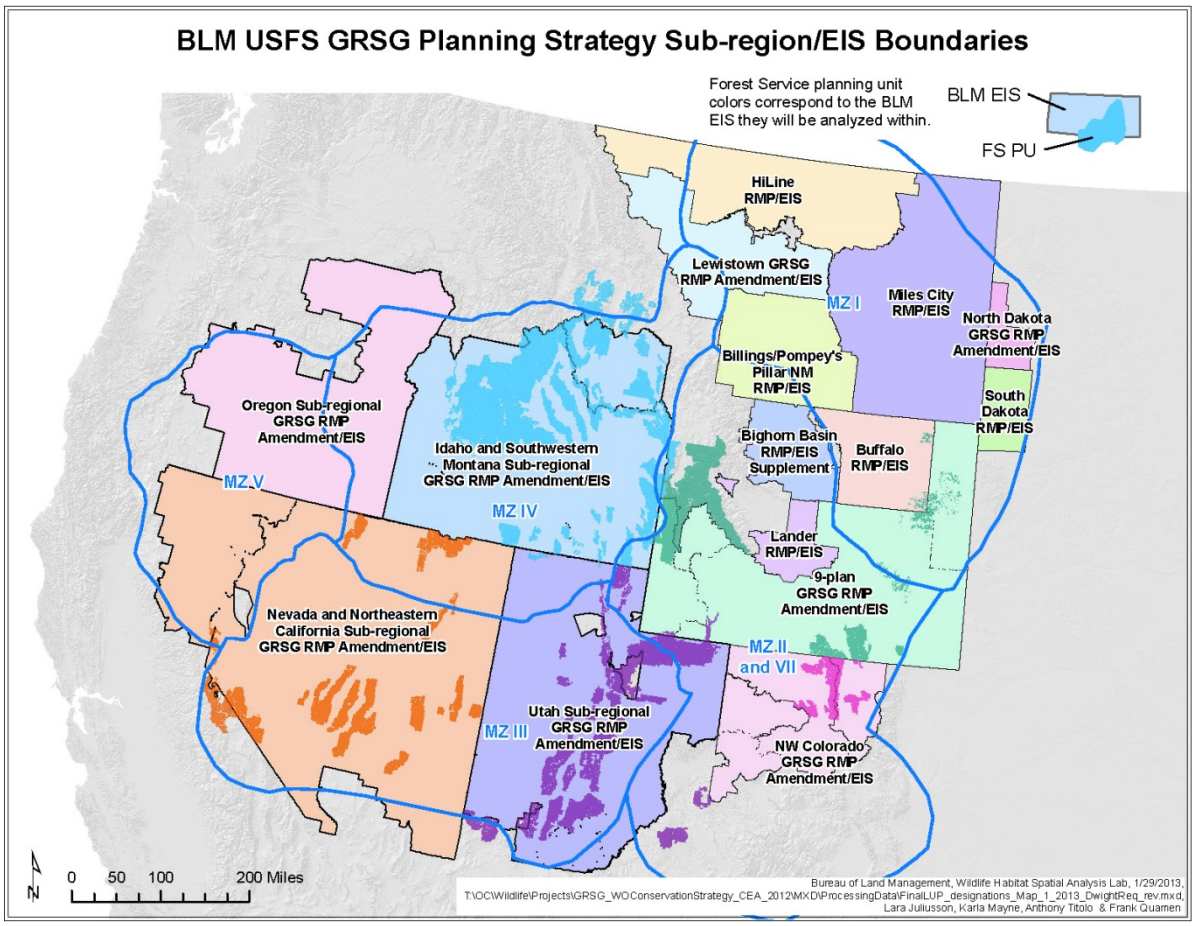
In response to the USFWS findings, the BLM and Forest Service intend to prepare plan amendments with associated Environmental Impact Statements (EISs) to incorporate specific conservation measures across the range of the GRSG, consistent with national BLM and Forest Service policy. The planning strategy will evaluate the adequacy of BLM and Forest Service LUPs and address, as necessary, amendments throughout the range of the GRSG (with the exception of the bi-state population in California and Nevada and the Washington State distinct population segment, which will be addressed through other planning efforts). The BLM is the lead agency and the FS is a cooperating agency in developing these EISs. These EISs have been coordinated under two administrative planning regions: the Rocky Mountain Region and the Great Basin Region. These regions are drawn roughly to correspond with the threats identified by the FWS in the 2010 listing decision, along with the Western Association of Fish and Wildlife Agencies (WAFWA) Management Zones framework (National Sage-grouse Conservation Planning Framework Team, December 2006). Stiver et al. (2006) delineated seven GRSG Management Zones, based on the distribution of 41 GRSG populations and 7 floristic provinces to guide general conservation goals and rangewide management within the range of the species. More detailed site-specific data, such as for seasonal habitats, vegetation characteristics, and related factors are more appropriately addressed in finer scale planning efforts or activities.

The Rocky Mountain Region comprises LUPs in the states of Montana, North Dakota, South Dakota, Wyoming, Colorado, and portions of Utah. This region comprises the WAFWA Management Zones I (Great Plains), II (Wyoming Basin), and a portion of VII (Colorado Plateau). The USFWS has identified a number of threats in this region, the major ones being habitat loss and fragmentation caused by development (e.g., oil and gas development, energy transmission, and wind energy development).

The Great Basin Region comprises LUPs in California, Nevada, Oregon, Idaho, and portions of Utah and Montana. This region comprises the WAFWA Management Zones III (Southern Great Basin), IV (Snake River Plain), and V (Northern Great Basin). The USFWS has identified a number of threats in this region, the major ones being wildfire, loss of native habitat to invasive species, and habitat fragmentation.

Both the Rocky Mountain and Great Basin regions are further divided into sub-regions, which is the level of this National Environmental Policy Act of 1969, as amended (NEPA) analysis. These sub-regions are generally based on the identified threats to the GRSG and the WAFWA Management Zones (see **Figure 1-2**, BLM USFS GRSG Planning Strategy Sub-region/EIS Boundaries, showing the sub-regional boundaries and WAFWA Management Zones).

Figure 1-2
BLM USFS GRSG Planning Strategy Sub-region/EIS Boundaries



On December 9, 2011, a Notice of Intent was published in the Federal Register to initiate the amendment of LUPs across nine western states, including California, Oregon, Nevada, Idaho, Utah, and Southwest Montana in the Great Basin Region and Northwest Colorado, Wyoming, Montana, South Dakota, and North Dakota in the Rocky Mountain Region. This Idaho and Southwestern Montana Sub-Regional Plan Amendment and EIS is one of fifteen separate EISs that are currently being conducted to analyze and incorporate specific conservation measures across the range of the GRSG, consistent with National BLM and Forest Service policy. A goal of all such LUPAs is to ensure consistency of goals objectives and management actions, to the extent practicable, across the region, as well as across the range of the GRSG.

On December 27, 2011, the BLM Washington Office released Instructional Memorandum (IM) No. 2012-044, *BLM National Greater Sage-Grouse Land Use Planning Strategy*. This IM provides direction to all of the planning efforts across the GRSG range to consider all applicable conservation measures when revising or amending its LUPs in GRSG habitat,

including the measures developed by the NTT that were presented in the December 2011 document – *A Report on National Greater Sage-Grouse Conservation Measures* (NTT Report), included as Attachment 1 of the IM. The IM also directs the inclusion and refinement of preliminary priority habitat (PPH) and preliminary general habitat (PGH) to be used in applying the conservation measures included in the NTT Report. The conservation measures developed by the NTT, should be considered in the land use planning process. The NTT report provides the latest science and best biological judgment, as of December 2011, to assist in making management decisions relating to the GRSG. The IM requires that the BLM consider all applicable conservation measures developed by the NTT when revising or amending its RMPs in GRSG habitat.

To augment this planning document at a biologically meaningful scale for GRSG, a Baseline Environmental Report (BER) for GRSG was produced by the US Geological Survey (USGS) for the BLM and Forest Service (Manier et al. 2013). The BER is a science support document that provides information to provide context for the individual planning units and issues within the larger WAFWA GRSG MZs. The BER examines each threat identified in the USFWS listing decision and summarizes the current scientific understanding of various impacts on GRSG populations and habitats. When available, the BER also identifies patterns, thresholds, indicators, metrics, and measured responses that quantify the impacts of each specific threat.

The Draft EIS included six alternatives that mapped GRSG habitat using different habitat classification schemes (**Table 1-1,** Crosswalk between Habitat Classifications in the Draft and Final EIS).

The Proposed Plan uses a three-tiered habitat classification system: Priority Habitat Management Areas (PHMA) Important Habitat Management Areas (IHMA) and General Habitat Management Areas (GHMA).

Priority Habitat Management Areas (PHMAs) focus on conserving the two key meta-populations in the sub-region. These meta-populations consist of a large aggregation of interconnected breeding subpopulations of GRSG that have the highest likelihood of long-term persistence. PHMAs include adequate area to accommodate continuation of existing land uses and landowner activities.

Important Habitat Management Areas (IHMAs) contain additional habitat and populations that provide a management buffer for the PHMA and to connect patches of PHMA. IHMAs are typically adjacent to PHMAs but generally reflect somewhat lower GRSG population status and/or reduced habitat value due to disturbance, habitat fragmentation or other factors. There are no IHMAs designated within the Southwestern Montana Conservation Area.

General Habitat Management Areas (GHMAs) encompass habitat that is outside of PHMAs or IHMAs. GHMAs contain approximately 10 percent of the occupied leks that are also of relatively low male attendance compared to leks in PHMA or IHMA. GHMAs are generally characterized by lower quality disturbed or patchy habitat of low lek connectivity.

Table 1-1
Crosswalk between Habitat Classifications in the Draft and Final EIS

Alternative	DEIS Habitat Classification	FEIS Habitat Classification
Alternative A	Preliminary Priority Habitat (PPH)	Priority Habitat Management Area (PHMA)
	Preliminary General Habitat (PGH)	General Habitat Management Area (GHMA)
Alternative B	Preliminary Priority Management Area (PPMA)	Priority Habitat Management Area (PHMA)
	Preliminary General Management Area (PGMA)	General Habitat Management Area (GHMA)
Alternative C	Preliminary Priority Management Area (PPMA)	Priority Habitat Management Area (PHMA)
Alternative D	Preliminary Priority Management Area (PPMA)	Priority Habitat Management Area (PHMA)
	Preliminary Medial Management Area (PMMA)	Important Habitat Management Area (IHMA)
	Preliminary General Management Area (PGMA)	Priority Habitat Management Area (PHMA)
Alternative E	Idaho Core Habitat Zone (CHZ) Montana Preliminary Priority Management Area (PPMA) Utah Sage-grouse Management Area (SGMA)	Priority Habitat Management Area (PHMA)
	Idaho Important Habitat Zone (IHZ)	Important Habitat Management Area (IHMA) – Idaho only
	Idaho General Habitat Zone (GHZ) Montana Preliminary General Management Area (PGMA)	General Habitat Management Area (GHMA)
Alternative F	Preliminary Priority Management Area (PPMA)	Priority Habitat Management Area (PHMA)
	Preliminary General Management Area (PGMA)	General Habitat Management Area (GHMA)
	Preliminary Restoration Management Area (PRMA)	Occur within General or Important Habitat Management Area (GHMA; IHMA)

1.1.1 Forest Service Involvement

The Forest Service is a cooperating agency with the BLM as part of the BLM GRSG Planning Strategy. Across the range of the GRSG the Forest Service manages approximately 8 percent of the total GRSG habitat. Combined with the approximately 52 percent managed by the BLM, both agencies manage approximately 60 percent of GRSG habitat across its range (Knick 2011).

The Forest Service has partnered with the BLM to help complete the LUPAs and EISs to implement the Strategy. As part of the initial Notice of Intent published in the Federal

Register on December 9, 2011, numerous Forest Service LUPs were identified to be amended through this combined effort. After further evaluation a Notice of Correction was published in the Federal Register on February, 10, 2012, which added several additional Forest Service LUPs to the list of plans to be amended through this process.

The Forest Service "Interim Conservation Recommendations for Greater Sage-Grouse and Greater Sage-Grouse Habitat" (Forest Service Washington Office [WO] 2600 Memo, October 2, 2012) provides interim recommendations for GRSG and habitat management in Forest Service Regions 1, 2, and 4, on the 20 Forest Service units involved in the GRSG land use planning process. These recommendations are applicable until interim directives are adopted or until the amendment for the LUP unit is completed (77 *Federal Register* 12792; March 2, 2012). The recommendations identify considerations for project decision-making as well as existing direction and legal requirements that may be relevant to Forest Service management of GRSG habitat. The recommendations do not supersede more protective conservation measures in existing LUPs. The goal is to promote consistency in management of activities on National Forest System lands with guidance in the BLM IM No. 2012-043, Greater Sage-Grouse Interim Management Policies and Procedures (December 22, 2011).

The Forest Service has structured its planning effort in a manner similar to the BLM Strategy, with involvement at the national, regional and sub-regional levels, as described in detail in **Section 1.1.1**. Since December 2011, the BLM and Forest Service have been working jointly through scoping, issue and alternative development, effects analysis and document completion. At the culmination of this process, the Forest Service intends to issue a separate Record of Decision (ROD) to amend or revise (if needed) Forest Service LUPs.

1.1.2 USFWS Involvement

The USFWS is a cooperating agency with the BLM as part of this Strategy. The USFWS is ultimately responsible for the evaluation and findings regarding potential ESA listing of the GRSG. The 2010 Finding indicated that GRSG is warranted for listing but precluded by higher priority listing actions ("warranted but precluded"), this designation places the GRSG on the federal list of candidate species.

GRSG Conservation Objectives: Priority Areas for Conservation and How They Correlate with Priority and General Habitat Management Areas

In 2012, the Director of the USFWS asked the Conservation Objectives Team (COT), consisting of state and USFWS representatives, to produce recommendations regarding the degree to which the threats need to be reduced or ameliorated to conserve GRSG so that it would no longer be in danger of extinction or likely to become in danger of extinction in the foreseeable future. The COT Report (USFWS 2013a) provides objectives based upon the best scientific and commercial data available at the time of its release. The BLM and Forest Service management actions analyzed in the LUP/EISs are intended to ameliorate threats identified in the COT report and to reverse the trends in habitat condition. The COT Report can be viewed online at the following address:

http://www.fws.gov/mountain-prairie/species/birds/sagegrouse/COT/COT-Report-with-Dear-Interested-Reader-Letter.pdf

The highest level objective in the COT Report is identified as meeting the objectives of WAFWA's 2006 GRSG Comprehensive Strategy of "reversing negative population trends and achieving a neutral or positive population trend."

The COT Report provides a WAFWA Management Zone and Population Risk Assessment. The report identifies localized threats from sagebrush elimination, fire, conifer encroachment, weed and annual grass invasion, mining, free-roaming wild horses and burros, urbanization, and widespread threats from energy development, infrastructure, grazing, and recreation (USFWS 2013a, p. 18).

Key areas across the landscape that are considered "necessary to maintain redundant, representative, and resilient populations" are identified within the COT Report. The USFWS in concert with the respective state wildlife management agencies identified these key areas as Priority Areas for Conservation (PACs).

Within the Idaho and southwestern Montana sub-region, the PACs consist of a total 11,232,800 acres. Under the Proposed Plan, the PACs are comprised of 7,111,200 acres of PHMA managed by the BLM and Forest Service, 3,489,400 acres of IHMA managed by the BLM and Forest Service, 272,400 acres of GHMA managed by the BLM and Forest Service, and 359,900 acres of non-habitat managed by the BLM and Forest Service.

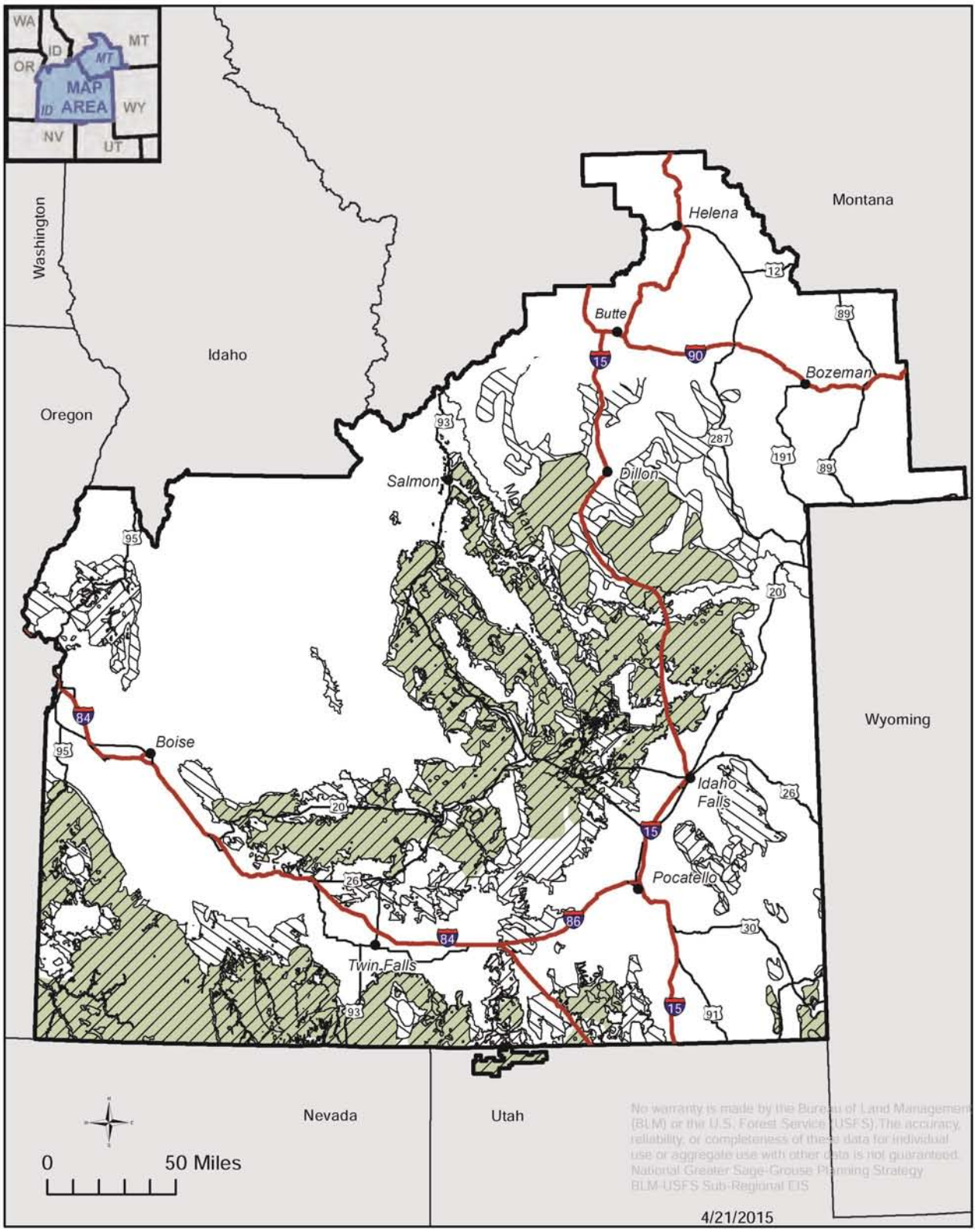
On October 27, 2014, the FWS provided the BLM/FS a memorandum titled "Greater Sage-Grouse: Additional Recommendations to Refine Land Use Allocations in Highly Important Landscapes". The memorandum and associated maps provided by the FWS identify areas that represent recognized "strongholds" for GRSG that have been noted and referenced by the conservation community as having the highest densities of GRSG and other criteria important for the persistence of the species. These areas have been incorporated into the Proposed Plan as Sagebrush Focal Areas (SFA) (**Figure 1-3,** USFWS Priority Areas for Conservation with Preliminary Priority and General Habitat), and will be managed as PHMA with the following additional management:

1) Recommended for withdrawal from the General Mining Act of 1872, subject to valid existing rights.

2) Managed as NSO, without waiver, exception, or modification, for fluid mineral leasing.

3) Prioritized for management and conservation actions in these areas, including, but not limited to review of livestock grazing permits/leases (see livestock grazing section for additional actions).

Figure 1-3
USFWS Priority Areas for Conservation
with Preliminary Priority and General Habitat



GRSG COT PAC
Priority Habitat
General Habitat
Analysis Boundary
Interstate Highway
US Highway
Major Cities

1.1.1 Other Federal Agency Involvement

On November 21, 2014 the USGS published "Conservation Buffer Distance Estimates for Greater Sage-Grouse—A Review" (USGS 2014). The USGS review provided a compilation and summary of published scientific studies that evaluate the influence of anthropogenic activities and infrastructure on GRSG populations. The BLM has reviewed this information and examined how lek buffer-distances were addressed through land use allocations and other management actions in the Draft Idaho and Southwestern Montana Sub-Region GRSG LUPA/EIS. Based on this review, in undertaking BLM management actions, and consistent with valid and existing rights and applicable law in authorizing third party actions, the BLM will apply the lek buffer-distances in the USGS Report "Conservation Buffer Distance Estimates for Greater Sage Grouse-A Review (Open File Report 2014-1239)" in GHMA, IHMA, and PHMA as detailed in **Appendix DD**.

1.1.2 State Government and Wildlife Agencies Involvement

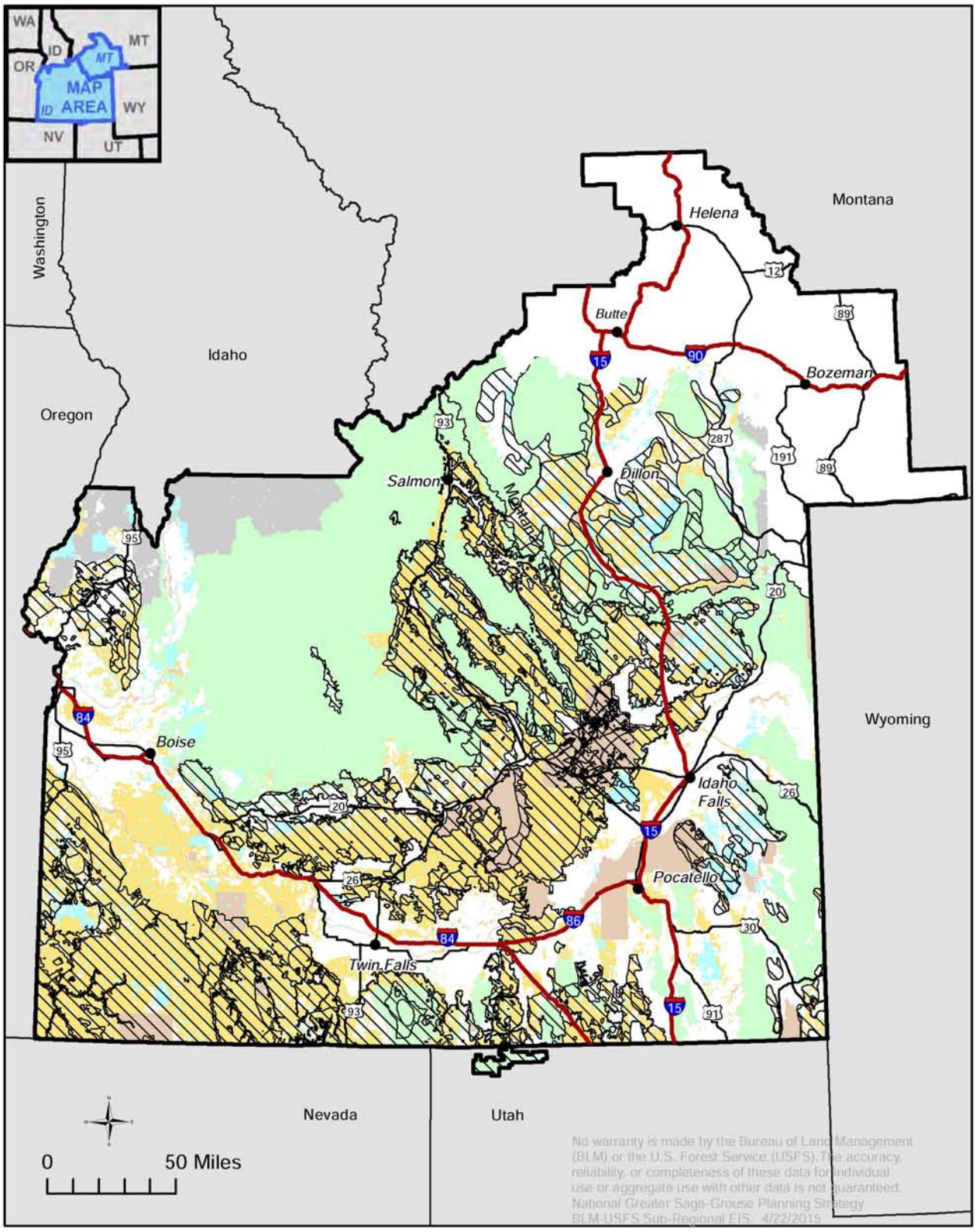
The various state wildlife agencies are involved in the BLM GRSG planning strategy as cooperating agencies and are involved with the RMTs and the Sub-Regional interdisciplinary teams. While working to help develop the EIS, the states of Idaho and Utah have also worked through their own authorities and processes to develop state plans to be included as alternatives in the BLM GRSG Planning Strategy as a potential approach to management for consideration by the BLM and Forest Service.

The Governor of the State of Montana issued Executive Order 10-2014 which created the Montana Sage Grouse Oversight Team and the Montana Sage Grouse Habitat Conservation Program. The executive order outlines a number of conservation strategies for state agencies to follow for land uses and activities in GRSG habitat in addition to establishing the Montana Sage Grouse Oversight Team and habitat conservation program. The State conservation efforts are complimentary to the conservation measures proposed in the BLM land use plans and when combined would provide conservation efforts across land ownership boundaries.

1.1.3 Idaho and Southwestern Montana Sub-Region

The BLM Idaho and Montana state offices and Forest Service Beaverhead-Deerlodge, Boise, Caribou, Salmon-Challis, Sawtooth, and Targhee national forests and Curlew National Grassland are preparing the Idaho and Southwestern Montana Sub-Regional EIS. This is to consider amending up to 29 LUPs to incorporate conservation measures into the management of GRSG habitat for all included BLM-administered and National Forest System lands (**Figure 1-4**, Idaho and Southwestern Montana Sub-Regional Planning Area). This planning area is the geographic area within which the BLM and Forest Service will provide direction during this planning effort, and the planning area boundary includes all lands regardless of jurisdiction. For this EIS, the planning area is the entire sub-region (**Figure 1-4**). Lands addressed in the LUPA will be BLM-administered and National Forest System lands (including surface-estate and split-estate lands) in GRSG habitats. Any

Figure 1-4
Idaho and Southwestern Montana Sub-Regional Planning Area



Management Agency
- Bureau of Land Management
- United States Forest Service
- Private
- State
- Other
- USFS Not Analyzed
- *Idaho and SW Montana Sub-regional boundary*

Preliminary Priority Habitat
- Priority
- General

direction provided in the LUPA will apply only to federal lands or mineral estate administered by either the BLM or the Forest Service. The LUPA will be limited to providing land use direction specific to the conservation of GRSG and their habitat. The proposed LUPA is intended to identify and incorporate appropriate regulatory mechanisms to maintain, enhance, and restore GRSG habitat. It also is intended to eliminate, reduce, or minimize threats to GRSG priority and general habitats on BLM-administered and National Forest System lands in the Idaho and Southwestern Montana Sub-region. The proposed LUPA addresses both ESA Listing Factors A and D (see Section 1.1 above) and is intended to provide consistency in the management of GRSG habitats across Idaho and Southwestern Montana Sub-region BLM and Forest System lands. The LUPs identified in **Table 1-2**, BLM and Forest Service Land Use Plans Proposed for Amendment, are proposed to be amended during this effort to incorporate appropriate conservation measures. The Butte RMP is not identified in **Table 1-2** and is not going to be amended due to the limited extent and quality of GRSG habitat present within the Butte Field Office; however, the area covered by the Butte RMP will be considered as part of the effects analysis described in **Chapter 4**.

Table 1-2
BLM and Forest Service Land Use Plans Proposed for Amendment

Managing Office	Year Effective	Land Use Plan
Bureau of Land Management		
Bruneau Field Office, ID	1983	Bruneau MFP
Bruneau Field Office, ID	Revision to start in 2015	Bruneau RMP Revision
Burley Field Office, ID	1985	Cassia RMP
Burley Field Office, ID	1982	Twin Falls MFP
Challis Field Office, ID	1999	Challis RMP
Dillon Field Office, MT	2006	Dillon RMP
Four Rivers Field Office, ID	1988	Cascade RMP
Four Rivers Field Office, ID	1983	Kuna RMP
Four Rivers Field Office, ID	In Development	Four Rivers RMP Revision
Four Rivers Field Office, ID	2008	Snake River Birds of Prey National Conservation Area (NCA) RMP
Jarbidge Field Office, ID	1987	Jarbidge RMP
Jarbidge Field Office, ID	In Development	Jarbidge RMP Revision
Owyhee Field Office, ID	1999	Owyhee RMP
Pocatello Field Office, ID	2012	Pocatello RMP
Salmon Field Office, ID	1987	Lemhi RMP
Shoshone Field Office, ID	2006	Craters of the Moon National Monument RMP
Shoshone Field Office, ID	1975	Magic MFP
Shoshone Field Office, ID	1981	Sun Valley MFP
Shoshone Field Office, ID	1980	Bennett Hills/Timmerman Hills MFP
Shoshone and Burley Field Offices, ID	1985	Monument RMP
Shoshone and Burley Field Offices, ID	Revision to start in 2015	Shoshone-Burley RMP Revision
Upper Snake Field Office, ID	1981	Little Lost-Birch Creek MFP

Table 1-2
BLM and Forest Service Land Use Plans Proposed for Amendment

Managing Office	Year Effective	Land Use Plan
Upper Snake Field Office, ID	1985	Medicine Lodge RMP
Upper Snake Field Office, ID	1981	Big Desert MFP
Upper Snake Field Office, ID	1983	Big Lost MFP
Upper Snake Field Office, ID	In Development	Upper Snake RMP
Forest Service		
Beaverhead-Deerlodge National Forest, MT	2009	Beaverhead-Deerlodge National Forest Plan
Boise National Forest, ID	2003	Boise National Forest Revised Forest Plan
Caribou-Targhee National Forest, ID	2002	Curlew National Grassland Management Plan
Caribou-Targhee National Forest, ID	2003	Revised Forest Plan for the Caribou National Forest
Caribou-Targhee National Forest, ID	1997	1997 Revised Forest Plan, Targhee National Forest
Salmon-Challis National Forest, ID	1987	Challis National Forest Plan
Salmon-Challis National Forest, ID	1988	Salmon National Forest Plan
Sawtooth National Forest, ID, UT	2003	Sawtooth National Forest Revised Forest Plan

1.2 Purpose and Need

The BLM and the Forest Service are preparing a LUPA with associated EIS for LUPs containing GRSG habitat. This effort responds to the USFWS's 2010 Finding which identified inadequacy of regulatory mechanisms as a significant threat. The USFWS identified the principal regulatory mechanisms for the BLM and Forest Service as conservation measures embedded in LUPs. Changes in management of GRSG habitats are necessary to avoid the continued decline of populations that are anticipated across the species' range. These plan amendments will focus on areas affected by threats to the GRSG habitat identified by the USFWS in the 2010 Finding. Within the Idaho and Southwestern Montana Sub-region the primary threats to GRSG include habitat loss and fragmentation due to increased occurrence of wildfire, expansion of invasive species, human development and infrastructure. **Table 1-3,** Identified Threats to Greater Sage-GrouseIdentified Threats to Greater Sage-Grouse , lists the threats, in order of priority, that have been identified across the GRSG range and specifically within Idaho and Montana. At the local scale, the relative risk of these threats may differ. For example, even though the USFWS at the national level, the State of Idaho at the state level, and the Challis Local Working Group (LWG) at the local level have identified predation as a lower threat, the Custer County Board of Commissioners has identified excessive predation as the greatest threat to GRSG within Custer County (see **Appendix R**).

Table 1-3
Identified Threats to Greater Sage-Grouse

USFWS 2010 Finding	2006 Idaho GRSG Conservation Plan	2005 Montana GRSG Management Plan
Invasive Species	Wildfire	Fire
Infrastructure	Infrastructure	Harvest management
Fire	Annual Grassland	Livestock grazing management
Agriculture	Livestock Impacts	Noxious weed management
Grazing	Human Disturbance	Mining and energy development
Oil and Gas	West Nile Virus	Outreach, education, and implementation;
Urbanization	Prescribed Fire	Power lines and generation facilities
Mining	Seeded Perennial Grassland	Predation
Conifer Invasion	Climate Change	Recreational disturbance of GRSG
Predation	Conifer Encroachment	Roads and motorized vehicles
Disease	Isolated Populations	Vegetation
Water Development	Predation	Other wildlife
Hunting	Urban/Exurban Development	
Climate Change	Sagebrush Control	
	Insecticides	
	Agricultural Expansion	
	Sport Hunting	
	Mines/Landfills/Gravel Pits	
	Falconry	

Source: USFWS 2010a; Idaho Sage-Grouse Advisory Committee 2006; Montana Sage-Grouse Work Group 2005

The purpose of the LUPA is to identify and incorporate appropriate conservation measures into LUPs to conserve, enhance, and restore GRSG habitat by reducing, eliminating, or minimizing threats to that habitat. The BLM and Forest Service will consider such measures in the context of their multiple-use mandates under the Federal Land Policy and Management Act (FLPMA) and the National Forest Management Act (NFMA), respectively. Because the BLM and Forest Service administer a large portion of the GRSG habitat within the affected states, changes in BLM and Forest Service management of GRSG habitats are anticipated to have a considerable beneficial impact on present and future GRSG populations.

1.3 Description of the Greater Sage-Grouse Planning Area

1.3.1 Overview

The Idaho and Southwestern Montana Sub-region includes BLM-administered and National Forest System lands in Idaho and southwestern Montana, excluding the Idaho panhandle (**Figure 1-3** and **Table 1-4**, Acres of GRSG Habitat by Surface Management. The specific field offices and national forests included in the planning area are: Bruneau Field Office, Burley Field Office, Challis Field Office, Four Rivers Field Office, Jarbidge Field Office,

Table 1-4
Acres of GRSG Habitat by Surface Management

Surface Land Management	Acres PPH	Acres PGH	Acres Outside Habitat	Total Acres
BLM Total	**7,272,100**	**1,971,800**	**3,205,100**	**12,449,000**
BLM – Idaho	6,811,400	1,749,900	2,982,900	11,544,200
Bruneau Field Office	1,001,000	184,700	262,900	1,448,600
Burley Field Office	422,000	206,200	206,700	834,900
Challis Field Office	635,600	84,400	72,900	792,900
Four Rivers Field Office	162,200	190,800	901,400	1,254,400
Jarbidge Field Office	765,100	251,900	305,100	1,322,200
Owyhee Field Office	794,600	242,700	222,500	1,259,900
Pocatello Field Office	233,700	87,500	278,800	599,900
Salmon Field Office	311,100	51,600	131,200	493,900
Shoshone Field Office	1,092,500	262,000	368,700	1,723,200
Upper Snake Field Office	1,393,800	187,900	232,600	1,814,300
BLM – Montana	460,600	222,000	222,200	904,800
Dillon Field Office	460,600	222,000	222,200	904,800
Forest Service Total	**962,400**	**898,100**	**11,391,900**	**13,252,400**
Forest Service - Idaho	728,200	664,100	9,718,800	11,111,100
Beaverhead-Deerlodge National Forest	110	30	980	1,120
Sawtooth National Forest	210,100	212,400	1,612,300	2,034,800
Boise National Forest	21,200	56,900	2,182,800	2,260,900
Caribou-Targhee National Forest	148,300	186,400	2,251,300	2,586,000
Salmon-Challis National Forest	348,700	208,300	3,672,400	4,229,400
Forest Service - Montana	162,300	234,000	1,673,100	2,069,400
Beaverhead-Deerlodge National Forest	162,300	234,000	1,673,100	2,069,400
Forest Service - Utah	71,900	0	0	71,900
Sawtooth National Forest	71,900	0	0	71,900
US Fish and Wildlife Service	39,700	11,700	30,000	81,400
National Park Service	27,200	222,700	261,800	511,700
Department of Energy	378,000	182,500	1,670	562,200
Department of Defense	11,100	37,700	78,500	127,400
Bureau of Reclamation	3,250	3,260	109,800	116,300
Indian Tribe	143,900	10,700	189,000	343,600
Idaho State	642,400	377,500	804,500	1,824,400
Montana State	221,700	167,500	432,000	821,100
Utah State	630	0	0	630
Private	2,127,600	1,857,200	9,652,900	13,637,700
Other	87,800	32,200	294,400	414,400
Total Acres:	**11,921,200**	**5,756,600**	**26,164,500**	**43,842,300**

Source: BLM 2013

Owyhee Field Office, Pocatello Field Office, Salmon Field Office, Shoshone Field Office, Upper Snake Field Office, Boise National Forest, Caribou-Targhee National Forest, Curlew National Grassland, Salmon-Challis National Forest, and Sawtooth National Forest in Idaho; and Butte Field Office, Dillon Field Office, and Beaverhead-Deerlodge National Forest in southwest Montana. The Idaho and Southwestern Montana Sub-region also includes the portion of the Sawtooth National Forest located within Box Elder County in Utah (managed under the Sawtooth Forest Plan), and the maps of the Idaho and Southwestern Montana Greater Sage-Grouse LUPA will display these lands as part of the planning area. The acres of GRSG habitat by county is displayed in **Table 1-5**, Acres of GRSG Habitat by County' .

There are approximately 77,800 acres of BLM-administered lands in Elko County, Nevada, located north of the Humboldt-Toiyabe National Forest and south of the Idaho-Nevada state line adjacent to the Bruneau and Jarbidge Field Offices in Idaho. For purposes of the GRSG LUPAs in Idaho and in Nevada, planning for these lands will occur through the Nevada and Northeastern California Greater Sage-Grouse LUPA, and the regulatory measures and direction that are put in place for the GRSG through the Nevada and Northeastern California ROD will be implemented and administered by the Jarbidge and Bruneau Field Offices in Idaho. Therefore, the decision and planning areas for the Idaho and Southwestern Montana Greater Sage-Grouse LUPA end at the Idaho/Nevada state line and will not include lands in Nevada; however, maps will continue to include these Nevada lands as part of the Idaho and Southwestern Montana Sub-region based on the recognized administrative boundary.

PPH and PGH have been delineated as defined by BLM IM No. 2012-043 for both Idaho and Montana. Although slightly different processes were used to delineate PPH and PGH in Idaho and Montana the habitat designations are analogous and will be discussed interchangeably for the purposes analysis. In Idaho, PPH and PGH were identified based on a model incorporating sage-grouse breeding bird density and lek connectivity models, informed with additional ancillary broad scale habitat data, seasonal habitat maps, connectivity information, expert opinion, population persistence model, local priority areas and agriculture and conifer filters (Makela and Major 2012).

In Montana, PPH was delineated based on Montana Fish, Wildlife, and Park's (MFWP) modeling of GRSG Core Areas using a model based on male lek attendance and refined with seasonal habitat, telemetry, connectivity information and field review; occupied habitats not identified as Core Areas were delineated as PGH (MFWP 2009).

Through this land use planning process, the BLM and Forest Service refined PPH and PGH data to: (1) identify priority habitat and analyze actions within priority habitat to conserve GRSG habitat functionality, and/or where appropriate, improve habitat functionality, and (2) identify general habitat and analyze actions within general habitat that provide for major life history function (e.g., breeding, migration, or winter survival) in order to maintain genetic diversity needed for sustainable GRSG populations.

Table 1-5
Acres of GRSG Habitat by County[1, 2]

County	Acres PPH			Acres PGH			GRSG Habitat (PPH & PGH)			County Acres	Percent Federal PPH in County	Percent Federal Habitat in County
	BLM	Forest Service	BLM & Forest Service	BLM	Forest Service	BLM & Forest Service	BLM	Forest Service	BLM & Forest Service			
Idaho												
Ada	0	0	0	500	0	500	500	0	500	678,800	0	0
Adams	7,800	0	7,800	14,400	0	14,400	22,200	0	22,200	604,200	1	4
Bear Lake	43,500	1,600	45,200	4,700	600	5,300	48,200	2,200	50,500	672,700	7	8
Bingham	87,800	0	87,800	96,500	0	96,500	184,300	0	184,300	1,356,800	6	14
Blaine	454,000	2,200	456,200	65,300	17,600	82,900	519,300	19,800	539,100	1,699,100	27	32
Bonneville	6,200	0	6,200	19,400	42,000	61,400	25,600	42,000	67,600	1,220,500	1	6
Butte	489,400	65,400	554,700	20,200	73,800	94,000	509,600	139,200	648,700	1,432,800	39	45
Camas	97,200	400	97,600	15,300	19,000	34,300	112,500	19,400	131,900	689,100	14	19
Caribou	7,400	0	7,400	9,100	2,000	11,100	16,500	2,000	18,500	1,150,900	1	2
Cassia	251,500	130,900	382,400	133,400	121,900	255,300	384,900	252,800	637,700	1,651,000	23	39
Clark	310,700	80,500	391,100	25,800	89,700	115,600	336,500	170,200	506,700	1,128,500	35	45
Custer	652,500	234,700	887,200	78,100	102,200	180,300	730,600	336,900	1,067,500	3,160,400	28	34
Elmore	108,400	26,000	134,400	57,700	57,000	114,700	166,100	83,000	249,100	1,986,100	7	13
Fremont	97,800	8,900	106,600	6,900	14,100	21,000	104,700	23,000	127,600	1,212,300	9	11
Gem	0	0	0	19,500	0	19,500	19,500	0	19,500	361,400	0	5
Gooding	195,000	0	195,000	18,100	0	18,100	213,100	0	213,100	469,900	41	45
Jefferson	169,100	0	169,100	12,200	0	12,200	181,300	0	181,300	707,700	24	26
Jerome	0	0	0	54,900	0	54,900	54,900	0	54,900	385,600	0	14
Lemhi	377,800	66,800	444,600	63,200	76,800	139,900	441,000	143,600	584,500	2,923,100	15	20
Lincoln	306,100	0	306,100	129,700	0	129,700	435,800	0	435,800	771,800	40	56
Madison	11,400	0	11,400	800	0	800	12,200	0	12,200	303,000	4	4
Minidoka	124,500	0	124,500	10,800	0	10,800	135,300	0	135,300	488,000	26	28

[1]Acres included are within the planning area. Acres for counties that extend beyond the planning area only reflect those acres within the county and within the planning area. Counties which do not contain any federal PPH or PGH are not included in the table.
[2]Acreage totals may not match other tables exactly, as a result of rounding errors and GIS overlay offsets.

Table 1-5
Acres of GRSG Habitat by County[1, 2]

County	Acres PPH			Acres PGH			GRSG Habitat (PPH & PGH)			County Acres	Percent Federal PPH in County	Percent Federal Habitat in County
	BLM	Forest Service	BLM & Forest Service	BLM	Forest Service	BLM & Forest Service	BLM	Forest Service	BLM & Forest Service			
Oneida	172,300	43,600	215,900	65,700	17,900	83,600	238,000	61,500	299,500	769,000	28	39
Owyhee	2,344,500	0	2,344,500	651,000	0	651,000	2,995,500	0	2,995,500	4,925,800	48	61
Payette	3,400	0	3,400	9,100	0	9,100	12,500	0	12,500	262,400	1	5
Power	82,100	4,100	86,200	35,800	2,400	38,300	117,900	6,500	124,500	923,000	9	13
Twin Falls	345,000	63,900	408,900	39,700	27,500	67,200	384,700	91,400	476,100	1,234,300	33	39
Washington	66,100	0	66,100	92,000	0	92,000	158,100	0	158,100	942,400	7	17
Montana												
Beaverhead	436,900	122,900	559,800	123,400	138,800	262,200	560,300	261,700	822,000	3,564,900	15	23
Deer Lodge	0	0	0	700	0	700	700	0	700	474,400	0	0
Fremont	0	0	0	500	0	0	0	0	0	0	0	0
Clark	0	0	0	500	0	0	0	0	0	0	0	0
Madison	23,700	39,900	63,500	101,200	95,604	196,900	124,900	135,504	260,400	2,306,000	3	11
Silver Bow	0	0	0	17,600	0	17,600	17,600	0	17,600	459,900	0	4
Utah												
Box Elder[3]	0	71,900	71,900	0	0	0	0	71,900	71,900	92,100	78	78

[3]Only acres for the Sawtooth National Forest that are located in Box Elder County are included; therefore, the only county acres contained in the Idaho and southwestern Montana Sub-region are those administered by the Sawtooth National Forest.

While PPH and PGH delineations reflect a relatively broad characterization of habitat priorities at the landscape scale, there may be variations or discrepancies locally due to the nature of the modeling involved. For purposes of this planning effort, the April 2012 map (used in the DEIS) (Makela and Major 2012) provides a common basis for comparing baseline conditions and impacts analysis for each alternative on GRSG habitat in the sub-region. For the remainder of this document, PPH and PGH refer to the areas identified in the April 2012 map of GRSG habitat (**Figure 1-4**). For the proposed plan this map was refined through coordination between the BLM, Forest Service, and the State of Idaho into a three-tiered habitat classification system. This does not represent a significantly new depiction or analysis of the extent of the habitat identified in the DEIS.

The vast majority of the Idaho and Southwestern Montana Sub-region lies within WAFWA Management Zone (MZ) IV (Stiver et al. 2006). A small portion of southeastern Idaho is within MZ II and is associated with the Wyoming Basin population. Within the sub-region, GRSG occupy all or portions of ten population areas described in Connelly et al (2004; **Figure 1-5**, Idaho and Southwestern Montana Greater Sage-Grouse Population Areas). Two populations (Great Basin Core, Wyoming Basin) occupy habitat in adjacent states. Habitat mapping has been coordinated across state boundaries.

The distribution of GRSG is closely aligned with the distribution of sagebrush-dominated landscapes (Schroeder et al. 2004). In the sub-region, large expanses of sagebrush still occur in portions of southwestern and south-central Idaho, in association with the Great Basin Core population shared with Nevada, Oregon, and Utah, as well as in portions of the Snake-Salmon-Beaverhead population north of the Snake River.

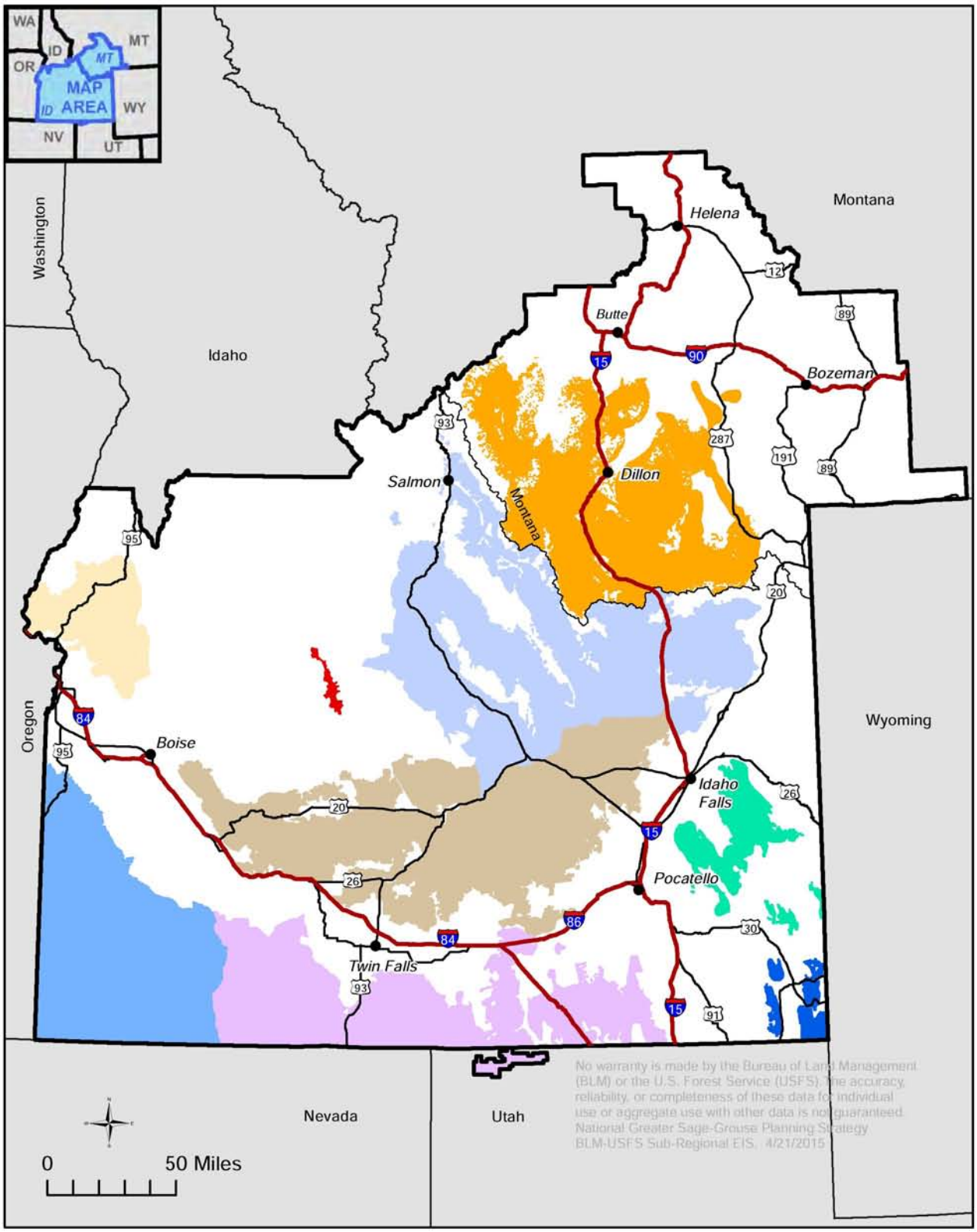
At broad scales, PPH and PGH encompass areas of intact sagebrush, suitable for GRSG habitat needs. PPH and PGH may also contain inclusions of conifer encroachment and perennial grass dominated areas, generally occupied by GRSG or potentially suitable for future restoration. At finer scales, PPH and PGH encompass areas of intact suitable sagebrush habitat that is generally occupied by GRSG, as well as areas of conifer expansion and perennial grassland potentially suitable for future restoration.

If current trends in wildfire, populations and habitat activities continue, then populations of sage-grouse in MZ IV are estimated to decline by 55 percent between 2007 and 2037, and by 66 percent in MZ II (USFWS 2010, citing unpublished version of Garton et al. 2011). Modeling suggests that if current conditions and trends continue, at least 13 percent of the GRSG populations may decline below effective population sizes of 50 within the next 30 years and at least 75 percent of the populations may decline below effective population sizes of 500 within the next 100 years (Garton et al. 2011).

1.3.2 Land Uses

Land uses occurring within GRSG habitat on BLM-administered and National Forest System lands in the Idaho and Southwestern Montana Sub-region are livestock grazing and associated infrastructure; rights-of-way (ROWs) for a variety of linear and site-type facilities;

Figure 1-5
Idaho and Southwestern Montana
Greater Sage-Grouse Population Areas



Population Area *

- Bear Lake
- East-Central Idaho
- Mountain Valleys
- North Side Snake
- SW Montana
- Sawtooth
- South Side Snake
- Southwest Idaho
- Weiser
- *Idaho and SW Montana Sub-regional boundary*

* Modified Connelly et al. 2004

travel and recreation; off-highway vehicle (OHV) use; energy (nonrenewable, renewable, and geothermal), mineral development (including hardrock and phosphate mining); and geothermal leasing, exploration, and development.

These uses generally occur throughout the planning area to varying degrees. For example phosphate leasing is typically confined to southeast Idaho and oil and gas leasing typically occurs in the eastern portion of the sub-region. Livestock grazing occurs throughout the sub-region as do recreation, OHV use and various ROW authorizations for linear and site-type facilities.

1.4 Planning Process

1.4.1 BLM Planning Process

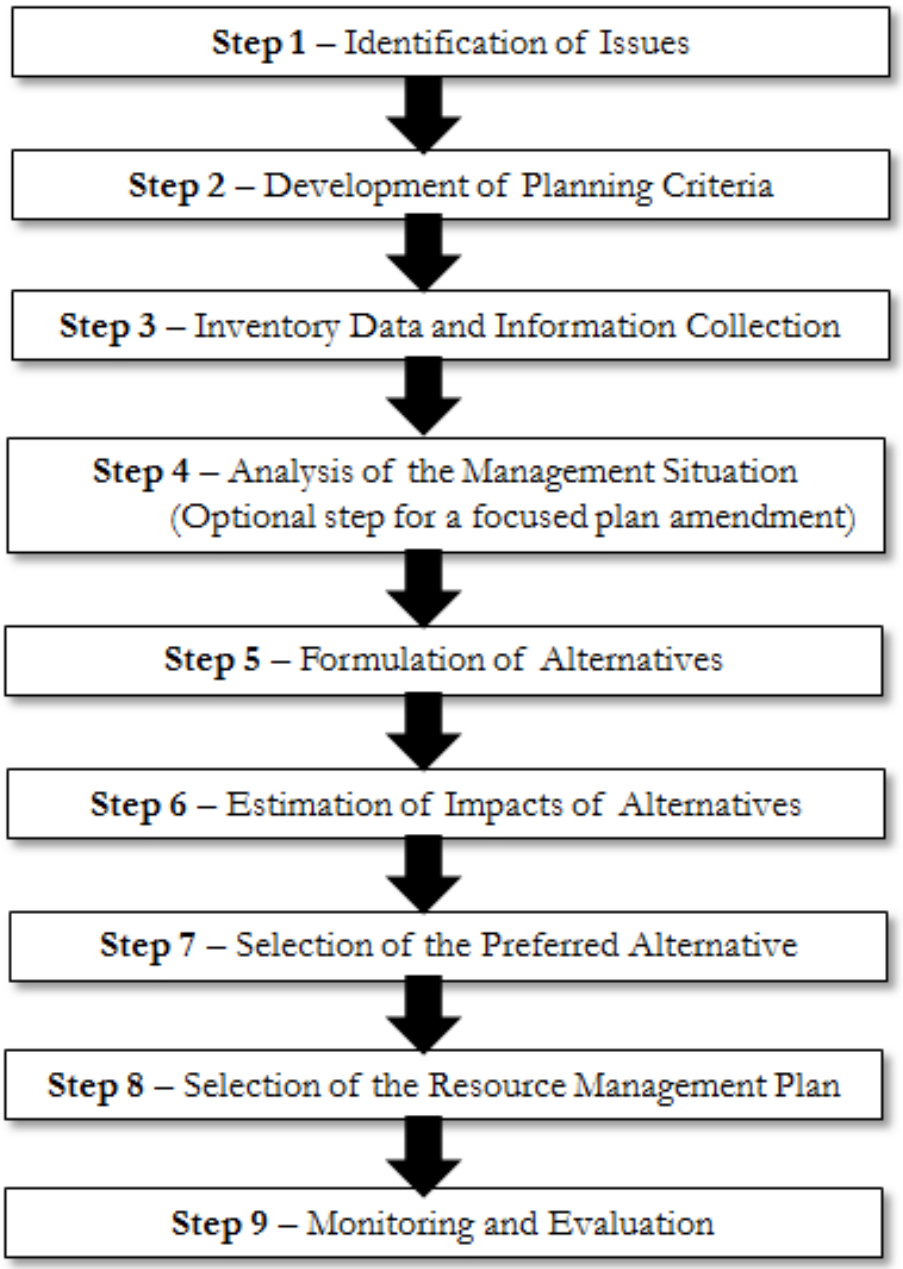
FLPMA requires the BLM to use RMPs as tools by which "present and future use is projected" (43 United States Code [USC] 170l(a)(2)). FLPMA's implementing regulations for planning (43 Code of Federal Regulations [CFR] Part 1600), state that LUPs are a preliminary step in the overall process of managing public lands "designed to guide and control future management actions and the development of subsequent, more detailed and limited scope plans for resources and uses" (43 CFR 1601.0-2). Public participation and input are important components of land use planning.

Under BLM regulations, an RMP revision or amendment of an existing plan is a major federal action requiring disclosure and documentation of environmental effects as described in the NEPA. Thus, this EIS accompanies the amendment of the existing RMPs (**Table 1-2**). This EIS analyzes the impacts of six alternatives for the Idaho and Southwestern Montana Sub-region LUPA, including the No Action Alternative. The science used to analyze these impacts is current through August 2013.

The BLM uses a nine-step planning process (**Figure 1-6**, BLM Nine Step Planning Process) to develop or revise RMPs (43 CFR Part 1600 and planning program guidance in the BLM Handbook H-1601-1, Land Use Planning Handbook (BLM 2005a)). The planning process is designed to help the BLM identify the uses of BLM-administered lands desired by the public and to consider these uses to the extent they are consistent with the laws established by Congress and the policies of the executive branch of the federal government.

Once an RMP is approved, it may be changed through amendment. An amendment can be initiated in response to monitoring and evaluation findings, new data, new or revised policy, a change in circumstances or a proposed action that may result in a change in the scope of resource uses or a change in the terms, conditions, and direction provided in the approved plan. If the BLM decides to prepare an EIS, the amending process shall follow the same procedure required for preparation and approval of the plan, but the focus shall be limited to that portion of the plan being amended (43 CFR 1610.5-5).

Figure 1-6
BLM Nine Step Planning Process



Source: 43 CFR 1610.4

As depicted in **Figure 1-6**, the planning process is issue-driven (Step 1). The planning process is undertaken to resolve management issues and problems as well as to take advantage of management opportunities. The BLM uses the public scoping process to identify planning issues to direct (drive) the revision or amendment of an existing plan. The scoping process is also used to introduce the public to preliminary planning criteria, which set the parameters or "sideboards" for conducting the planning process (Step 2).

The BLM uses existing data from files and other sources and collects new data to address planning issues and to fill data gaps identified during public scoping (Step 3). Using these data, information concerning the resource management programs, and the planning criteria, the BLM completes an Analysis of the Management Situation (AMS) (Step 4) to describe current management and develop or inform the affected environment portion of the LUP. Typically, the AMS is conducted at the outset of planning for an entire LUP or LUP revision and is incorporated by reference into development of a single focus plan amendment. AMSs are required for plan revisions but not necessarily for plan amendments, and an AMS has not been completed specific to this sub-regional planning effort. In this case, direction for the plan amendment is provided through national policy (BLM IM 2012-044).

Results of the first four steps of the planning process clarify the purpose and need and identify key planning issues that need to be addressed by the amendment. Key planning issues reflect the focus of the LUP amendment and are described in more detail in **Section 1.5.2**, Issues Identified for Consideration in the Idaho and Southwestern Montana Sub-Region.

Alternatives constitute a range of management actions that set forth different priorities and measures to emphasize certain uses or resource values over other uses or resource values (usually representing a continuum from extraction and development to preservation/conservation) pursuant to the multiple-use and sustained yield mandate, so as to achieve certain goals or objectives consistent with the purpose and need. During alternative formulation (Step 5), the BLM collaborates with cooperating agencies to identity goals and objectives (desired outcomes) for resources and resource uses within the planning area. The alternatives represent a reasonable range of planning strategies for managing resources and resource uses. Chapter 2 of the DEIS, Alternatives, describes and summarizes the Preferred Alternative and the other draft alternatives considered in detail.

The draft LUPA/EIS also includes an analysis of the impacts of the Preferred Alternative and the other draft alternatives in Chapter 4, Environmental Consequences (Step 6). With input from cooperating agencies and BLM specialists, and consideration of planning issues, planning criteria, and the impacts of alternatives, the BLM identifies and recommends a preferred alternative from among the alternatives presented in the EIS (Step 7). This is documented in the draft LUPA/EIS, which is then distributed for a 90-day public review and comment period.

Following receipt and consideration of public comments on the draft LUPA/EIS and in preparation of the Proposed LUPA/Final EIS, the BLM considers all comments it receives during the public comment period (Step 8). This Proposed LUPA has been crafted, in whole

or in part, from components of the draft alternatives. It amends plans on final approval of the Record of Decision.

Monitoring, the repeated measurement of activities and conditions over time, and evaluation, in which the plan and monitoring data are reviewed to see if management goals and objectives are being met and if management direction is sound, are components of plan implementation (Step 9). 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 what changes need to be made in management practices to meet objectives.

The two types of monitoring of the planning process include implementation and effectiveness monitoring. Land use plan monitoring is the process of (1) tracking the implementation of land use planning direction and (2) collecting and assessing data/information necessary to evaluate the effectiveness of land use planning direction. The two types of monitoring are described below.

Implementation Monitoring: Implementation monitoring is the most basic type of monitoring and simply determines whether planned activities have been implemented in the manner prescribed by the plan. Some agencies call this compliance monitoring. This monitoring documents the BLM's progress toward full implementation of the direction provided in the LUP. There are no specific thresholds or indicators required for this type of monitoring.

Effectiveness Monitoring: Effectiveness monitoring is aimed at determining if the implementation of activities has achieved the desired goals and objectives. Effectiveness monitoring asks the question: Was the specified activity successful in achieving the objective? This requires knowledge of the objectives established in the LUP as well as indicators that can be measured. Indicators are established by technical specialists in order to address specific questions, and thus to focus on collection of only necessary data. Success is measured against the benchmark of achieving desired future conditions established by the plan.

Regulations at 43 CFR 1610.4-9 require that the proposed LUPA establish intervals and standards, as appropriate, for monitoring and evaluation of the plan, based on the sensitivity of the resource decisions involved. Progress in meeting the plan objectives and adherence to the management framework established by the plan is reviewed periodically. The Council on Environmental Quality (CEQ) regulations implementing NEPA state that agencies may provide for monitoring to assure that their decisions are carried out and should do so in important cases (40 CFR 1505.2(c)). To meet these requirements, the BLM will review the plan on a regular schedule in order to provide consistent tracking of accomplishments and provide information that can be used to develop annual budget requests to continue implementation.

LUP evaluations will be used by BLM to determine if the direction provided in the LUP, supported by the accompanying NEPA analysis, is still valid. Evaluation of the LUP will

generally be conducted every five years per BLM policy, unless unexpected actions, new information, or significant changes in other plans, legislation, or litigation triggers an evaluation. LUP evaluations determine if direction provided is being implemented, whether mitigation measures are satisfactory, whether there are significant changes in the related plans of other entities, whether there are new data of significance to the plan, and if direction should be changed through amendment or revision. Evaluations will follow the protocols established by the BLM Land Use Planning Handbook H-1601-1 in effect at the time the evaluation is initiated. Specific monitoring and evaluation needs are identified by resource/uses throughout Chapter 2.

1.4.2 Forest Service Planning Process

The Forest and Rangeland Renewable Resources Planning Act of 1974, as amended by the NFMA (16 USC 1600 et seq.), requires the Forest Service to develop, maintain, and, as appropriate, revise LRMPs for units of the National Forest System using a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences. Consistent with the Multiple-Use Sustained-Yield Act of 1960 (16 USC 528-531), the overall goal of managing the National Forest System is to sustain the multiple uses of its renewable resources in perpetuity while maintaining the long-term productivity of the land. LRMPs provide broad guidance and information for project and activity decision-making. In particular, LRMPs coordinate outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness. Public participation and input are important components of land use planning.

The process of amending a LRMP is outlined in 36 CFR 219. The current version of this regulation states that plan amendments that were initiated before May 9, 2015 may be developed in conformance with the provisions of the prior planning regulation. Therefore, the LRMP amendments in this document were developed according to direction in the 1982 version of the CFR 25 219. A LRMP includes plan components, proposed and possible actions, the monitoring program, and maps.

The objectives of LRMPs are: Establishment of Forest-wide or Grassland-wide Multiple Use Goals and Objectives, including Desired Conditions.

1. Establishment of Forest-wide or Grassland-wide Management Requirements, including standards and guidelines.

2. Establishment of Management Area direction, including prescriptions and associated standards and guidelines.

3. Identification of lands suitable or unsuitable for various uses.

4. Recommendations for any Wilderness, Wild-Scenic, or other designated areas.

5. Establishment of requirements for monitoring and evaluation.

NFMA requires LRMPs to be maintained, amended, and revised. Adaptive management requires ongoing adjustment of goals, objectives, management area prescriptions, standards, and guidelines constraining land uses. An amendment can be started in response to monitoring and evaluation findings, new data, new or revised policy, a change in circumstances or a proposed action that may result in a change in the scope of resource uses, or a change in the standards and guidelines of the approved plan. Plan development is part of the collaborative and adaptive cycle: (1) monitor, (2) evaluate monitoring results and any new information, and (3) change activity and resource management, change the plan, change the monitoring, or do an assessment.

The Forest Service responsible official may amend a plan in response to the need for change. For this amendment, the process involves eight steps (36 CFR, Part 220):

i. Consideration of need for change

ii. Public notice for initiating plan amendment. Development of the proposed plan amendment

iii. Documentation of affected environment and environmental consequences in an EIS. Public notice for proposed plan amendment, draft EIS, and 90-day comment period

iv. Response to comments

v. Issuance of final EIS and draft decision document, beginning of the 60-day public objection period before approval of the decision document

vi. Upon resolution of any objection[4] (36 CFR, Part 219 subpart B), approval of the plan by the responsible official

Under Forest Service regulations, an LRMP revision or amendment of an existing plan is a federal action requiring appropriate NEPA documentation. This EIS analyzes the possible amendment of the Beaverhead-Deerlodge National Forest LRMP and the amendment of the individual LRMPs for the Boise, Caribou, Challis, Salmon, Sawtooth, and Targhee national forests and Curlew National Grassland. This EIS analyzes the impacts of various alternatives for the plan amendment, including the no action alternative.

In addition, both agencies have certain existing programs, activities, or projects that implement their respective LUPs (for example oil and gas and geothermal leasing analyses).

[4]Because the Forest Service is a cooperating agency and thus a participant in the multifederal agency effort, the responsible officials for the Forest Service have waived the objection procedures of 35 CFR, Part 219, Subpart B, and adopted the administrative review procedure of the BLM, as provided for by 36 CFR, Part 219.59(a). This is in agreement with the responsible officials of the BLM. A joint agency response will be provided to those who file for administrative review of this effort.

These program-specific documents may also be updated to reflect new information or changed circumstances that result from this analysis.[5]

1.5 Public Input and Identification of Issues

1.5.1 The Scoping Process

Scoping is an early and open process for determining the scope, or range, of issues to be addressed and for identifying the significant issues to consider in the planning process. Scoping identifies the public and agency concerns, defines the relevant issues and alternatives that will be examined in detail in the EIS, and eliminates those that are not within the scope or have been covered by prior environmental review. A planning issue is defined as a major controversy or dispute regarding existing and potential land and resource allocations, levels of resource use, production and related management practices on BLM-administered and National Forest System lands that can be addressed through a range of alternatives. The environmental impacts of these alternative management scenarios are analyzed and addressed in this final EIS.

A public scoping period was initiated on December 9, 2011, with the publication of a Notice of Intent to begin a planning effort in the Federal Register. Scoping is designed to be consistent with the public involvement requirements of FLPMA, NFMA, and NEPA. The cooperative process included soliciting input from interested state and local governments, tribal governments, other federal agencies and organizations, and individuals to identify the scope of issues to be addressed in the plan amendment, and to assist in the formulation of reasonable alternatives. The scoping process is an excellent method for opening dialogue between the BLM, Forest Service, and the general public about management of GRSG and their habitats on BLM-administered and National Forest System lands and for identifying the concerns of those who have an interest in this subject and in GRSG habitats. As part of the scoping process, the BLM also requested that the public submit nominations for potential Areas of Critical Environmental Concern (ACECs) for GRSG and their habitats.

Public outreach during the public scoping period included: press releases announcing the original and extended scoping period for the EIS process; a newsletter mailed in December 2011 to over 14,000 agency officials, organizations, and members of the public in the Great Basin Region; 26 open houses throughout the Great Basin Region; and a National GRSG conservation Web site (http://www.blm.gov/wo/st/en/prog/more/sagegrouse.html) and a regional Web site for the Great Basin Region (http://www.blm.gov/wo/st/en/prog/more/sagegrouse/western.html), which provides access to materials distributed at scoping meetings, as well as information on the public involvement process. The formal public comment period as required by NEPA began on December 9, 2011, with the publication of

[5]Regulations at 36 CFR, Part 228.102, require the Forest Service to decide which NFS lands are administratively available for oil and gas leasing. The Forest Service decision also includes necessary lease stipulations to protect surface resources. The Forest Service does not have regulations that address geothermal leasing, but the agency follows a process similar to oil and gas in that it conducts an analysis of leasing National Forest System lands and makes a decision that is consistent with but independent of the LRMP.

a Notice of Intent in the Federal Register. It was extended through a Notice of Correction published February 10, 2012, and ended on March 23, 2012.

Scoping included scheduled open-house meetings in the following 26 locations (see Chapter 5 for details):

- Tonopah, Ely, Elko, Winnemucca, and Reno, Nevada
- Boise, Idaho Falls, Salmon, Twin Falls, and Pocatello, Idaho
- Lakeview, Ontario, Baker City, Burns, and Prineville, Oregon
- Price, Vernal, Salt Lake City, Randolph, Snowville, Richfield, Kanab, and Cedar City, Utah
- Alturas and Susanville, California
- Dillon, Montana

In addition, news releases were used to notify the public regarding the scoping period and the planning process and to invite the public to provide written comments from many sources including via email, fax, and regular mail (see Chapter 5 for details). Comments obtained from the public during the scoping period were used to define the relevant issues that would be addressed by a range of reasonable alternatives.

A total of 585 unique written submissions for the Great Basin Region were received during the public scoping period. Submissions resulted in a total of 7,472 unique comments. In addition, a total of 30,397 form letters were received.

For the Idaho and Southwestern Montana Sub-region planning process, scoping comments received from the public were placed in one of three categories:

i. Issues identified for consideration in the Idaho and Southwestern Montana Sub-Region LUPA
ii. Issues to be addressed through policy or administrative action (and therefore not addressed in the LUPA)
iii. Issues eliminated from detailed analysis because they are beyond the scope of the LUPA (and therefore not addressed in the LUPA)

Some important issues to be addressed in the LUPA were identified by the public and the agencies during the scoping process for the statewide planning effort. The Final Scoping Summary can be located at:

http://www.blm.gov/wo/st/en/prog/more/sagegrouse/documents_and_resources.html

The Scoping Summary was prepared in support of the planning effort and summarizes the scoping process. The Scoping Report identified issues in 13 broad categories. Section 1.5.3

describes the refined issues for the Idaho and Southwestern Montana Sub-Region. Other resource and use issues are identified in the BLM Planning Handbook and Manual (H1610-1). All of these issues were considered in developing the alternatives brought forward for analysis.

1.5.2 Issues Identified for Consideration in the Idaho and Southwestern Montana Sub-Region

During the scoping process, the BLM and Forest Service received feedback from members of the public, including various public, governmental and nongovernmental groups. This feedback, along with internal assessment and concerns described in the 2010 Finding, has been compiled to describe issues and analysis concerns that are discussed in this document. During comment analysis, individual comments were evaluated to determine whether they constituted issues relevant to this planning process. These issues were then evaluated to determine where in the planning process they most appropriately applied – project design; alternative development, or environmental effects.

Issues that applied to all parts of the planning process were further evaluated to determine planning issues. A planning issue is defined as a major controversy or dispute regarding existing and potential land and resource allocations, levels of resource use, production and related management practices on BLM-administered and National Forest System lands that can be addressed through a range of alternatives. Planning issues can drive the development of an alternative, may involve resources that are adversely affected by the proposed action, or involve unresolved conflicts regarding alternative uses of available resources. Planning issues provide focus for the analysis and are used to compare and contrast the environmental effects of the alternatives.

In addition to planning issues, analysis issues are identified and utilized in the effects analysis to compare alternatives. These issues are further described below.

1.5.3 Planning Issues

Issues identified as planning issues for this Draft LUPA/EIS are described below. These issues have been grouped according to their related threat to GRSG, as described in the 2010 Finding, and a brief description of the threat is provided. These issues were used to drive differences between the alternatives analyzed in detail and will be discussed in the analysis and throughout the remaining chapters of this document.

Wildfire

Wildfire (primarily lightning- and human-caused) in sagebrush ecosystems is one of the primary factors linked to the loss of sagebrush-steppe habitat and corresponding population declines of GRSG. Loss of sagebrush habitat to wildfire has been increasing in the western portion of the GRSG range due to an increase in fire frequency, which has been facilitated in drier, lower elevations by the replacement of native perennial bunchgrass communities by invasive annuals such as cheatgrass. The USFWS conservation objective for wildfire – retain and restore healthy native sagebrush plant communities within the range of GRSG (USFWS 2013) – is applicable to this planning issue.

Issues:

- **What measures should be undertaken to manage fuels and wildland fires, while protecting GRSG habitat?**
- **How would the BLM and Forest Service evaluate, authorize, and implement program activities to reduce the threat (habitat loss and fragmentation) to GRSG habitat from wildland and prescribed fire?**

Vegetation – Invasive Species, Conifer Encroachment

The increase in mean fire frequency has been facilitated by the incursion of nonnative annual grasses into sagebrush ecosystems (Billings 1994; Miller and Eddleman 2001). Exotic annual grasses and other invasive plants also alter habitat suitability for GRSG by reducing or eliminating native forbs and grasses essential for food and cover (75 *Federal Register* 13910, and references therein). Annual grasses and noxious perennials continue to expand their range, facilitated by ground disturbances, including wildfire (Miller and Eddleman 2001), improper grazing (Young et al. 1972, 1976), agriculture (Benvenuti 2007), motorized recreation, and infrastructure associated with energy development (Bergquist et al. 2007). The USFWS conservation objective for nonnative, invasive plant species – maintain and restore healthy, native sagebrush plant communities (USFWS 2013) – is tied to this threat.

The intentional removal or treatment of sagebrush (i.e., using prescribed fire, or any mechanical and chemical tools to remove or alter the successional status of the sagebrush ecosystem) can contribute to habitat loss and fragmentation. Removal and manipulation of sagebrush may also increase the opportunities for the incursion of invasive annual grasses, particularly if the soil crust is disturbed (Beck et al. 2012). The USFWS conservation objective for sagebrush removal – avoid sagebrush removal or manipulation in GRSG breeding or wintering habitats (USFWS 2013) – is tied to this threat.

GRSG are negatively impacted by the expansion of pinyon and/or juniper in their habitats, even if the under-story sagebrush habitats remain (Freese et al. 2009). GRSG avoid these areas of expansion (Casazza et al. 2010), and as the pinyon and/or juniper increases in abundance and size, the underlying habitat quality for GRSG diminishes. The USFWS conservation objective for pinyon-juniper expansion – remove pinyon-juniper from areas of sagebrush that are most likely to support GRSG (post-removal) at a rate that is at least equal to the rate of pinyon-juniper incursion (USFWS 2013) – is applicable to this planning issue.

Issues:

- **How will the BLM and Forest Service address the potential expansion of nonnative annual grasses (i.e., cheatgrass) and associated loss of sagebrush habitats as a result of climate change?**
- **How would the BLM and Forest Service conserve, enhance, or restore GRSG habitat such as sagebrush communities and minimize or prevent the introduction or spread of noxious weeds and invasive species?**

- **How would the BLM and Forest Service evaluate, authorize, and implement program activities to reduce the threat (habitat loss and fragmentation) to GRSG habitat from conifer encroachment and spread of noxious and invasive species?**

Infrastructure

The increasing demands on BLM-administered and National Forest System lands for the location of wind towers, cellular towers, utility lines, roads, and other infrastructure cause continued development within the GRSG range, resulting in habitat loss and fragmentation, which in turn result in GRSG population declines. Infrastructure development can cause fragmentation that leaves the remaining habitat in noncontiguous patches, alteration that renders patches unusable to a species, or other changes (such as installation of power lines or cellular towers) that cause habitat avoidance (USFWS 2010). The cumulative impacts of infrastructure is a concern because sage-grouse population persistence may not be influenced by a single anthropogenic (human-built or human-caused) line or point feature (such as a power line or tower), but by multiple anthropogenic features acting in synergy (Leu and Hanser 2011). Development of infrastructure for any purpose (e.g. roads, pipelines, power lines, and cellular towers) results in habitat loss and fragmentation, and may cause GRSG habitat avoidance. Infrastructure can also provide sources for the introduction of invasive plant species and may also facilitate predation by providing perching or nesting opportunities for ravens and raptors. Surface mining and associated facilities within GRSG habitats result in the direct loss of habitat and habitat fragmentation. The USFWS conservation objectives listed below for the following threats are applicable to this planning issue:

- Energy development – design energy development to ensure it will not impinge upon stable or increasing GRSG population trends
- Infrastructure – avoid development of infrastructure within PACs
- Mining – maintain stable to increasing GRSG populations and no net loss of GRSG habitats in areas affected by mining (USFWS 2013)

Issues:

- **How would the BLM and Forest Service manage program activities (land use authorizations, mining, mineral leasing, energy development – including renewable energy) to reduce the threat (habitat loss, fragmentation and reduced productivity) to GRSG habitat from additional infrastructure development and management of ongoing infrastructure development (ROWs, oil and gas development, Coal/Strip Mining, Hard Rock Mining, Wind Energy Development, Solar Energy Development) while recognizing valid existing authorizations?**
- **How would the BLM and Forest Service manage existing and proposed infrastructure development to reduce resulting mortality (direct and via predation) of GRSG?**

Human Disturbance

Various activities occurring within GRSG habitat can disturb GRSG, altering their behavior and potentially disrupting aspects of their life history requirements, leading to lowered productivity and reduced populations. These activities can include ROW, energy (nonrenewable and renewable) and mineral development, as well as commercial operation activities and recreational activities. Aspects of these activities can cause direct and indirect disturbance to GRSG (construction activities, operational activities, maintenance activities, noise, vehicles, etc.). The USFWS conservation objectives listed below for the following threats are applicable to this planning issue:

- Energy development – design energy development to ensure it will not impinge upon stable or increasing GRSG population trends
- Infrastructure – avoid development of infrastructure within PACs
- Mining – maintain stable to increasing GRSG populations and no net loss of GRSG habitats in areas affected by mining
- Recreation – manage direct and indirect human disturbance (including noise) to avoid interruption of normal GRSG behavior (USFWS 2013)

Issues:

- **How would the BLM and Forest Service evaluate, authorize, and implement program activities to reduce the threat (loss of productivity) to GRSG habitat from human presence?**
- **How would the BLM and Forest Service evaluate, authorize, and implement program activities to reduce the threat (habitat loss and fragmentation) to GRSG habitat from recreation and travel management activities?**
- **How would motorized, nonmotorized, and mechanized travel be managed to provide access to federal lands and a variety of recreation opportunities while protecting GRSG and their habitat?**

Livestock Grazing

Livestock grazing is the most widespread land use across the sagebrush biome (Connelly et al. 2004) and almost all sagebrush areas are managed for livestock grazing (Knick et al. 2003). Improper livestock management, in relation to local ecological conditions, may have negative impacts on GRSG seasonal habitats (USFWS 2010a, and references therein). Structures which support range management activities can have negative impacts on GRSG by increasing fragmentation (e.g., fences and roads) or diminishing habitat quality (e.g., concentrating ungulates in winter habitats). Fences can be deleterious to GRSG populations and habitats, with threats including habitat fragmentation and direct mortality through strikes (Stevens et al. 2012). Fences can also improve habitat conditions for GRSG (e.g., by protecting brood-rearing habitats in riparian areas from overgrazing). The USFWS

conservation objectives listed below for the following threats are applicable to this planning issue:

- Grazing – conduct grazing management for all ungulates in a manner consistent with local ecological conditions that maintains or restores healthy sagebrush shrub and native perennial grass and forb communities and conserves the essential habitat components for GRSG (e.g., shrub cover, nesting cover)
- Range management structures – avoid or reduce the impact of range management structures on GRSG habitat
- Fences – minimize the impact of fences on GRSG populations (USFWS 2013)

Issues:

- **How would the BLM and Forest Service evaluate, authorize, and implement grazing management activities (grazing, water developments, fences, and structures) to reduce the threat (habitat loss, fragmentation, productivity, disease vector production) to GRSG and their habitat?**
- **What measures would the BLM and Forest Service put in place to protect and improve GRSG habitat while maintaining grazing privileges?**
- **What measures would be put in place to manage habitat for other wildlife species and reduce conflicts with GRSG?**
- **What measures would the BLM and Forest Service put in place to reduce the impacts of wild horses and burros on GRSG habitat?**

Management and Monitoring

Effective conservation strategies are predicated on identifying key areas across the landscape that are necessary to maintain redundant, representative, and resilient populations. Delineation of key GRSG habitats recognizes the extensive reach of habitat threats and the existing loss and degradation of habitats, and acknowledges that preservation of every remaining area of GRSG habitat is improbable (Kiesecker et al. 2011; USFWS 2013). With input from the state wildlife agencies, the BLM and Forest Service have identified PPH and PGH. These areas, along with the PACs identified by USFWS, form a foundation to assess application of habitat designations and related management actions as part of this effort.

Issues:

- **How would the BLM and Forest Service use the best available science to designate priority and general habitat categories for GRSG habitat within the planning area?**
- **How would the BLM and Forest Service accurately monitor the impact of land uses on GRSG and its habitat?**

Urbanization and Agricultural Conversion

Ex-urban development (dispersed homes on small acreages) results in direct habitat loss, habitat fragmentation, and the introduction of invasive plants species. Urban and ex-urban activities also increase the presence of predator subsidies (e.g., trash, landfills and bird feeders) allowing for increased predators associated with humans that may have disproportionate impacts on GRSG (e.g., red fox, skunks, and raccoons). Agricultural conversion is typically defined as the conversion of sagebrush habitats to tilled agricultural crops or re-seeded exotic grass pastures, resulting in habitat loss and fragmentation. The USFWS conservation objectives listed below for the following threats are applicable to this planning issue:

- Ex-urban development – limit urban and ex-urban development in GRSG habitats and maintain intact native sagebrush plant communities
- Agricultural conversion – avoid further loss of sagebrush habitat for agricultural activities (both plant and animal production) and prioritize restoration (USFWS 2013)

Issues:

- **What opportunities exist to adjust public land ownership that would increase management efficiency for GRSG and their habitat?**
- **How would the BLM and Forest Service manage lands and realty decisions to reduce habitat fragmentation and conversion of GRSG habitat?**
- **How would the BLM and Forest Service evaluate, authorize, and implement land tenure adjustments to reduce the conversion of (habitat loss and fragmentation) GRSG habitat to agricultural or urbanization uses?**

Social and Economic Concerns

Management of the BLM-administered and National Forest System lands within the sub-region affect the economies of the associated counties and states. Conversely, the local demographics, social structure, and values within the counties and states influence the demand for uses and opportunities provided by the BLM-administered and National Forest System lands. In many counties, management uses (mining, grazing, energy development) of the BLM-administered and National Forest System lands are a vital component of the economic and social stability in these counties. Noncommodity values around aesthetics and recreation opportunities can also play an important role in local economics and sense of place.

Issue:

- **How could the BLM and Forest Service promote or maintain activities that provide social and economic benefit to local communities while providing protection for GRSG habitat?**

Special Management Designations

The BLM and Forest Service have the ability to designate and manage unique and important areas for their associated values. The BLM calls these ACECs and the Forest Service calls these Zoological Areas. Several ACECs already exist within the sub-region. These areas prescribe management to protect the unique values identified during their designation. Existing special management areas such as Wilderness, Wilderness Study Areas (WSAs), and Wild and Scenic Rivers, may in some areas protect GRSG by restricting resource uses in these areas.

Issue:

- **What areas would be designated by the BLM or Forest Service to benefit the maintenance, enhancement, and restoration of GRSG and GRSG habitat?**

Analysis Issues

The following issues were identified through the internal and external scoping process; however, they were not used to drive the development of the alternatives. They will be displayed as components of the analysis in **Chapter 4** and may show differences between the effects of the alternatives.

Issues:

- **How would the BLM and Forest Service protect water and soil resources in order to benefit GRSG habitat?**
- **How would the BLM and Forest Service incorporate the analysis of the impacts of a changing climate on GRSG habitat?**

Issues not Addressed

The following discussion describes various comments or issues raised during the scoping period which are outside the scope of this LUPA process. This discussion is taken from the May 2012 National Greater Sage-Grouse Planning Strategy Scoping Summary Report (BLM 2012).

Comments related to national policy decisions and issues outside the scope of the LUPA will not be addressed as part of this planning effort, including decisions on BLM-administered and National Forest System lands within the purview of other planning efforts or decisions made by other federal, state, or local agencies.

National Policy Decisions
Commenters expressed concern with decisions at the national level, including, but not limited to, the LUP revision process and implementation of NEPA, decisions on wilderness and WSAs, and hunting regulations on federal lands.

Outside the Scope of the Planning Effort
Commenters expressed concern with development and management of GRSG on decisions outside of the BLM and Forest Service jurisdiction. Specific themes included the following:

- How will the BLM and Forest Service work with wildlife management agencies to ensure appropriate management of hunting for GRSG on both public and private lands?

  Many commenters questioned why hunting of GRSG is allowed if the bird is in need of protection. Others stated that hunting should be used as a method to control GRSG predators.

  Hunting is regulated by state wildlife agencies; these comments therefore relate to state-regulated actions and are outside the scope of the current planning effort. Additionally, hunting opportunities for GRSG have been reduced in response to general population declines of known origin (e.g., disease and habitat loss) and unknown origin. While hunting has not been demonstrated as the primary cause of decline in GRSG populations, the cautionary recommendations outlined in the Sage-Grouse management guidelines (Idaho Sage-Grouse Advisory Committee 2006) and Connelly et al. (2000) remain appropriate.

- How did the USFWS determine the warranted but precluded decision?

  Commenters questioned population levels and the need to incorporate range-wide conservation measures. Others questioned the effectiveness of ESA listing as a method of species conservation.

  These comments relate to decisions under the purview of the USFWS and will not be addressed in the current planning effort.

- How can the BLM and Forest Service manage livestock grazing?

  Commenters asked that grazing be limited or completely stopped due to detrimental ecosystem effects. Other stated that grazing programs should be reformed as the requirements are too limiting and impact ranchers' livelihoods. In addition, some commenters state that grazing provides habitat enhancements for sensitive species.

  Decisions about national livestock grazing policies would not be made in this planning effort.

- How should renewable energy be managed and developed in relation to economic instability and wildlife mortality?

Commenters stated concerns about renewable energy development, including economic instability due to government subsidies and risk of wildlife mortality, specifically for bats and birds.

General decisions about renewable energy management on BLM-administered and National Forest System lands are outside the scope of this planning effort.

In addition, comments were received related to issues that are outside the scope of this effort, including the following:

- Compensation of private land owners for conservation efforts and off-site mitigation
- BLM and Forest Service funding
- NEPA procedures and costs

In addition to these issues described in the Scoping Summary Report, feedback specific to the Idaho and Southwestern Montana Sub-region and predator control was provided to BLM through public meeting comments and cooperating agency feedback. While predation is included in several of the planning issues as a concern related to development, actual predator control activities are outside the authority of the BLM and Forest Service and, therefore, will not be considered further in the planning process.

1.5.4 Public Comment on the Draft LUPA/EIS

The BLM and Forest Service released the Draft LUPA/EIS to the public on November 1, 2013. Following the release of the Draft LUPA/EIS, there was a 90-day public comment period, which began on November 1, 2013, and ended on January 29, 2014. During this time, the BLM and Forest Service hosted seven open houses where the public had the opportunity to learn about the Draft LUPA/EIS, to ask questions of the BLM, the Forest Service, and the USFWS staff, and to fill out comment cards. Open houses were held in the following locations:

- Murphy, ID- January 6, 2014
- Idaho Falls, ID, January 7, 2014
- Salmon, ID, January 8, 2014
- Dillon, MT, January 9, 2014
- Pocatello, ID, January 13, 2014
- Twin Falls, ID, January 14, 2014
- Boise, ID, January 15, 2014

The BLM and Forest Service received written comments by mail, e-mail, and submitted at the public meetings. Using a systematic approach of labeling, reviewing, and categorizing each comment, the BLM and Forest Service identified and formally responded to all

substantive public comments. Substantive comments were categorized based on the content of the comment. Each retained the link to the commenter.

Subsequently, the BLM and Forest Service drafted statements summarizing the issues contained in each comment category. They then developed responses to each issue statement. As part of the response statement, the BLM and Forest Service indicated whether the comments resulted in a change to the LUPA/EIS. The Comment Analysis Report in **Appendix T** contains the issue statements and summary response for each comment category.

1.6 Development of Planning Criteria

Planning criteria are based on appropriate laws, regulations, BLM and Forest Service Manual and Handbook sections, and policy directives, as well as on public participation and coordination with cooperating agencies, other federal agencies, state and local governments, and Native American tribes. Planning criteria are the standards, rules, and factors used as a framework to resolve issues and develop alternatives. Planning criteria are prepared to ensure decision-making is tailored to the issues and to ensure that the BLM and Forest Service avoid unnecessary data collection and analysis.

1.6.1 Preliminary Planning Criteria

- The BLM and Forest Service will use the WAFWA *Conservation Assessment of Greater Sage-Grouse and Sagebrush Habitats* (Connelly et al. 2004) and any other appropriate resources (e.g., Knick et al. 2011) to identify GRSG habitat requirements and best management practices.
- The approved LUPA will be consistent with the BLM's National Greater Sage-Grouse Conservation Strategy.
- The approved LUPA will comply with FLPMA, NEPA, and CEQ regulations at 40 CFR, Parts 1500-1508; Department of the Interior regulations at 43 CFR and 46 and 43 CFR, Part 1600; the BLM H-1601-1 Land Use Planning Handbook, Appendix C: Program-Specific and Resource-Specific Decision Guidance Requirements, as amended, for affected resource programs; the 2008 BLM NEPA Handbook (H-1790-1); and all other applicable BLM policies and guidance.
- The approved LUPA will comply with NFMA, NEPA, CEQ regulations at 40 CFR, Parts 1500-1508l; Regulations of the Secretary of Agriculture at 36 CFR, Part 219; Forest Service Manual 1920; and Forest Service Handbooks 1909.12 and 1909.15.
- The approved LUPA will comply with the Wild Free-Roaming Horses and Burro Act of 1971 (as amended) which directs that "*All management activities shall be at the minimal feasible level and shall be carried out in consultation with the wildlife agency of the State wherein such lands are located in order to protect the natural ecological balance of all wildlife species which inhabit such lands, particularly endangered wildlife species.*"

- The LUPA will be limited to providing land use direction or to amending certain program-specific decisions, for the conservation of GRSG habitats on BLM-administered and National Forest System lands in the planning area.
- The BLM and Forest Service will consider allocations and prescriptive standards to conserve GRSG habitat, as well as objectives and management actions to restore, enhance, and improve GRSG habitat.
- The LUPA will recognize valid existing rights and authorizations, such as mining claims, mineral leases, and approved mineral operating plans.
- Lands addressed in the LUPA will be BLM-administered and National Forest System lands (including split-estate lands) in GRSG habitats. Any direction provided in the LUPAs will apply only to BLM-administered and National Forest System lands.
- Where more restrictive land use allocations or decisions are made in existing RMPs, those more restrictive land use allocations or decisions will remain in effect and will not be amended by this LUPA.
- The BLM and Forest Service will use a collaborative and multi-jurisdictional approach with the public and adjacent jurisdiction, where appropriate, to determine the desired future condition of BLM-administered and National Forest System lands for the conservation of GRSG and their habitats and to consider the impacts of proposed actions on all the resources in the region.
- As described by law and policy, the BLM and Forest Service will strive to ensure that conservation measures are as consistent as possible with other planning jurisdictions within the planning area boundaries.
- The BLM and Forest Service will consider a range of reasonable alternatives, including appropriate management prescriptions that focus on the relative values of resources while contributing to the conservation of the GRSG and its habitat.
- The BLM and Forest Service will address socioeconomic impacts, including environmental justice, of the alternatives. Socio-economic analysis will use an accepted input-output quantitative model such as IMPLAN, RIMSII, or JEDI for renewable energy analysis.
- The BLM and Forest Service will use best available scientific information, research, technologies, and results of inventory, monitoring, and coordination consistent with the Information Quality Act, to inform appropriate local and regional management strategies that will enhance or restore GRSG habitats.
- Management of GRSG habitat that intersects with WSAs on BLM-administered lands will be guided by BLM Manual 6330 Management of Wilderness Study Areas. Land use allocations made for WSAs must be consistent with Manual 6330 and with other laws, regulations, and policies related to WSA management.

- Management of GRSG will be guided by BLM Manual 6840 Special Status Species Management.
- Management of other special designation areas (e.g., Wild and Scenic Rivers, National Historic Trails, Wilderness Areas, National Monuments, National Conservation Areas) will be guided by the appropriate BLM and Forest Service manual or handbook.
- Management of GRSG habitat that intersects with National Forest System wilderness areas will be guided by Forest Service Manual 2300 – Recreation, Wilderness, and Related Resource Management.
- For BLM-administered lands, all activities and uses within GRSG habitats will follow existing land health standards. Standards and guidelines (S&G) for livestock grazing and other programs that have developed S&Gs will be applicable to all alternatives for BLM-administered lands.
- Management of National Forest System lands for livestock grazing will follow guidance in Forest Service Manual (FSM) 2200, Range Management, and Forest Service Handbook (FSH) 2209.13, Grazing Permit Administration.
- For National Forest System lands, all activities and uses within GRSG habitats will follow guidelines in Forest Manual 2500 – Watershed and Air Management.
- The BLM and Forest Service will consult with Native American tribes to identify sites, areas, and objects important to their cultural and religious heritage within GRSG habitats.
- The BLM and Forest Service will coordinate and communicate with state, local, and tribal governments to ensure that the BLM and Forest Service consider provisions of pertinent plans, seek to resolve inconsistencies between state, local, and tribal plans, and provide ample opportunities for state, local, and tribal governments to comment on the development of amendments.
- The BLM and Forest Service will develop vegetation management objectives, including objectives for managing noxious weeds and invasive species (including identification of desired future condition for specific areas), within GRSG habitat.
- The LUPA will be based on the principles of adaptive management.
- Reasonable Foreseeable Development Scenarios (**Appendix B**) and planning for Fluid Minerals will follow the BLM Handbook H-1624-1 and current fluid minerals manual guidance for fluid mineral (e.g., oil and gas, coal-bed methane, and oil shale) and geothermal resources. For mineral resources on National Forest System lands, the Forest Service will apply guidance provided in Forest Manual 2800 – Minerals and Geology, as applicable.
- The LUPA will be developed using an interdisciplinary approach to prepare reasonable foreseeable development scenarios, identify alternatives, and analyze

resource impacts, including cumulative impacts on natural and cultural resources and the social and economic environment.

- The most current approved BLM and Forest Service corporate spatial data will be supported by current metadata and will be used to ascertain GRSG habitat extent and quality. Data will be consistent with the principles of the Information Quality Act of 2000.
- State wildlife agencies' GRSG data and expertise will be used to the fullest extent practicable in making management determinations on federal lands.

1.7 Relationship to Other Policies, Plans and Programs

This planning process will recognize the many ongoing programs, plans, and policies that are being implemented in the planning area by other land managers and government agencies. The BLM and Forest Service will seek to be consistent with or complementary to other management actions whenever possible.

1.7.1 Federal Plans

Federal plans that will be considered during the GRSG planning effort include, but are not limited to, the following:

- Vegetation Treatment on BLM Lands in Thirteen Western States (BLM 1991a)
- Final Vegetation Treatments on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement and Associated Record of Decision. USDI, Bureau of Land Management, 2007 (FES 07-21)
- Final Vegetation Treatments on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Report. USDI, Bureau of Land Management, 2007 (FES 07-21)
- Approved Resource Management Plan Amendments/Record of Decision for Designation of Energy Corridors on Bureau of Land Management-Administered Lands in the 11 Western States, January 2009, and the ROD on Forest Service Designation of Section 368 Energy Corridors on National Forest System Lands in 10 Western States (Forest Service 2009)
- BLM and Forest Service Final Programmatic Environmental Impact Statement for Geothermal Leasing In the Western United States (2008) and associated Records of Decision and Management Plan Amendments
- Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-administered Lands in the Western United States. FES 05-11. June 2005
- Final Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States. October 2012

- Supplement to the Draft Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States. October 2011
- Greater Sage-grouse (*Centrocercus urophasianus*) Conservation Objectives: Final Report. USFWS, February 2013
- Forest Service oil and gas leasing availability analyses prepared to comply with 36 CFR, Part 228.102

1.7.2 State Plans

State plans that will be considered during the GRSG planning effort include the following:

- Greater Sage-Grouse Comprehensive Conservation Strategy. National Sage-Grouse Conservation Planning Framework Team, Western Association of Fish and Wildlife Agencies, 2006
- Montana Greater Sage-Grouse Habitat Conservation Strategy, 2009
- Management Plan and Conservation Strategies for Sage-Grouse in Montana – Final, Montana Sage Grouse Work Group, 2005
- Conservation Plan for the Greater Sage-Grouse in Idaho, as amended, Idaho Sage-Grouse Advisory Committee, 2009
- Idaho Energy Plan, Idaho Governor's Office of Energy Resources, 2012
- Idaho Invasive Species Strategic Plan 2012-2016
- Idaho Greater Sage-Grouse Local Working Group (LWG) Plans
    - Big Desert
    - Challis
    - Curlew Valley
    - Dillon
    - East Idaho Uplands
    - Jarbidge
    - North Magic Valley
    - Owyhee County
    - Shoshone Basin
    - Upper Snake
    - West Central

1.7.3 County Plans

County plans that will be considered during the GRSG planning effort are listed in **Table 1-6,** County Land Use and Sage-Grouse Management Plans. Blank rows indicate that the given county does not have a Land Use or Sage-Grouse Management Plan.

Table 1-6
County Land Use and Sage-Grouse Management Plans

County	Type	Adoption Date
Idaho		
Ada	Comprehensive	November 26, 2007
Adams	Comprehensive	May 2006
Bear Lake		
Bingham	Comprehensive	March 2005
Blaine	Comprehensive	November 7, 1994
Bonneville	Comprehensive	January 5, 1995
Butte		
Camas		
Caribou	Comprehensive	May 22, 2006
Cassia	Comprehensive	September 1, 2006
Clark	Comprehensive	November 11, 2010
Custer	Comprehensive Sage-Grouse	December 11, 2006 March 29, 2013
Elmore	Comprehensive	August 9, 2004
Fremont	Comprehensive	December 17, 2008
Gem	Comprehensive	January 19, 2010
Gooding	Comprehensive	May 3, 2010
Jefferson	Comprehensive	January 15, 2005
Jerome	Comprehensive	April 27, 2006
Lemhi	Comprehensive	October 9, 2012
Lincoln	Comprehensive	May 7, 2008
Madison	Comprehensive	March 25, 2008 in Draft
Minidoka	Comprehensive	Pending Approval
Oneida	Comprehensive	2011
Owyhee	Comprehensive Sage-Grouse Energy	August 9, 2010 April 8, 2013 December 4, 2007
Payette	Comprehensive	May 8, 2006
Power	Comprehensive	June 8, 2009
Twin Falls	Comprehensive	July 5, 1995
Washington	Comprehensive	October 19, 2010
Montana		
Beaverhead	Resource Use Plan	July 6, 2010
Deer Lodge	Growth Policy	December 12, 2005
Gallatin	Growth Policy	April 15, 2003
Madison?	Growth Policy	September 2006
Silver Bow	Growth Policy	2008
Utah		
Box Elder		

1.7.4 Endangered Species Recovery Plans

Endangered species recovery plans are prepared by the USFWS to promote the recovery of threatened and endangered species. The following geographically relevant endangered species recovery plans have been identified:

- Draft Recovery Plan for Three of the Five Distinct Population Segments of Bull Trout (*Salvelinus confluentus*)
- Draft Recovery Plan for the Jarbidge River Distinct Population Segment of Bull Trout
- Northern Rocky Mountain Wolf Recovery Plan
- Recovery Plan for the Bruneau Hot Springsnail (*Pyrgulopsis bruneauensis*)
- Recovery Plan for the Northern Idaho Ground Squirrel
- Revised Grizzly Bear Recovery Plan
- Snake River Aquatic Species Recovery Plan

1.7.5 Memoranda of Understanding

There are several memoranda of understanding (MOU) in effect that pertain to management of resources on BLM-administered and National Forest System lands. These include:

- Between the BLM, Forest Service, USFWS, National Marine Fisheries Service and the Environmental Protection Agency regarding implementation of the Interior Columbia Basin Strategy. The purpose of this MOU is to cooperatively implement the "The Interior Columbia Basin Strategy" to guide the amendment and revision of forest (Forest Service) and resource management (BLM) plans and project implementation on public lands administered by the Forest Service and BLM throughout the Interior Columbia Basin.
- Between the BLM and the Forest Service Concerning Oil and Gas Leasing Operations (2006). The purpose of this MOU is to establish joint BLM and Forest Service policies and procedures for managing oil and gas leasing and operational activities pursuant to oil and gas leases on National Forest System lands, consistent with applicable law and policy. The MOU was signed in 2006 for the purpose of efficient, effective compliance with statutory and regulatory requirements. The MOU establishes the roles of the Forest Service and the BLM in processing Applications for Permits to Drill and review of subsequent operations.
- Between the BLM and the Forest Service concerning Implementation of Section 225 of the Energy Policy Act of 2005 Regarding Geothermal Leasing and Permitting (2006).

- Interagency Agreements between the BLM and Forest Service concerning Mineral Leasing (1984) and Leasable Mineral Operations (1987). These agreements currently pertain to management of leasable minerals other than oil and gas and geothermal.
- Between the Department of the Interior, the USDA and the US Environmental Protection Agency Regarding Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions Through the NEPA Process (2011). Through the MOU, the signatories commit to a clearly defined, efficient approach to compliance with the NEPA regarding air quality and air quality related values (AQRVs), such as visibility, in connection with oil and gas development on Federal lands.
- Between the WAFWA, the Forest Service, Natural Resources Conservation Service (NRCS), Farm Service Agency, the BLM, USFWS, and USGS (2008). The purpose of the MOU is to provide for cooperation among the participating State and federal land, wildlife management and science agencies in the conservation and management of GRSG sagebrush (*Artemisia* spp.) habitats and other sagebrush-dependent wildlife throughout the Western United States and Canada.
- Between the Idaho BLM and Nevada BLM regarding management responsibility and authority regarding lands in Nevada but accessed through Idaho.
- Between Twin Falls District BLM and Elko District BLM (2013) clearly identifying the administrative boundaries between the districts as the Nevada/Idaho state line within the China Butte, Player Butte, Player Canyon, and Horse Creek allotments, and defines the Twin Falls District and Elko District management responsibilities in the Nevada portions of the identified allotments.
- Between the State of Idaho (Governor's Office, Idaho Department of Fish and Game [IDFG], Office of Species Conservation [OSC], Idaho Department of Agriculture [IDA]) and the BLM and USDA (Forest Service, Animal and Plant Health Inspection Service [APHIS], NRCS) for the purpose of supporting and implementing the intent and actions contained in the 2006 Conservation Plan for the Greater Sage-Grouse in Idaho.
- Montana Idaho Airshed Group MOU, which includes federal, state, and private partners and encompasses prescribed burning activities on federal lands (e.g., pile burns and seedbed preparation).
- Between the Forest Service Sawtooth National Forest Minidoka Ranger District and the BLM Twin Falls District Burley Field Office concerning consolidated management of the Forest Service Goose Creek Allotment and the BLM West Goose Creek Allotment.
- Between the BLM and APHIS (2012) for the purpose of establishing guidelines to assist field personnel in carrying out their wildlife damage management responsibilities.

- Between the BLM and the Department of Energy (2011) regarding grazing, ROWs, fire suppression and other aspects of shared management of lands within the Idaho National Laboratory.
- While it is not an MOU, the BLM Dillon Field Office is a signatory on the Montana Cooperative Fire Management and Stafford Act Response Agreement; a multiparty agreement involving various federal and county agencies regarding fire suppression efforts.

In addition, the BLM has entered into numerous MOUs with various federal, state, and county agencies for the purpose of establishing cooperating agencies for the BLM and Forest Service National Greater Sage-Grouse Planning Strategy. The following agencies and entities have established cooperating agency status for the purpose of working on the Idaho and Southwestern Montana Sub-regional GRSG planning effort:

- **Federal**
  - USFWS
  - Forest Service
    - Beaverhead-Deerlodge National Forest
    - Boise National Forest
    - Caribou-Targhee National Forest
    - Salmon-Challis National Forest
    - Sawtooth National Forest
  - NRCS
  - National Park Service – Craters of the Moon National Monument and Preserve
  - Department of Energy – Idaho National Laboratory
- **State**
  - Idaho Department of Fish and Game
  - Idaho Office of Species Conservation
  - Montana Fish Wildlife and Parks
- **County**
  - Idaho Association of Counties
  - Bingham County, Idaho
  - Blaine County, Idaho
  - Box Elder County, Utah (through the Utah BLM State Office)

- Cassia County, Idaho
- Clark County, Idaho
- Custer County, Idaho
- Fremont County, Idaho
- Jefferson County, Idaho
- Lemhi County, Idaho
- Owyhee County, Idaho
- Power County, Idaho
- Twin Falls County, Idaho
- Beaverhead County, Montana
- Madison County, Montana

1.7.6 Activity Plans and Amendments

Each BLM field office and Forest Service district has many specific planning documents including: allotment management plans, livestock management plans, activity plans, coordinated resource management plans, cooperative resource management plans, habitat management plans, fire management plans, and normal fire rehabilitation plans.

1.7.7 Habitat Management Plans

A Habitat Management Plan (HMP) provides guidance for the management of a defined habitat for a target wildlife species, protecting and improving habitat for that species and for other species utilizing the habitat. These plans are usually written in coordination with State Wildlife Agencies. Idaho Department of Fish and Game has a variety of fish and wildlife management plans which are either species specific (e.g., mule deer, elk, bighorn sheep, and Yellowstone cutthroat trout) or statewide in scope (e.g., Comprehensive Wildlife Conservation Strategy and Fisheries Management Plan). The plans most relevant to the GRSG in the Idaho and Southwestern Montana sub-region are the Idaho 2006 Conservation Plan for GRSG and the Montana 2005 Management Plan and Conservation Strategies for GRSG.

1.7.8 Secretarial Order 3336

Wildfire has been identified as one of the primary factors linked to loss of sagebrush-steppe habitat and corresponding population declines of greater sage-grouse (Connelly and Braun, 1997; Miller and Eddleman, 2001). While fire is a naturally occurring disturbance in the sagebrush steppe, the incursion of non-native annual grasses has facilitated an increase in mean fire frequency which can preclude the opportunity for sagebrush to become re-established. As such, the RMP includes requirements (referred to as Greater Sage-grouse Wildfire and Invasive Species Habitat Assessment in appendices in Draft documents) - that landscape scale Fire and Invasives Assessments be completed and updated regularly to more accurately define specific areas to be treated to address threats to sagebrush steppe habitat

from wildfire. Within the Great Basin, the first five priority areas of conservation (PACs) were singled out for the initial round of assessments because fire was identified as a primary threat to greater sage-grouse habitat and the first phase of these assessments were completed in March of 2015. Additionally, the Secretary of Interior issued Secretarial Order 3336 on January 5, 2015 which establishes the protection, conservation and restoration of "the health of the sagebrush-steppe ecosystem and, in particular, greater sage-grouse habitat, while maintaining safe and efficient operations as a critical fire management priority for the Department". The Secretarial Order will result in a final report of activities to be implemented prior to the 2016 Western fire season. This will include prioritization and allocation of fire resources and the integration of emerging science, enhancing existing tools to implement the Resource Management Plan and improve our ability to protect sagebrush-steppe from damaging wildfires.

Chapter 2

Proposed Action and Alternatives

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FIGURES *(see Appendix A)*

FIGURES *(see Appendix A) (continued)*

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Chapter 2. Proposed Action and Alternatives

2.1 Changes between the Draft LUPA/EIS and Proposed LUPA/Final EIS

As a result of public comments, best science, cooperating agency coordination, and internal review of the Draft LUPA/EIS, the BLM and Forest Service have developed the Proposed LUPA/FEIS for managing BLM-administered and National Forest System lands in the Idaho and Southwestern Montana GRSG sub-region. The Proposed LUPA/FEIS focuses on addressing public comments, while continuing to meet the BLM's and Forest Service's legal and regulatory mandates. The Proposed LUPA/FEIS is a variation of the co-preferred alternative (Alternatives D and E), and is within the range of alternatives analyzed in the DEIS.

Changes made to the Proposed LUPA/FEIS from the co-preferred alternative (Alternatives D and E) in Draft LUPA/EIS are the following:

- During review of the DEIS, mapping adjustments were made in response to public comments and were based on agency field and personnel input and discussions with State of Idaho and USFWS (**Appendix N**). Specifically, adjustments were intended to address the broad scale nature of the initial map and to address disparities. Specifically, certain portions of the Alternative D and Alternative E maps still encompassed some areas of non-habitat, such as timber or farm lands; or they were missing some areas of potential restoration or other locally definable areas or habitat; or were designated inappropriately as Core and/or Important. As a result, in preparing the Proposed Plan/FEIS, BLM, Forest Service, USFWS and the State of Idaho worked together to refine the GRSG Habitat Management Area map. To resolve map disparities between Alternatives D and E, and to provide more recognizable boundaries of Habitat Management Areas on the ground, BLM and Forest Service worked closely with field personnel in December 2013. During the winter and spring of 2014, BLM and Forest Service also worked closely with the State of Idaho and USFWS (Idaho Fish and Wildlife Office, Boise) in re-evaluating the Core, Important or General Management Zone designations of Alternative E, in order to move forward with a map for the Proposed Plan that met BLM and Forest Service objectives for habitat and State of Idaho and USFWS objectives for populations.
- Allocations for PHMA, IHMA, and GHMA — allocations in the proposed plan/FEIS provide more opportunities for uses in GHMA, while still maintaining conservation management by establishing screening criteria for project/activity review in GRSG habitat. Allocations that were changed between the preferred Alternative and the Proposed Plan are as follows:
- Major ROWs in PHMA, analyzed as exclusion in Alternative D in the DEIS, were changed to Avoidance, and analyzed in the Proposed Plan.
- Major ROWs in GHMA, analyzed as avoidance in Alternative D in the DEIS, were changed to open, and analyzed in the Proposed Plan (Idaho).

- Minor ROWs in GHMA, analyzed as avoidance in Alternative D in the DEIS, were changed to open, and analyzed in the Proposed Plan.
- Solar development in PHMA, analyzed as avoidance in Alternative E in the DEIS, was changed to exclusion and analyzed in the Proposed Plan.
- Wind development in PHMA, was analyzed as Exclusion in the Proposed Plan. The Proposed Plan's allocation for wind is within the range of alternatives analyzed in the DEIS.
- Wind development in IHMA, was analyzed as Avoidance in the Proposed Plan. The Proposed Plan's allocation for wind is within the range of alternatives analyzed in the DEIS.
- Salable minerals in PHMA, analyzed as open in Alternative E in the DEIS, was changed to closed to new development and analyzed in the Proposed Plan.
- Non energy leasables in PHMA, analyzed as open in Alternative E in the DEIS, was changed to closed and analyzed in the Proposed Plan.
- Sagebrush Focal Areas (SFAs) — these areas have been identified in the Proposed Plan based on recommendations in a USFWS memorandum, and are proposed to be managed as PHMA with the following additional management: recommended for withdrawal; NSO without waiver, exception, or modification for fluid mineral leasing; and prioritized for management and conservation actions including, but not limited to review of livestock grazing permits/leases. Alternatives B and C recommended withdrawal from locatable minerals development; alternatives B and D proposed closure of PPMA to fluid mineral development whereas Alternative E proposed the Idaho Core Habitat Zone as open to fluid minerals with NSO. Alternatives C and F proposed no grazing in occupied GRSG habitat whereas other alternatives were open with varying management actions. See DEIS at Chapter 4. As such, the management of these areas as SFAs and the impacts of the associated management decisions was addressed in the DEIS and is qualitatively within the spectrum of alternatives analyzed.

  BLM and the Forest Service will manage these areas, totaling approximately 3,842,900 acres (3,606,100 acres of BLM; 236,800 acres of Forest Service) within the Idaho and Southwestern Montana sub-region, as SFAs because of the importance to the conservation of the species range-wide. Specifically, SFAs include characteristics such as existing high-quality sagebrush habitat; highest breeding densities; have been identified as essential to conservation and persistence of the species; represent a preponderance of current federal ownership and in some cases are adjacent to protected areas that serve to anchor the conservation importance of the landscape. While SFAs provide essential habitat for the conservation of GRSG, a broad, landscape approach that integrates appropriate conservation efforts across habitats occurring outside the SFAs, in accordance with the Proposed Plan, is also integral since effective

conservation strategies are predicated on identifying key areas across the landscape that are necessary to maintain redundant, representative and resilient GRSG populations (see LUPA/DEIS Issues **Section 1.5.2**, Management and Monitoring). 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.

- As noted in the DEIS, the goals of this planning effort are to protect both the habitat and the species. While action Alternatives B through F, and portions of Alternative A emphasize a slightly different mix of resources and resource uses, all have goals to 1) conserve, enhance, and restore the sagebrush ecosystem that GRSG populations depend on in order to maintain or increase their abundance and distribution, in cooperation with other conservation partners; and 2) to protect GRSG habitats from disturbances that will reduce distribution or abundance of GRSG (see LUPA/DEIS **Section 2.2.1** Management Common To All Alternatives and **Table 2-17**). The BLM and Forest Service committed to using the best available scientific information to determine appropriate local and regional management strategies to enhance and restore GRSG habitats (see LUP/DEIS **Section 1.6.1** Preliminary Planning Criteria and **Section 4.1.2** Incomplete or Unavailable Information).

- USGS Buffer Study—Included a management action to incorporate the lek buffer-distances identified in the USGS report titled Conservation Buffer Distance Estimates for Greater Sage Grouse—A Review: USGS Open File Report 2014-1239 (Mainer et al. 2014) during NEPA analysis at the implementation stage. Although the buffer report was not available at the time of the DEIS release, applying these buffers was addressed in the DEIS and is qualitatively within the spectrum of alternatives analyzed. Specifically, (Alternatives B, C, D, E, and F) identified and analyzed allocation restrictions such as closure to fluid minerals, recommendation for locatable mineral withdrawal, elimination of grazing, saleable mineral restrictions, and ROW avoidance and exclusion. Alternatives B and C were the most restrictive. The following were analyzed in the DEIS: 1) closing PHMA to fluid minerals development (Alternatives B and C); 2) recommending withdrawal of PHMA to locatable minerals (Alternatives B and C); 3) closing occupied GRSG habitat to livestock grazing (Alternatives C and F); and 4) closing PHMA to salable minerals (Alternatives B, C, and F) and applying a 3 km buffer restriction for saleable minerals around leks (Alternative B). In addition to specific management actions designed to protect GRSG habitat, the DEIS included a Required Design Features and Best Management Practices Appendix D that applies protective measures during project implementation. However, the No Action was still the least restrictive of all alternatives analyzed. Accordingly, the management decision to require lek buffers for development within certain habitat types is within the range of alternatives analyzed.

- Adaptive management—Identification of hard and soft adaptive management triggers for population and habitat and identified appropriate management responses. Chapter 2 of the DEIS identified that the BLM/Forest Service would further develop the adaptive management approach by identifying hard and soft triggers and responses. All of the adaptive management hard trigger responses were analyzed within the range of alternatives. For example, in a Conservation Area, if a hard trigger is reached in IHMA, all IHMA in the Conservation Area would be managed as PHMA for all resources. Adaptive triggers were analyzed in Alternatives D and E of the Draft EIS

- Monitoring and Disturbance – The monitoring framework was further refined in the FEIS, and further clarification as to how disturbance cap calculations would be measured were developed for the FEIS. During the public comment period, BLM received comments on how monitoring and disturbance cap calculations would occur at implementation. The DEIS outlined the major components of the monitoring strategy, as well as provided a table portraying a list of anthropogenic disturbances that would count against the disturbance cap. A BLM Disturbance and Monitoring Sub-team further enhanced the three Appendices (**Appendix G**, Disturbance and Adaptive Management, **Appendix H**, Anthropogenic Disturbance Calculation, and **Appendix E**, GRSG Final Monitoring Framework) in the FEIS.

- Mitigation Strategy; Net Conservation Gain –The net conservation gain strategy is in response to the overall landscape-scale goal which is to enhance, conserve, and restore GRSG and its habitat. All of the action alternatives provided management actions to meet the landscape-scale goal (GRSG Goals: Goal 1, 2, 3 and 5; Special Status Species Objectives: MA-OBJ-1, 2, and 3; HM-OBJ-1 and 2; Vegetation Management Objectives VEG-OBJ-1, 2, and 3, Wildland Fire Management Objective Fuel-OBJ - 1). WAFWA Management Zone Cumulative Effects Analysis on GRSG – a quantitative cumulative effects analysis for GRSG was included in the FEIS. This analysis was completed to analyze the effects of management actions on GRSG at a biologically significant scale which as determined to be at the WAFWA Management Zone. The DEIS, in Chapter 4, included a qualitative analysis and identified that a quantitative analysis would be completed for the FEIS at the WAFWA Management Zone.

- Forest Service Plan Amendment—Chapter 2 separates the Forest Service Proposed Plan and the BLM Proposed Plan. This is because the Forest Service has different guidance for writing planning language; however, the actions are basically the same for both the BLM and FS under the Proposed Plan.

- Public Comment on DEIS—Updated the FEIS based on public comment received on the DEIS (see **Appendix T**, Public Comment Report)

NEPA requires agencies to prepare a supplement to the draft EIS if: 1) the agency makes substantial changes in the proposed action that are relevant to environmental concerns; or 2) if there are significant new circumstances or information relevant to environmental concerns

and bearing on the proposed action or its impacts. A supplement is not necessary if a newly formulated alternative is a minor variation of one of the alternatives is qualitatively within the spectrum of alternatives analyzed in the Draft EIS.

The Proposed LUPA includes components of the alternatives analyzed in the Draft EIS. Taken together, these components present a suite of management decisions that present a minor variation of the preferred alternative identified in the Draft LUPA/Draft EIS and are qualitatively within the spectrum of alternatives analyzed.

As such, the BLM has determined that the Proposed LUPA is a minor variation of the preferred alternative and that the impacts of the Proposed LUPA would not affect the human environment in a substantial manner or to a significant extent not already considered in the EIS. The impacts disclosed in the Proposed RMP/Final EIS are similar or identical to those described Draft LUPA/Draft EIS.

2.2 Introduction

The LUPA/EIS complies with NEPA, which directs the BLM and Forest Service to "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 Section 102[2][e]). At the heart of the alternative development process is the required development of a reasonable range of alternatives. Public and internal (within BLM and Forest Service) scoping (see **Section 1.5**, Scoping and Identification of Issues) identified issues that present opportunities for alternative courses of action, while the purpose and need for action described in **Section 1.2**, Purpose and Need, provides sideboards for determining "reasonableness."

This chapter introduces and details the Proposed Plan. The Proposed Plan is a mix of management actions selected from the range of alternatives in the Draft LUPA/EIS and is based on best science, public scoping comments, public comments on the Draft LUPA/EIS and internal agency discussion. The alternatives that were in the Draft LUPA/EIS are also included in this chapter. These include the No Action Alternative, which would continue the existing policies of the BLM and Forest Service; five action alternatives; and the alternatives considered but eliminated from detailed analysis.

The identification of the co-Preferred Alternatives in the Draft LUPA/EIS did not constitute a commitment or decision in principle, and there is no requirement to select either of the co-Preferred Alternatives or any of the separate alternatives presented in the Draft LUPA/EIS in the Final LUPA/EIS as the Proposed Plan. The BLM and Forest Service have the discretion to select any of the alternatives as their Preferred Alternative(s) in the Draft LUPA/EIS. The agencies also have the discretion to modify the Preferred Alternative(s) between the Draft EIS and the Final EIS into the Proposed Plan. The modifications are allowable as long as the actions presented in the Proposed Plan within the Proposed LUPA/Final EIS were within the range of alternatives in the Draft EIS. The various parts of the separate alternatives that were analyzed in the Draft EIS can be "mixed and matched" to develop an alternative – known as the Proposed Plan - in the Final EIS, as long as the reasons for doing so are explained (40 CFR 1506.2(b)).

2.3 Introduction to Draft Alternatives

LUP decisions consist of identifying and clearly defining goals and objectives (desired outcomes) for resources and resource uses, followed by developing allowable uses and management actions necessary for achieving the goals and objectives. These critical determinations guide future land management actions and subsequent site-specific implementation actions to meet multiple use and sustained yield mandates while sustaining land health.

2.3.1 Components of Alternatives

Goals are broad statements of desired (LUP-wide and resource- or resource-use-specific) 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. Forest Service objectives are also time specific.

Management actions and allowable uses are designed to achieve objectives. Management actions are measures that guide day-to-day and future activities. Allowable uses delineate which uses 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 on-the-ground actions and are typically not addressed in LUPs.

On National Forest System lands, forest plans guide management activities and contain desired conditions and objectives as well as standards and guidelines that provide direction for project planning and design. Desired conditions are descriptions of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. Standards are mandatory constraints on project and activity decision making. Not meeting a standard would require a site-specific forest plan amendment. A guideline is a constraint on project and activity decision making that allows for departure from its terms, so long as the purpose of the guideline is met.

2.3.2 Purpose of Alternatives Development

Land use planning and NEPA regulations require the BLM and Forest Service to formulate a reasonable range of alternatives. Alternative development is guided by established planning criteria (as outlined for the BLM at 43 CFR 1610) (see **Chapter 1**).

The NEPA regulations at 40 CFR Part 1501.2(c) states that Federal agencies shall: "Study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflict concerning alternatives uses of available resources…."

The basic goal of alternative development is to produce distinct potential management scenarios that:

- Address the identified major planning issues;
- Explore opportunities to enhance management of resources and resource uses;
- Resolve conflicts among resources and resource uses; and
- Meet the purpose of and need for the LUP or LUPA.

Pursuit of this goal provides the BLM, Forest Service, and the public with an appreciation for the diverse ways in which conflicts regarding resources and resource uses might be resolved, and offers the decision maker a reasonable range of alternatives from which to make an informed decision. The components and broad aim of each alternative considered for the Idaho and Southwestern Montana GRSG LUPA/EIS are discussed below.

2.4 Alternative Development Process for the Idaho and Southwestern Montana Greater Sage-Grouse Land Use Plan Amendment

The Idaho and Southwestern Montana GRSG LUPA/EIS planning team employed the BLM planning process (outlined in **Section 1.4**, Planning Process) to develop a reasonable range of alternatives for the LUPA/EIS. The BLM and Forest Service complied with NEPA and the CEQ implementing regulations at 40 CFR Part 1500 in the development of alternatives for this Proposed LUPA/EIS, including seeking public input and analyzing reasonable alternatives. Where necessary to meet the planning criteria, to address issues and comments from cooperating agencies and the public, or to provide a reasonable range of alternatives, the alternatives include management options for the planning area that would modify or amend decisions made in the applicable LUP. Since this LUPA/EIS will specifically address GRSG conservation, many decisions within existing LUPs that do not impact GRSG are acceptable and reasonable; in these instances, there is no need to develop alternative management prescriptions.

Public input received during the scoping process was considered to identify significant issues deserving of detailed study to help identify alternatives. The planning team developed planning issues to be addressed in the LUPA/EIS, based on broad concerns or controversies related to conditions, trends, needs, and existing and potential uses of planning area lands and resources. All comments were reviewed to determine whether they identified significant issues or unresolved conflicts.

2.4.1 Develop a Reasonable Range of Alternatives

Based on scoping and collaboration efforts, the BLM and Forest Service finalized their planning criteria and identified 13 key planning issues to help frame the alternatives development process. Following the close of the public scoping period in March 2012, the BLM and the Forest Service began the alternatives development process. Between May and September 2012, the planning team (BLM, Forest Service, and cooperating agencies) met to develop management goals and to identify objectives and actions to address the goals. The

various groups met numerous times throughout this period to refine their work. As outcomes of this process, the planning team:

- Developed one No Action Alternative (Alternative A) and three preliminary action alternatives. The first action alternative (Alternative B) is based on A Report on National Greater Sage-Grouse Conservation Measures (NTT 2011), and the two additional action alternatives (Alternative C and F) are based on proposed alternatives submitted by various conservation groups.
- Customized the objectives and actions from the NTT-based alternative (Alternative B) to develop a third action alternative (Alternative D) that strives for balance among competing interests.
- Incorporated proposed GRSG protection measures recommended by state governments as a fifth alternative (Alternative E).

Each of the preliminary action alternatives in the Draft LUPA/EIS was designed to:

- Address the 13 planning issues (identified in Section 1.5.3);
- Fulfill the purpose and need for the LUPA (outlined in Section 1.2, Purpose and Need); and
- Meet the multiple use mandates of the FLPMA (43 CFR 1716), MUSYA and NFMA.

2.4.2 Resulting Range of Alternatives in Draft LUPA/EIS

The five resulting action alternatives (Alternatives B, C, D, E, and F) in the Draft LUPA/EIS offer a range of management approaches to maintain or increase GRSG abundance and distribution of GRSG by conserving, enhancing, or restoring the sagebrush ecosystem upon which GRSG populations depend in collaboration with other conservation partners. While the goal is the same across all the alternatives, each alternative contains a discrete set of objectives and management actions constituting a separate LUPA. The goal is met in varying degrees, with the potential for different long-range outcomes and conditions.

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

The meaningful differences among the alternatives are described in **Section 2.9**, Summary Comparison of Proposed Plan Amendment and Draft Alternatives. **Section 2.10**, Detailed Description of Draft Alternatives, also provides a complete description of the proposed decisions for each alternative, including the project goal and objectives, management actions, and allowable uses for individual resource programs. Maps and figures in **Appendix A** provide a visual representation of differences between alternatives. In some instances, varying levels of management overlap a single area, or polygon, due to management

prescriptions from different resource programs. In instances where varying levels of management prescriptions overlap a single polygon, the stricter of the management prescriptions would apply.

2.4.3 Selection of and Rationale for identifying the co-Preferred Alternatives

The BLM and Forest Service selected Alternatives D and E as its co-preferred alternatives, which were presented in the Draft RMP/EIS, released in October 2013. The BLM and Forest Service selected the co-preferred alternatives based on interdisciplinary team recommendations, environmental consequences analysis of the alternatives, cooperating agency input, and public input during scoping.

Alternative D provides LUP guidance and conservation measures to address all GRSG threats for BLM- and Forest Service-managed programs that affect GRSG or their habitat. It provides a consistent approach to BLM and Forest Service management within the entire sub-region. It is also consistent with existing regulations and policy.

Alternative E provides LUP guidance focusing on the primary threats to GRSG in Idaho (e.g., wildfire, invasive species and infrastructure development). It also includes LUP guidance for some other secondary GRSG threats (e.g., recreation, improper livestock grazing and West Nile virus) on BLM and Forest Service programs which affect GRSG or their habitat. This alternative also includes four foundational elements: habitat zones; conservation areas; population objectives; and adaptive triggers.

Alternatives D and E both categorize GRSG habitat into three delineations which differentiate them from the other alternatives analyzed in the Draft LUPA/EIS. Alternative D names these Priority Habitat Management Areas (PHMA), Important Habitat Management Areas (IHMA), and General Habitat Management Areas (GHMA). Alternative E names these categories Core Habitat Zones (CHZ), Important Habitat Zones (IHZ), and General Habitat Zones (GHZ).

The BLM used the impact analysis, along with knowledge of specific issues raised throughout the planning process; recommendations from the tribes, cooperating agencies, and BLM and Forest Service resource specialists; consideration of planning criteria; and anticipated resolution of resource conflicts to identify Alternatives D and E as co-Preferred Alternatives from the suite of alternatives analyzed. Specifically, the selection of the co-Preferred Alternatives was based on the following:

- Achievement of BLM goals and policies; and
- Consideration of cooperating agencies and BLM specialists' recommendations.

See **Section 2.6.1**, Development of the Proposed Plan Amendment for GRSG Management, for a discussion of the how the Proposed Plan Amendments were developed.

2.5 BLM/Forest Service Resource Programs for Addressing GRSG Threats

The action alternatives are directed towards responding to USFWS-identified issues and threats to GRSG and its habitat. The USFWS threats do not necessarily align with BLM and Forest Service resource program areas, and are often integrated into several different agency resource program areas. **Table 2-1**, USFWS Threats to GRSG and Their Habitat, Applicable BLM and Forest Service Proposed Plan Resource Program Areas Addressing these Threats, provides a cross-walk between each of the USFWS listing decision and COT identified threats and the BLM and the Forest Service resource program areas and shows how those threats were addressed in the BLM and the Forest Service land use plan.

2.6 Proposed Plan Amendment

2.6.1 Development of the Proposed Plan Amendment for GRSG Management

In developing the Proposed Plan Amendment, the BLM and Forest Service made modifications to the co-Preferred Alternatives identified in the Draft LUPA/EIS. The modifications are based on public comments received on the Draft LUPA/EIS, internal BLM review, new information and best available science, the need for clarification in the plans, and ongoing coordination with stakeholders across the range of the GRSG. As a result, the Proposed Plan Amendment provides consistent GRSG habitat management across the range, prioritizes development outside of GRSG habitat, and focuses on a landscape-scale approach to conserving GRSG habitat. Differences between the Proposed Plan and the co-preferred alternatives are presented in **Appendix EE**.

Since release of the Draft LUPA/EIS, the BLM and Forest Service have continued to work closely with a broad range of governmental partners, including Governors, State Fish and Game agencies, the USFWS, Indian tribes, county commissioners and many others. Through this cooperation, the BLM and Forest Service have developed a Proposed Plan Amendment that takes into account state, Tribal, and local plans, policies, and strategies in accordance with applicable law, and contributes to the long-term conservation of the GRSG. The BLM and Forest Service also received many substantive public comments on the Draft LUPA (**Appendix T**), which greatly informed the BLM's and Forest Service's development of the Proposed Plan Amendment.

The BLM's and Forest Service's Proposed Plan Amendment considers documents related to the conservation of GRSG that have been released since the publication of the draft LUPA/EIS. For example, this Proposed Plan Amendment considers the USFWS' October 27th, 2014 memorandum *"Greater Sage-Grouse: Additional Recommendations to Refine Land Use Allocations in Highly Important Landscapes"* and the USGS' November 21st, 2014 report *"Conservation Buffer Distance Estimates for Greater Sage-Grouse—A Review" (USGS 2014)*. Based on these documents, the BLM is proposing to designate SFAs to further protect highly valuable habitat and is proposing to include lek-buffer distances when authorizing activities near leks. The BLM and Forest Service also updated the Proposed Plan Amendment to reflect new GRSG state conservation strategies, including recent State Executive Orders.

Table 2-1
USFWS Threats to GRSG and Their Habitat, Applicable BLM and Forest Service Proposed Plan Resource Program Areas Addressing these Threats

USFWS-Identified Threats to GRSG and Its Habitat (2010 warranted but precluded finding)	COT Report-Identified Threats to GRSG and Its Habitat (2013)	Applicable BLM/Forest Service Proposed Plan Resource Program Addressing Threat[1]
Wildland Fire	Fire	BLM: Wildland Fire Management Forest Service: Fire Management
Invasive Species	Nonnative, Invasive Plants Species	BLM: Vegetation Management, Range Management, Wildland Fire Management, and Recreation Forest Service: GRSG Habitat, Fire Management, and Roads and Transportation
Oil and Gas For wind energy development, see *Infrastructure – power lines/pipelines, roads (below)*	Energy Development	BLM: Lands and Realty and Fluid Minerals Forest Service: Lands and Realty and Fluid Minerals
Prescribed Fire	Sagebrush Removal	BLM: Vegetation Management and Wildland Fire Management Forest Service: GRSG Habitat and Fire Management
Grazing	Grazing	BLM: Range Management, Wild Horse and Burro Management, Special Status Species, and Vegetation Management Forest Service: Livestock Grazing and Wild Horse and Burro Management
See *Grazing Management (above)*	Range Management Structures	BLM: Range Management Forest Service: Livestock Grazing
No similar threat identified	Free-Roaming Equid Management	BLM: Wild Horse and Burro Management Forest Service: Wild Horse and Burro Management
Conifer Encroachment	Pinyon and/or Juniper Expansion	BLM: Wildland Fire Management and Vegetation Management Forest Service: Fire Management and GRSG Habitat
Agriculture & Urbanization	Agricultural Conversion and Ex-Urban Development	BLM: Lands and Realty Forest Service: Lands and Realty/Land Ownership Adjustments

Table 2-1
USFWS Threats to GRSG and Their Habitat, Applicable BLM and Forest Service Proposed Plan Resource Program Areas Addressing these Threats

USFWS-Identified Threats to GRSG and Its Habitat (2010 warranted but precluded finding)	COT Report-Identified Threats to GRSG and Its Habitat (2013)	Applicable BLM/Forest Service Proposed Plan Resource Program Addressing Threat[1]
Hard Rock Mining	Mining	BLM: Lands and Realty, Locatable Minerals, Salable Minerals, and Non-energy Leasable Minerals Forest Service: Locatable Minerals, Non-energy Leasable Minerals, and Mineral Materials
See Infrastructure, Roads	Recreation	BLM: Recreation and Trails and Travel Management Forest Service: Recreation and Roads/ Transportation
Infrastructure - Power lines/ pipelines - Roads - Communication sites - Railroads Range improvements (see below)	Infrastructure	BLM: Lands and Realty and Trails and Travel Management Forest Service: Lands and Realty and Roads/ Transportation
Infrastructure – Range Improvements	Range Management Structures	BLM: Range Management Forest Service: Livestock Grazing
Water Developments	No similar threat identified	All applicable programs
Climate Change	No similar threat identified	*There is no BLM or Forest Service resource program in the proposed plan addressing this threat.*
Weather	No similar threat identified	*There is no BLM or Forest Service resource program in the proposed plan addressing this threat.*
Predation	No similar threat identified	BLM: All applicable programs Forest Service: GRSG Habitat, Land and Realty, and Minerals
Disease	No similar threat identified	BLM: All applicable programs Forest Service: Minerals/Fluid Mineral Operations

Table 2-1
USFWS Threats to GRSG and Their Habitat, Applicable BLM and Forest Service Proposed Plan Resource Program Areas Addressing these Threats

USFWS-Identified Threats to GRSG and Its Habitat (2010 warranted but precluded finding)	COT Report-Identified Threats to GRSG and Its Habitat (2013)	Applicable BLM/Forest Service Proposed Plan Resource Program Addressing Threat[1]
Hunting	No similar threat identified	*There is no BLM or Forest Service resource program in the proposed plan addressing this threat.*
Contaminants	No similar threat identified	BLM: Public Health and Safety Forest Service: Mineral

Source: USFWS 2010, 2013

[1] For management associated with each resource program, see **Section 2.6.2** for the BLM Proposed Plan and **Section 2.6.3** for the Forest Service Proposed Plan

On October 27, 2014, the USFWS provided the BLM and Forest Service a memorandum titled "Greater Sage-Grouse: Additional Recommendations to Refine Land Use Allocations in Highly Important Landscapes". The memorandum and associated maps provided by the USFWS identify areas that represent recognized "strongholds" for GRSG that have been noted and referenced as having the highest densities of GRSG and other criteria important for the persistence of the species. Within these areas, the BLM/FS identified Sagebrush Focal Areas (SFAs), which are PHMAs with the following additional management (Figure 2-3):

1) Recommended for withdrawal from the Mining Law of 1872, subject to valid existing rights.

2) Managed as NSO, without waiver, exception, or modification, for fluid mineral leasing.

3) Prioritized for management and conservation actions in these areas, including, but not limited to review of livestock grazing permits/leases (see livestock grazing section for additional actions).

The BLM and Forest Service have refined the Proposed Plan Amendment to provide a layered management approach that offers the highest level of protection for GRSG in the most valuable habitat. Land use allocations in the Proposed Plan would limit or eliminate new surface disturbance in PHMA, while minimizing disturbance in GHMA. In addition to establishing protective land use allocations, the Proposed Plan Amendment would implement a suite of management tools such as disturbance limits (**Appendix G**), GRSG habitat objectives and monitoring (**Appendix E**), mitigation approaches (**Appendix J**), adaptive management triggers and responses (**Appendix G**), and lek buffer-distances (**Appendix B**) throughout the range. These overlapping and reinforcing conservation measures will work in concert to improve GRSG habitat condition and provide clarity and consistency on how the BLM/FS will manage activities in GRSG habitat.

For the sake of clarity, BLM and Forest Service decisions have been separated into two sections (described in **Sections 2.6.2** and **2.6.3**, respectively) in the Proposed Plan Amendment.

2.6.2 BLM Proposed Plan Amendment

The Proposed Plan represents a management strategy to address GRSG, their habitat and associated threats within the Idaho and Southwestern Montana Sub-region. The Plan has been developed through a coordinated partnership of BLM, Forest Service, the States of Idaho and Montana and the USFWS.

The Plan incorporates appropriate conservation measures to conserve, enhance, and restore GRSG habitat by reducing, eliminating, or minimizing threats to that habitat. The Plan is also consistent with the objectives described in the USFWS Conservation Objectives Team Report (USFWS 2013) to: 'Conserve sage-grouse so that it is no longer in danger of

extinction or likely to become in danger of extinction in the foreseeable future…' through 'Maintaining viable, connected, and well-distributed populations and habitats across [the range of GRSG], through threat amelioration, conservation of key habitats, and restoration activities'.

To achieve these objectives the Plan includes a combination of: goals and objectives including vegetation/habitat management objectives to be applied during project development and implementation (**Table 2-3**); land allocation decisions (**Table 2-2**, Idaho and Southwestern Montana GRSG EIS – Land Allocation Decisions Summary[1]); delineation of five Conservation Areas (**Figure 2-1**) to support evaluation of the adaptive management strategy and 3 percent anthropogenic disturbance cap; delineation of PHMA, IHMA, GHMA, and SFAs (**Figures 2-2** and **2-3**) with associated program management direction; a mitigation framework and strategy; development of Wildfire and Invasive Species Assessments; and associated monitoring to support these decisions.

The decisions described in this Plan apply to BLM lands in both Montana and Idaho unless identified differently. Several notable differences include the Adaptive Management Strategy and the Disturbance Density evaluation. In both cases Idaho and Southwestern Montana have separate approaches which are described in the applicable sections. Southwestern Montana's approach in both cases is the same as the approaches being applied in the rest of Montana; this supports a consistent approach within the entire state that can be implemented in coordination with State and Federal partners.

The proposed plan incorporates the following GRSG goals:

GOAL-1: Maintain and/or increase the abundance, distribution and connectivity of GRSG by conserving, enhancing and restoring GRSG habitat to maintain resilient populations by reducing, eliminating or minimizing threats to GRSG habitats.

GOAL-2: Provide for the needs of GRSG and their habitat while also providing for resource uses in accordance with the agencies' direction for multiple use and sustained yield as described in FLPMA and the NFMA.

GOAL-3: Manage anthropogenic development and human disturbance to minimize the likelihood of adverse population level effects on GRSG.

GOAL-4: Reduce the risk of West Nile Virus or other disease outbreaks from BLM and Forest Service management actions.

GOAL-5: Conserve, enhance, and restore the sagebrush ecosystem upon which GRSG populations depend in an effort to maintain and/or increase their abundance and distribution, in cooperation with other conservation partners.

Table 2-2
Idaho and Southwestern Montana GRSG EIS – Land Allocation Decisions Summary[1]

PHMA	IHMA	GHMA
Solar/Wind/Nuclear/Hydropower – Figure 2-4		
Exclusion (LR-2)	Avoidance (LR-2)	Idaho: Open (LR-2) Montana: Avoidance
Commercial Service Airports – Figure 2-6		
Exclusion (LR-3)	Avoidance (LR-1)	Open (LR-1)
Landfills – Figure 2-6		
Exclusion (LR-4)	Avoidance (LR-1)	Open (LR-1)
Utility Corridors – Figure 2-7		
Existing designated corridors which are land use plan designations (and include Section 368 Corridors), will remain "open" (subject to the ongoing settlement agreement) and can provide an opportunity to be modified with mitigation. Any new disturbance within these corridors would count towards the disturbance cap. All new, modified, or deleted corridors will require a land use plan amendment. (LR-7)	Same as PHMA (LR-7)	Same as PHMA (LR-7)
ROWs and Land Use Authorizations/Permits – High Voltage Transmission Lines and Large Pipelines – Figure 2-8		
Avoidance (LR-1)	Avoidance (LR-1)	Idaho: Open (LR-1) Montana: Avoidance
ROWs and Land Use Authorizations/Permits – Minor ROWs– Figure 2-9		
Avoidance (LR-1)	Avoidance (LR-1)	Open (LR-1)

Note:
[1] The Idaho and Southwestern Montana Subregion includes portions of Idaho, Montana and Utah. Where differences exist between direction for Idaho and Montana or between BLM and Forest Service, those are noted in the table and within the management action section. The lands within Utah are part of the Sawtooth National Forest and are managed as such; therefore direction for these lands in Utah is the same as that described for the Sawtooth National Forest in Idaho.

Table 2-2
Idaho and Southwestern Montana GRSG EIS – Land Allocation Decisions Summary[1]

PHMA	IHMA	GHMA
Land Tenure Adjustments – Figure 2-10		
Lands classified as PHMA, IHMA, and GHMA for GRSG will be retained in federal management unless: (1) the agency can demonstrate that disposal of the lands will provide a net conservation gain to the GRSG or (2) the agency can demonstrate that the disposal of the lands will have no direct or indirect adverse impact on conservation of the GRSG. (LR-14)	Same as PHMA (LR-14)	Same as PHMA (LR-14)
Fluid Mineral Resource Allocation (Includes Geothermal) – Figures 2-11 and 2-12		
Idaho and Montana: Open subject to No Surface Occupancy (NSO) without waiver, or modification. (FLM-1)	Idaho: Open subject to NSO with a limited exception. Montana: Not Applicable (FLM-1)	Idaho and Montana: Open subject to Controlled Surface Use and Timing Limitations (FLM-1)
Locatable Minerals – Figure 2-13		
All PHMA within SFA are recommended for withdrawal. Areas not previously withdrawn are open.	Areas not previously withdrawn are open.	Same as IHMA
Non-Energy Leasables – Figure 2-14		
Closed to leasing. (NEL-1) There are no Known Phosphate Leasing Areas (KPLAs) in PHMA.	KPLAs are Open subject to standard leasing stipulations. Areas outside KPLAs are Open subject to standard and GRSG stipulations (required design features, seasonal timing restrictions). (NEL-1)	Open to leasing with standard and GRSG stipulations (required design features and seasonal timing restrictions) (NEL-1)

Note:
[1] The Idaho and Southwestern Montana Subregion includes portions of Idaho, Montana and Utah. Where differences exist between direction for Idaho and Montana or between BLM and Forest Service, those are noted in the table and within the management action section. The lands within Utah are part of the Sawtooth National Forest and are managed as such; therefore direction for these lands in Utah is the same as that described for the Sawtooth National Forest in Idaho.

Table 2-2
Idaho and Southwestern Montana GRSG EIS – Land Allocation Decisions Summary[1]

PHMA	IHMA	GHMA
Mineral Materials (Salable Minerals) – Figure 2-15		
Closed to new site authorizations. Existing sites Open to new free use subject to RDFs, buffers and seasonal timing restrictions. (SAL-1)	Open to new site authorizations subject to Anthropogenic Disturbance Criteria (AD-4). Existing sites Open to new sales subject to seasonal timing restrictions. (SAL-1)	Open to new site authorizations subject to RDFs, buffers and seasonal timing restrictions. Existing sites Open to new sales subject to seasonal timing restrictions. (SAL-1)
Travel Management – Figure 2-16		
BLM Idaho: Limited to Existing (TM-1) BLM Montana: Limited to Designated (Decisions described in Dillon RMP)	BLM: Limited to Existing (TM-1)	BLM: Limited to Existing (TM-1) BLM Montana: Limited to Designated (Decisions described in Dillon RMP)

Note:
[1] The Idaho and Southwestern Montana Subregion includes portions of Idaho, Montana and Utah. Where differences exist between direction for Idaho and Montana or between BLM and Forest Service, those are noted in the table and within the management action section. The lands within Utah are part of the Sawtooth National Forest and are managed as such; therefore direction for these lands in Utah is the same as that described for the Sawtooth National Forest in Idaho.

Special Status Species

Objectives

MA-OBJ-1 (Management Area – Objective): Maintain a resilient population of GRSG in Idaho and Southwestern Montana.

MA-OBJ-2: Designate GRSG management areas and associated management to maintain a resilient population and to designate strategically located adjacent areas to provide a buffer from unpredictable habitat loss such as wildfire to the resilient population areas.

MA-OBJ-3: Identify and strategically protect larger intact sagebrush areas and areas of lower fragmentation to maintain GRSG population persistence.

HM-OBJ-1 (Habitat Management): Maintain or make progress toward at least 70 percent of lands within PHMAs and IHMAs capable of producing sagebrush at 10 to 25 percent canopy cover and conifers absent to uncommon within 1.86 miles of occupied leks.

HM-OBJ-2: Incorporate GRSG Seasonal Habitat Objectives (**Table 2-3**, Seasonal Habitat Desired Conditions for GRSG on BLM-Administered Lands) into the design of projects or activities, as appropriate, based on site conditions and ecological potential, unless achievement of fuels management objectives require additional reduction in sagebrush cover to meet strategic protection of GRSG habitat and conserve habitat quality for the species or at least one of the following conditions can be demonstrated and documented in the NEPA analysis associated with the specific project:

- A specific objective is not applicable to the site-specific conditions of the project or activity;
- An alternative objective is determined to provide equal or better protection for GRSG or its habitat (based on appropriate scientific findings); or
- Analysis concludes that following a specific objective would provide no more protection to GRSG or its habitat than not following it, for the project being proposed.

Table 2-3
Seasonal Habitat Desired Conditions for GRSG on BLM-Administered Lands

Attribute	Indicator	Desired Condition	Reference
BREEDING HABITAT (LEK AND NESTING/EARLY BROOD REARING) **Breeding and Nesting (Seasonal Use Period March 1 – June 15)[1]**			
Lek Security	Proximity of trees	Trees (i.e., in Idaho mainly juniper, conifers, and does not include old-growth juniper, pinyon pine and mountain mahogany; in Montana mainly Douglas-fir) absent or uncommon on shrub/grassland ecological sites within 1.86 miles (3 km) of occupied leks.	Baruch-Mordo et al. 2013[7] Stiver et al. *in press*[13]
	Proximity of sagebrush to leks	Adjacent protective sagebrush cover within 328 ft. (100 m) of an occupied lek	Stiver et al. *in press*[13]
NESTING/EARLY BROOD REARING[1,5,10,12,13,14]			
Cover and Food	Seasonal habitat extent (Percent of Seasonal Habitat Meeting Desired Conditions)	>80% of the nesting habitat meets the recommended vegetation characteristics, where appropriate (relative to ecological site potential, etc.).	Connelly et al. 2000[8]
	Sagebrush cover [2]	15-25%	Connelly et al. 2000[8] Connelly et al. 2003[9] Hagen et al. 2007[11]
	Sagebrush height Arid sites[3] Mesic sites[4]	 12-31 inches (30-80cm) 16-31 inches (40-80cm)	Connelly et al. 2000[8]
	Predominant sagebrush shape	Predominantly spreading shape[5]	Stiver et al. *in press*[13]
	Perennial grass cover [2] Arid sites[3] Mesic sites[4]	 ≥10% ≥15%	Connelly et al. 2000[8] Stiver et al. *in press*[13]
	Perennial grass (and forb) height	≥ 7 inches	Connelly et al. 2000[8] Connelly et al. 2003[9] Hagen et al. 2007[11] Stiver et al. *in press*[13]
	Perennial forb cover [2] Arid sites[3] Mesic sites[4]	 ≥5% ≥10%	Connelly et al. 2000[8]
	Perennial forb availability	Preferred forbs are common with several species present[6]	Stiver et al. *in press*[13]

Table 2-3
Seasonal Habitat Desired Conditions for GRSG on BLM-Administered Lands

Attribute	Indicator	Desired Condition	Reference
LATE BROOD-REARING/SUMMER[1, 15] (July-October)[1] Late brood-rearing areas, such as riparian, meadows, springs, higher elevation mesic uplands, etc. may occur within other mapped seasonal habitat areas. Apply late brood rearing/summer habitat desired conditions locally as appropriate.			
Cover and Food	Seasonal habitat extent (Percent of Seasonal Habitat Meeting Desired Condition)	>40% of the summer/brood habitat meets recommended brood habitat characteristics where appropriate (relative to ecological site potential, etc.)	Connelly et al. 2000[8]
	Sagebrush cover[2]	Uplands 10-25% Riparian/Meadow: Sagebrush cover within 100 m	Connelly et al. 2000[8]
	Sagebrush height	16 to 32 inches (40-80cm)	Connelly et al. 2000[8]
	Perennial grass and forb cover [2]	>15%	
	Upland and riparian perennial forb availability [2]	Preferred forbs are common with appropriate numbers of species present[6]	Stiver et al. *in press*[13]
	Riparian and/or meadow habitat condition	Proper Functioning Condition	Stiver et al. *in press*[13]
WINTER[1] November-March[1] (Apply to areas of known or likely winter-use)			
Cover and Food	Seasonal habitat extent (Percent of Seasonal Habitat Meeting Desired Condition)	>80% of the wintering habitat meets winter habitat characteristics where appropriate (relative to ecological site, etc.).	Connelly et al. 2000[8]
	Sagebrush cover and height above snow[5]	Sagebrush is at least 10 inches (25 cm) above snow and ≥10% cover[16]	Connelly et al. 2000[8] Stiver et al. *in press*[13]

NOTES AND REFERENCES

[1] Seasonal dates can be adjusted by local unit according to geographic region.
[2] Since plant species and/or life forms may overlap, total vegetative cover, inclusive of shrubs, forbs and grasses may exceed 100%.
[3] Arid corresponds to the 10 – 12 inch precipitation zone; *Artemisia tridentata wyomingensis* is a common big sagebrush sub-species for this type site (Stiver et al. *In Press*).
[4] Mesic corresponds to the ≥12 inch precipitation zone; *Artemisia tridentata vaseyana* is a common big sagebrush sub-species for this type site (Stiver et al. *In Press*).
[5]Collectively the indicators for sagebrush (cover, height, and shape), perennial grass and perennial forb (cover, height and/or availability) represent the desired condition range for nesting/early brood rearing habitat characteristics, consistent with the breeding habitat suitability matrix identified in Stiver et al. *In Press*. Sagebrush plants that are more tree or columnar-shaped provide less protective cover near the ground than sagebrush plants with a spreading shape (Stiver et al. *In Press*). Some sagebrush plants are naturally columnar (e.g., Great Basin big sagebrush), and a natural part of the plant community. However, a predominance of columnar shape arising from animal impacts may warrant management investigation or adjustments at site specific scales.
[6] Preferred forbs are listed in Stiver et al. *In press*. Overall total forb cover may be greater than that of preferred forb cover since not all forb species are listed as preferred.
[7]Baruch-Mordo, S., J. S. Evans, J. P. Severson, D. E. Naugle, J. D. Maestas, J. M. Kiesecker, M. J. Falkowski, C.

Table 2-3
Seasonal Habitat Desired Conditions for GRSG on BLM-Administered Lands

Attribute	Indicator	Desired Condition	Reference

A. Hagen, and K. P. Reese. 2013. Saving sage-grouse from trees. Biological Conservation 167:233-241.
[8] Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.
[9] Connelly, J. W., K. P. Reese, and M. A. Schroeder. 2003. Monitoring of Greater sage-grouse habitats and populations. University of Idaho College of Natural Resources Experiment Station Bulletin 80. University of Idaho, Moscow, ID.
[10]Doherty, K. 2008. Sage-grouse and Energy Development: Integrating Science with Conservation Planning to Reduce Impacts. Ph.D. Dissertation. University of Montana, Missoula, MT.
[11] Hagen, C. A., J. W. Connelly, and M. A. Schroeder. 2007. A meta-analysis of greater sage-grouse *Centrocercus urophasianus* nesting and brood-rearing habitats. Wildlife Biology 13 (Supplement 1):42-50.
[12]Holloran, M. J., and S. H. Anderson. 2005. Spatial Distribution of Greater Sage-grouse nests in relatively contiguous sagebrush habitats. Condor 107:742-752.
[13]Stiver, S. J., E. T. Rinkes, D. E. Naugle, P. D. Makela, D. A. Nance, and J. W. Karl. *In Press*. Sage-Grouse Habitat Assessment Framework: A Multi-scale Habitat Assessment Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies Technical Reference 6710-1. U.S. Bureau of Land Management, Denver, Colorado.
[14] Connelly, J.W., A. Moser, and D. Kemner. 2013. Greater Sage-Grouse breeding habitats: Landscape-based comparisons. Grouse News 45. Research Reports.
[15] Some late brood habitat occurs at higher elevations outside of mapped nesting habitat and some is embedded within nesting landscapes especially areas such as wet meadows, riparian areas, springs and seeps.
[16]Winter habitat metrics are a guideline but snow depths and habitat availability may vary widely depending on winter severity, topography and elevation.

- These habitat objectives in **Table 2-3** summarize the characteristics that research has found represent the seasonal habitat needs for GRSG. The specific seasonal components identified in the table were adjusted based on local science and monitoring data to define the range of characteristics used in this sub-region. Thus, the habitat objectives provide the broad vegetative conditions we strive to obtain across the landscape that indicate the seasonal habitats used by GRSG. These habitat indicators are consistent with the rangeland health indicators used by the BLM.

- The habitat objectives will be part of the GRSG habitat assessment to be used during land health evaluations (see Monitoring Framework, **Appendix E**). These habitat objectives are not obtainable on every acre within the designated GRSG habitat management areas. Therefore, the determination on whether the objectives have been met will be based on the specific site's ecological ability to meet the desired condition identified in the table.

- All BLM use authorizations will contain terms and conditions regarding the actions needed to meet or progress toward meeting the habitat objectives. If monitoring data show the habitat objectives have not been met nor progress being made towards meeting them,

there will be an evaluation and a determination made as to the cause. If it is determined that the authorized use is a cause, the use will be adjusted by the response specified in the instrument that authorized the use.

Coordination

CC-1: Collaborate, coordinate and utilize cooperative planning efforts to implement and monitor activities to achieve desired conditions and to maximize the utilization of available funding opportunities. Coordination efforts could include: adjacent landowners, federal and state agencies, local governments, tribes, communities, other agencies, resource advisory groups, public lands permit holders and non-governmental organizations.

CC-2: Develop a cooperative MOU between the BLM, Forest Service and State of Idaho to establish the State of Idaho as a cooperating agency during implementation of the final decision. The MOU would identify responsibilities, role and interaction of the BLM, Forest Service and State of Idaho. Montana BLM will participate as appropriate on Montana's Sage-grouse Oversight Team to facilitate coordination and implementation of BLM's final decision and Montana's Executive Order No. 10-2014.

CC-3: The BLM and Forest Service would consider any recommendations from the Governor of Idaho as a result of evaluation completed by the Sage-Grouse Implementation Task Force.

CC-4: Idaho: The BLM would coordinate with the State of Idaho and the Idaho Sage-Grouse Implementation Task Force regarding proposed management changes, the implementation of conservation measures, mitigation, and site-specific monitoring, related to adaptive management, anthropogenic disturbance and livestock grazing (**Appendix M**).

CC-5: Montana: The BLM would coordinate with the State of Montana and the Montana Sage-grouse Oversight Team regarding proposed management changes, the implementation of conservation measures, mitigation, and site-specific monitoring, related to adaptive management and anthropogenic disturbance (**Appendix M**).

CC-5: Upon completion of the Record of Decision the BLM will develop an initial Implementation Guide for BLM District and Field Offices within a year of issuance of the Record of Decision. This Guide would define and describe consistent application of the allocations, management actions, required design features, and etc. that are contained within the final plan and would be updated and expanded as needed to respond to issues and concerns.

CC-6: At the state level, BLM and Forest Service would coordinate with IDFG, MFWP, USFWS, and other conservation partners in collaborative efforts

with adjacent states (Oregon, Nevada, Utah, Montana, Wyoming) in GRSG MZs IV and II to evaluate GRSG habitat and population status and trends and make appropriate regional recommendations for GRSG conservation at broader scales.

CC-7: At the state level, BLM and Forest Service would coordinate with the appropriate WAFWA Sage-grouse Technical Committee to develop consistent population and habitat monitoring approaches that facilitate GRSG conservation at the MZ scale.

CC-8: All prescribed burning would be coordinated with state and local air quality agencies to ensure that local air quality is not significantly impacted by BLM and Forest Service activities.

Greater Sage-Grouse Management Areas

MA-1 (Management Area): Designate five GRSG Conservation Areas (see **Chapter 8,** Glossary) within the sub-region to form the geographic basis for achieving population objectives; evaluating the disturbance density and adaptive regulatory triggers; and tailor adaptive management responses. These conservation areas are depicted in **Figure 2-1**. These areas are referred to as Mountain Valleys, Desert, West Owyhee, Southern and Southwestern Montana Conservation Areas.

Conservation Area Description:

Mountain Valleys Conservation Area – generally located north of the Snake River Plain, including GRSG habitat in the Salmon and Challis areas, and habitat in west-central population area. It extends west from Rexburg, north and west of Highway 33 to Howe, north and west of Highway 33/22 to Arco, north and west of Highway 26/20/93 to Carey, north and west of Highway 20 west to Hill City, north and west of Highway 20 to the Dylan Karaus Road, west to Canyon Creek. Canyon Creek to the confluence with the Snake River form the western boundary.

Desert Conservation Area – located north of the Snake River and south of the Mountain Valleys Conservation Area. It extends from the confluence of Canyon Creek and the Snake River, eastward to Idaho Falls. The Snake River and Henry's Fork form the eastern boundary.

West Owyhee Conservation Area – located south of the Snake River and west of the Bruneau River.

Southern Conservation Area – located south of the Snake River and east of the Bruneau River, including East Idaho uplands and Bear Lake Plateau, and the Utah portion of the Sawtooth National Forest in Box Elder County.

Southwestern Montana – located in southwestern Montana - encompassing the Dillon Butte BLM Field Office and Beaverhead-Deerlodge National Forest boundaries (the Butte RMP is not being amended and since there are

limited GRSG federal GHMAs, management actions do not apply in the Butte Field Office).

In general, GRSG habitats in the Desert and West Owyhee CAs are relatively contiguous, while those in the Mountain Valleys and Southern CAs tend to be more fragmented due to more complex topography, and elevational differences and/or effects from wildfires, agriculture, urbanization or other factors.

MA-2: Within each Conservation Area designate GRSG Habitat Management Areas: Priority, Important and General Habitat Management Areas (**Figure 2-2**). **Priority Habitat Management Areas (PHMAs**) focus on conserving the two key meta-populations in the sub-region. PHMA encompasses areas with the highest conservation value to GRSG, based on the presence of larger leks, habitat extent, important movement and connectivity corridors and winter habitat. PHMAs include adequate area to accommodate continuation of existing land uses and landowner activities. **Important Habitat Management Areas (IHMAs)** contain additional habitat and populations that provide a management buffer for the PHMA and to connect patches of PHMA. IHMA encompasses areas of generally moderate to high conservation value habitat and/or populations and in some Conservation Areas includes areas beyond those identified by USFWS as necessary to maintain redundant, representative and resilient populations (Priority Areas for Conservation (PACs)). IHMAs are typically adjacent to PHMAs but generally reflect somewhat lower GRSG population status and/or reduced habitat value due to disturbance, habitat fragmentation or other factors. There are no IHMAs designated within the Southwestern Montana Conservation Area. **General Habitat Management Areas (GHMAs)** encompass habitat that is outside of PHMAs or IHMAs. GHMAs contain approximately 10 percent of the occupied leks that are also of relatively low male attendance compared to leks in PHMA or IHMA. GHMAs are generally characterized by lower quality disturbed or patchy habitat of low lek connectivity.

MA-3: In Idaho, Designate PHMA and IHMA to encompass 90 percent of the breeding males in Idaho. In Montana, designate PHMA to encompass Montana Fish, Wildlife, and Parks 2009 Greater Sage Grouse Core Area designations.

MA-4: Annually prioritize Conservation Areas at the state scale considering results of the annual adaptive regulatory trigger evaluations relative to implementation of restoration and mitigation activities.

MA-5: Prioritize activities and mitigation to protect, enhance and restore GRSG habitats (i.e., fire suppression activities, fuels management activities, vegetation treatments, invasive species treatments etc.) first by Conservation Area, if appropriate (Conservation Area under adaptive management or at

risk of engaging adaptive management), followed by PHMAs, then IHMAs then GHMAs within the Conservation Areas. Local priority areas within these areas will be further refined as a result of completing the GRSG Wildfire and Invasive Species Habitat Assessments as described in **Appendix D**. This could include projects outside GRSG habitat when those projects would provide a benefit to GRSG habitat.

MA-6: The management area map and Biologically Significant Unit (BSU) baseline map would be re-evaluated in conjunction with plan evaluation processes (i.e. approximately every 5 years). This re-evaluation could indicate the need to adjust PHMA, IHMA or GHMA or the habitat baseline. These adjustments could occur upon completion of the appropriate analysis (plan amendment) to review the allocation decisions based on the map. Results from the Wildfire and Invasive Species Assessments, such as identified focal or emphasis areas would also be used to help inform mapping adjustments during this evaluation.

MA-7: GRSG habitat within the project area would be assessed during project-level NEPA analysis within the management area designations (PHMA, IHMA, GHMA). Project proposals and their effects would be evaluated based on the habitat and values affected.

MA-8: Idaho BLM will annually update the Key Habitat map as described in **Appendix F**, in order to reflect habitat changes resulting from wildfire, succession, and vegetation treatments that occurred or were observed since the last update. Key habitat includes areas of generally intact sagebrush that provide sage-grouse habitat during some portion of the year. This map also identifies potential restoration areas (perennial grassland annual grasslands, conifer encroachment and recent burns). This map a broad scale current vegetation map that changes as habitat is lost or restored. The Key Habitat Map is not an allocation decision such as PHMA, IHMA, and GHMA. Updates to the map will also occur if it is determined that mapping errors or omissions have occurred, or that radio-telemetry studies indicate that GRSG are consistently utilizing an area. Updates are also intended to capture recommendations by the field offices, GRSG Local Working Groups, or agency partners in GRSG conservation. Project-level evaluations of GRSG habitat during the NEPA process may also be used to inform the annual update.

MA-9: Areas of habitat outside of delineated management areas identified during the Key habitat update process would be evaluated during site specific NEPA for project level activities and GRSG required design features (**Appendix B**), seasonal timing restrictions (**Appendix C**) and buffers (**Appendix B**) would be included as part of project design. These areas would be further evaluated during plan evaluation and the 5-year update to the management areas, to determine whether they should be included as PHMAs, IHMAs, or GHMAs.

MA-10: Designate Sagebrush Focal Areas (SFA) as shown on **Figure 2-3**. SFAs will be managed as PHMA, with the following additional management:

- Recommended for withdrawal from the General Mining Act of 1872, as amended, subject to valid existing rights.
- Managed as NSO, without waiver, exception, or modification, for fluid mineral leasing.
- Prioritized for management and conservation actions in these areas, including, but not limited to review of livestock grazing permits/leases (see livestock grazing section for additional actions).
- Areas of non-PHMA mapped within the SFA boundary will not be managed as SFA, except for the Donkey Hills ACEC and three Forest Service parcels in the Lost River Range, Idaho (Borah Peak, Big Flat Top Mountain, and Copper Basin Knob).

Adaptive Management

AM-1 (Adaptive Management): Idaho: Use hard and soft population and habitat triggers to determine an appropriate management response as described in AM-6 to AM-16. Hard and soft triggers responses are applied at the Conservation Area (MA-1) scale (**Appendix G**).

AM-2: Utilize monitoring information collected through the Monitoring Framework (**Appendix E**) to determine when adaptive regulatory triggers have been met.

AM-3: Idaho: BLM and Forest Service would maintain GRSG habitat information, through use of the Key Habitat map or latest sagebrush/vegetation map, which would be used to track and identify habitat changes to assess the habitat trigger in the adaptive management approach. Key habitat map updates are made each winter by BLM in coordination with the Forest Service and IDFG, using the process described in **Appendix F**.

AM-4: Idaho: BLM would coordinate with the IDFG regarding population information collected and maintained by the IDFG to track and identify population changes to assess the population trigger in the adaptive management approach.

AM-5: Idaho: Twice each year the applicable monitoring information would be reviewed to determine if any adaptive management triggers have been met.

AM-6: Idaho: Adaptive habitat regulatory triggers would be individually calculated across all ownerships within the BSUs (**Appendix G**). The BSU is defined as the IDFG modeled nesting and wintering habitat (IDFG 2013, unpublished data) within PHMAs and IHMAs within a Conservation Area. The sagebrush component of the BSU is represented by the Key habitat within the BSU

present during the 2011 baseline and as mapped during subsequent annual Key habitat map updates. Key habitat is defined as areas of generally intact sagebrush that provide GRSG habitat during some portion of the year (ISAC 2006).

AM-7: Adaptive Regulatory Criteria for Habitat Hard Triggers are defined as:

- A 20 percent loss of Key Habitat within the BSU of the PHMA of a Conservation Area when compared to the 2011 baseline, inclusive of all land ownerships or
- A 20 percent loss of Key Habitat within the BSU of the IHMA of a Conservation Area when compared to the 2011 baseline.

AM-8: Adaptive Regulatory Criteria for Habitat Soft Triggers are defined as:

- A 10 percent loss of Key Habitat within the BSU of the PHMA of a Conservation Area when compared to the 2011 baseline; or
- A 10 percent loss of Key Habitat within the BSU of the IHMA of a Conservation Area when compared to the 2011 baseline.

AM-9: Adaptive Regulatory Criteria for Population Hard Triggers are defined as:

- A 20 percent decline in the current 3-year average of total maximum number of males counted compared to the 2011 maximum male baseline and a finite rate of change (λ) significantly below 1.0 within PHMA within a Conservation Area over the same 3-year period; or
- A 20 percent decline in the current 3-year average of total maximum number of males counted compared to the 2011 maximum male baseline and a finite rate of change (λ) significantly below 1.0 within IHMA within a Conservation Area over the same 3-year period.
- Significance is defined by the 90 percent confidence interval around the current 3-year finite rate of change. If the 90 percent confidence interval is less than, and does not include 1.0, then the finite rate of change is considered significant. The finite rate of change and variance will be calculated following Garton et al. (2011).

AM-10: Adaptive Regulatory Criteria for Population Soft Triggers are defined as:

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

baseline and a finite rate of change (λ) below 1.0 within IHMA within a Conservation Area over the same 3-year period.

AM-11: When any of the Adaptive Regulatory Criteria for Soft Triggers have been met the Implementation Team would evaluate causal factors and recommend additional potential implementation level activities (**Appendix G**).

AM-12: When any of the Adaptive Regulatory Criteria for Hard Triggers have been met then all PHMA management actions would be applied to the IHMA within that Conservation Area and the Implementation Team would evaluate causal factors and recommend additional potential implementation level activities.

AM-13: If an adaptive regulatory trigger is tripped and livestock grazing is identified as a probable limiting factor then adjustments would follow the Adaptive Grazing Management Response described in **Appendix G**.

AM-14: Remove any adaptive management response when the habitat or maximum male population count (i.e., 3-year average) returns to or exceeds the 2011 baseline levels within the associated Conservation Area in accordance with the Adaptive Management Strategy (**Appendix G**). In such a case, changes in management allocations resulting from a tripped trigger would revert back to the original allocation (AM-12).

AM-15: Montana: Follow the NPT Adaptive Management Guidance and Sideboards. When a hard trigger is hit in a BSU, the designated response will be put in place in that BSU. Triggers and responses have been developed with local state and USFWS experts (**Appendix I**).

AM-16: Idaho and Montana: When a hard trigger is hit in a BSU within a 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 causal factor, put project-level responses in place, as appropriate and discuss further appropriate actions to be applied. The team will also investigate the status of the hard triggers in other BSUs within the PAC and will invoke the appropriate plan response.

Anthropogenic Disturbance

AD-1 (Anthropogenic Disturbance): For Idaho and Montana, if the 3 percent anthropogenic disturbance cap is exceeded on lands (regardless of land ownership) within GRSG PHMA (or IHMA in Idaho) Habitat Management Areas in any given BSU, then no further discrete anthropogenic disturbances (subject to applicable laws and regulations, such as the General Mining Law of 1872, as amended, valid existing rights, etc.) will be permitted by BLM within GRSG PHMAs and IHMAs in any given BSU until the disturbance has been reduced to less than the cap. As measured according to the Monitoring Framework (**Appendix G**) for the intermediate scale.

For Idaho, if the 3 percent disturbance cap is exceeded on all lands (regardless of land ownership) within a proposed project analysis area (**Appendix G**) in a PHMA (or IHMA in Idaho), then no further anthropogenic disturbance will be permitted by BLM until disturbance in the proposed project analysis area has been reduced to maintain the area under the cap (subject to applicable laws and regulations, such as the General Mining Law of 1872, as amended, valid existing rights, etc.).

For Montana, if the 3 percent disturbance cap is exceeded on lands (regardless of land ownership) or if anthropogenic disturbance and habitat loss associated with conversion to agricultural tillage or fire exceed 5% within a project analysis area in PHMAs, then no further discrete anthropogenic disturbances (subject to applicable laws and regulations, such as the 1872 Mining Law, valid existing rights, etc.) will be permitted by BLM within PHMA in a project analysis area until the disturbance has been reduced to less than the cap. If the BLM determines that the State of Montana has adopted a GRSG Habitat Conservation Program that contains comparable components to those found in the State of Wyoming's Core Area Strategy including an all lands approach for calculating anthropogenic disturbances, a clear methodology for measuring the density of operations, and a fully operational Density Disturbance Calculation Tool, the 3% disturbance cap will be converted to a 5% cap for all sources of habitat alteration within a project analysis area.

For Idaho the BSU (**Figure 2-3**) is defined as the currently mapped nesting and wintering habitat within PHMA and IHMA within a Conservation Area, inclusive of all ownerships for evaluation. For Montana the BSU is defined as the PHMA in Montana. Anthropogenic disturbance excludes habitat disturbance from wildfire and fuels management activities and includes activities described in **Table 2-4**, Anthropogenic Disturbances and Areas of Impact. For Idaho this disturbance is measured by direct footprint or by ROW width for linear features (powerlines, pipelines and roads). For Montana disturbance is measured similar to the Wyoming Disturbance Density Calculation Tool process described in **Appendix G**.

Subject to applicable laws and regulations and valid existing rights, if the average density of one energy and mining facility per 640 acres (the density cap) is exceeded on all lands (regardless of land ownership) in the Priority Habitat Management Area within a proposed project analysis area, then no further disturbance from energy or mining facilities will be permitted by BLM: (1) until disturbance in the proposed project analysis area has been reduced to maintain the limit under the cap; or (2) unless the energy or mining facility is co-located into an existing disturbed area.

Table 2-4
Anthropogenic Disturbances and Areas of Impact

Datasets as Described in the Monitoring Framework[1]
Oil and Gas Wells and Development Facilities
Coal Mines
Wind Towers
Solar Fields
Geothermal Development Facilities
Mining (Active Locatable, Non-Energy Leasable and Saleable Developments)
Roads
Railroads
Powerlines
Communication Towers
Other Vertical Structures
Additional Local Datasets
Coalbed Methane Ponds
Meteorological Towers (e.g., wind energy testing)
Nuclear Energy Facilities
Airport Facilities and Infrastructure
Military Range Facilities and Infrastructure
Hydroelectric Plants
Recreation Areas Facilities and infrastructure

Note:
[1] Taken from Table 6 – GRSG Monitoring Framework.
See **Appendix G** for further details

AD-2: New anthropogenic disturbances within PHMA or IHMA within a Conservation Area where the disturbance cap is already exceeded from any source or where the proposed development would result in the cap being exceeded would not be allowed in within that Conservation Area until enough habitat has been restored within that Conservation Area to maintain the area under this cap (subject to valid existing rights).

AD-3: PHMA (Idaho only): Anthropogenic Disturbance Screening Criteria. In order to avoid surface-disturbing activities in PHMA, priority will be given to development (including ROWs, fluid minerals and other mineral resources subject to applicable stipulations) outside of PHMA. When authorizing development in PHMA, priority will be given to development in non-habitat areas first and then in the least suitable habitat for GRSG. In addition to the PHMA and IHMA Anthropogenic Disturbance Development Criteria (AD-4), the following criteria must all be met in the project screening and assessment process:

a. The population trend for the GRSG within the associated Conservation Area is stable or increasing over a three-year period and the population levels are not currently engaging the adaptive management triggers (this applies strictly to new authorizations;

renewals and amendments of existing authorizations would not be subject to this criteria when it can be shown that long-term impacts from those renewals or amendments would be substantially the same as the existing development);

b. The development with associated mitigation would not result in a net loss of GRSG Key habitat and mitigation would provide a net conservation benefit to the respective PHMA;

c. The project and associated impacts would not result in a net loss of GRSG Key habitat or habitat fragmentation or other impacts causing a decline in the population of the species within the relevant Conservation Area (the project would be outside Key habitat in areas not meeting desired habitat conditions or the project would provide a benefit to habitat areas that are functioning in a limited way as habitat);

d. Cannot be reasonably accomplished outside of the PHMA; or can be either: 1) developed pursuant to a valid existing authorization; or 2) is co-located within the footprint of existing infrastructure (proposed actions would not increase the 2011 authorized footprint and associated impacts more than 50 percent, depending on industry practice.

e. Development could be implemented adhering to the required design features (RDF) described in **Appendix B**;

f. The project would not exceed the disturbance cap (AD-1).

g. The project has been reviewed by the State Implementation Team and recommended for consideration by the Idaho Governor.

AD-4: The following Anthropogenic Disturbance Development Criteria must be met in the screening and assessment process for proposals in PHMA and IHMA to discourage additional disturbance in PHMAs and IHMAs (as described in LR-1 and LR-2; applies to Idaho only):

a. Through coordination with the USFWS and State of Idaho (as described in CC-1), it is determined that the project cannot be achieved, technically or economically, outside of this management area; and

b. The project siting and/or design should best reduce cumulative impacts and/or impacts on GRSG and other high value natural, cultural, or societal resources; this may include co-location within the footprint for existing infrastructure, to the extent practicable; and

c. The project results in a net conservation gain to GRSG Key habitat or with beneficial mitigation actions reduces habitat fragmentation or other threats within the Conservation Area; and

d. The project design mitigates unavoidable impacts through appropriate compensatory mitigation; and

e. Development could be implemented adhering to the RDFs described in **Appendix B**.

f. The project would not exceed the disturbance cap (AD-1).

In Montana, the BLM would apply the project/action screen and mitigation process (**Appendix I**).

AD-5: Co-locating new infrastructure within existing ROWs and maintaining and upgrading ROWs is preferred over the creation of new ROWs or the construction of new facilities in all management area. Colocation for various activities is defined as:

- Communication Sites – The installation of new equipment/facilities on or within or adjacent to existing authorized equipment/facilities or within a communication site boundary as designated in the Communication Site Plan.
- Electrical Lines – Installation of new ROWs adjacent to current ROWs boundaries, not necessarily placed on the same power poles.
- Other Rights-of-Way – The installation of new ROWs within the existing footprint of an approved ROW boundary or adjacent to an approved ROW boundary.
- Designated Corridors – The installation of new rights-of-way within the existing corridor or adjacent to the existing corridor.

AD-6: Incorporate RDFs as described in **Appendix B** in the development of project or proposal implementation, reauthorizations or new authorizations and suppression activities, as conditions of approval (COAs) into any post-lease activities and as best management practices for locatable minerals activities, to the extent allowable by law, unless at least one of the following conditions can be demonstrated and documented in the NEPA analysis associated with the specific project:

a. A specific RDF is not applicable to the site-specific conditions of the project or activity;

b. A proposed design feature or BMP is determined to provide equal or better protection for GRSG or its habitat; or

c. Analysis concludes that following a specific RDF would provide no more protection to GRSG or its habitat than not following it, for the project being proposed.

AD-7: Conduct implementation and project activities, including construction and short-term anthropogenic disturbances consistent with seasonal habitat restrictions described in **Appendix C**.

AD-8: RDFs and seasonal habitat restrictions would not be required for emergency or short-term activities necessary to protect and preserve human life or property.

AD-9: In undertaking BLM management actions, and consistent with valid and existing rights and applicable law in authorizing third-party actions, the BLM will apply the lek buffer-distances identified in the USGS Report Conservation Buffer Distance Estimates for Greater Sage-Grouse – A Review (Open File Report 2014-1239) in accordance with **Appendix B**.

AD-10: Incorporate appropriate conservation measures for slickspot peppergrass (*Lepidium papilliferum*) as described in the 2014 Conservation Agreement (as updated, amended or reauthorized) into implementation and project design within slickspot peppergrass habitat in the Jarbidge and Four Rivers Field Offices to avoid and minimize impacts to slickspot peppergrass. The 2014 Conservation Agreement is included as **Appendix P**.

Mitigation

MIT-1 (Mitigation): BLM would establish an inter-agency State GRSG Conservation Team at the state level (both Idaho and Montana) to help guide conservation of GRSG through compensatory mitigation, within 90 days of the issuance of the Record of Decision.

MIT-2: The BLM and Forest Service, in coordination with the GRSG Conservation Team would develop a Mitigation Strategy within one year of the issuance of the Record of Decision. In Idaho this strategy would be consistent with the Idaho Mitigation Framework (**Appendix J**).

MIT-3: In all GRSG habitat, in undertaking BLM management actions, and, consistent with valid existing rights and applicable law, in authorizing third-party actions that result in habitat loss and degradation (**Appendix G, Table G-1**), the BLM will require and ensure mitigation that provides a net conservation gain to the species including accounting for any uncertainty associated with the effectiveness of such mitigation. This will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions.

MIT-4: Mitigate anthropogenic development (**Appendix G, Table G-1**) impacts to GRSG habitat through application of appropriate mitigation in accordance with the Mitigation Framework (**Appendix J**).

MIT-5: Consistent with regulations for minerals activities, require a full reclamation bond specific to the site when surface disturbing activities are proposed. Ensure reclamation bonds are sufficient to cover costs to fully rehabilitate lost GRSG habitat. Base the reclamation costs on the assumption that contractors for the BLM will perform the work. Areas are considered fully rehabilitated when they meet the conditions described in **Table 2-3**.

Monitoring

MON-1 (Monitoring): Once FIAT Assessments are complete, annually complete a review of FIAT Assessment implementation efforts within GRSG habitat with appropriate USFWS and state agency personnel.

MON-2: Monitor the effectiveness of projects (e.g., fuel breaks. fuels treatments) until objectives have been met or until it is determined that objectives cannot be met, according to the monitoring schedule identified for project implementation.

MON-3: Monitor invasive vegetation post vegetation management treatment

MON-4: Monitor project construction areas for noxious weed and invasive species for at least 3 years, unless control is achieved earlier.

MON-5: Use lek, nesting and winter habitat maps and key habitat map (updates) to annually assess GRSG population and habitat status in the context of the adaptive management triggers.

MON-6: Continue to support updates to the Key Habitat map to track vegetation changes in relation to GRSG habitat on a yearly basis, until such a time this process is replaced. The process used to update the Key Habitat Map is described in **Appendix F**.

MON-7: Monitor GRSG habitat as described in the monitoring framework plan (**Appendix E**) in coordination with IDFG and MT FWP.

Vegetation

Objectives

VEG-OBJ-1 (Vegetation): Reconnect and expand areas of higher native plant community integrity/rangeland health to increase the extent of high quality habitat and, where possible, to accommodate the future effects of climate change.

VEG-OBJ-2: Increase the amount and functionality of seasonal habitats by:

a. Increasing or enhancing canopy cover and average patch size of sagebrush.

b. Increasing the amount, condition and connectivity of seasonal habitats.

c. Protecting or improving GRSG migration/movement corridors.

d. Reducing conifer encroachment within GRSG seasonal habitats.

e. Improving understory (grass, forb) and/or riparian condition within breeding and late brood-rearing habitats.

f. Reducing the extent of annual grasslands within and adjacent to PHMA and IHMA.

Decadal treatment objectives by population area are identified in **Table 2-5**, Estimated Acres of Treatment Needed within a 10-Year Period to Achieve Vegetation Objectives on BLM-Administered Lands[1].

VEG-OBJ-3: In all SFAs and PHMAs, the desired condition is to maintain a minimum of 70 percent of lands capable of producing sagebrush with 10 to 30 percent sagebrush canopy cover. The attributes necessary to sustain these habitats are described in Interpreting Indicators of Rangeland Health (BLM Tech Ref 1734-6).

Table 2-5
Estimated Acres of Treatment Needed within a 10-Year Period to Achieve Vegetation Objectives on BLM-Administered Lands[1]

Population Area	Mechanical[2]	Prescribed Fire (FM-15) [3]	Grass Restoration (VEG-2) [4]
Bear Lake Plateau	1,000	0	0
East Idaho Uplands	6,000	9,000	1,000
S Central Idaho/N Snake River and Mountain Valleys	18,000	11,000	162,000
Weiser	0	0	13,000
SW Idaho	52,000	10,000	444,000
SW Montana	0	0	0

Note:
[1] These are estimates of treatments required to achieve and/or maintain desired habitat conditions over a period of ten years. There are many dynamic and highly variable disturbances that may happen over that period of time that could have a significant effect on the amount, type, and timing of treatment needed. Those disturbances are factored into the ten-year simulation using stochastic, not predictive, techniques. Probabilities of events such as large wildfires are used in the model to make the simulation as realistic as possible, given empirical data about such events in the past, but the results of the simulation cannot be used to predict the future occurrence of such events, including their timing, size, or location, which are essentially random.
[2] Removal of conifers that have invaded sagebrush including phase one juniper that is 10 percent or less and reducing sagebrush cover in areas over 30 percent canopy cover
[3] Acres are those that are greater than 30 percent sagebrush canopy cover and/or invaded by 10 percent or greater conifer.
[4] Acres presently dominated by annual grasses that could be improved by herbicide application and seeding of perennial vegetation.

Vegetation Management

VEG-1: Implement habitat rehabilitation or restoration projects in areas that have potential to improve GRSG habitat using a full array of treatment activities as appropriate, including chemical, mechanical and seeding treatments.

VEG-2: Implement vegetation rehabilitation or manipulation projects to enhance sagebrush cover or to promote diverse and healthy grass and forb understory to achieve the greatest improvement in GRSG habitat based on FIAT Assessments, HAF assessments, other vegetative assessment data and local, site specific factors that indicate sagebrush canopy cover or herbaceous conditions do not meet habitat management objectives (i.e. is minimal or exceeds optimal characteristics). This may necessitate the use of prescribed fire as a site preparation technique to remove annual grass residual growth prior to the use of herbicides in the restoration of certain lower elevation sites (e.g., Wyoming big sagebrush) but such efforts will be carefully planned and coordinated to minimize impacts to GRSG seasonal habitats.

VEG-3: Require use of native seeds for restoration based on availability, adaptation (ecological site potential), and probability of success (Richards et al. 1998). Non-native seeds may be used as long as they support GRSG habitat objectives (Pyke 2011) to increase probability of success, when adapted seed availability is low or to compete with invasive species especially on harsher sites.

VEG-4: Implement management changes in restoration and rehabilitation areas, as necessary, to maintain suitable GRSG habitat, improve unsuitable GRSG habitat and to ensure long-term persistence of improved GRSG habitat (Eiswerth and Shonkwiler 2006). Management changes could be considered during livestock grazing permit renewals, travel management planning, and renewal or reauthorization of ROWs.

VEG-5: Consider establishing seed harvest areas that are managed for seed production (Armstrong 2007) to provide a reliable source of locally adapted seed to use during rehabilitation and restoration activities.

VEG-6: Allocate use of native seed to GRSG or ESA listed species habitat in years when preferred native seed is in short supply. This may require reallocation of native seed from ESR (BLM) and/or BAER (Forest Service) projects outside of PHMA or IHMA to those inside it. Where probability of success or native seed availability is low, nonnative seeds may be used as long as they meet GRSG habitat conservation objectives (Pyke 2011). Re-establishment of appropriate sagebrush species/subspecies and important understory plants, relative to site potential, shall be the highest priority for rehabilitation efforts.

VEG-7: During land health assessments, evaluate the relative value of existing nonnative seeding within GRSG habitat as: 1) a component of a grazing system allowing improvement of adjacent native vegetation, 2) development of a forage reserve, 3) incorporation into a fuel break system (Davies et al. 2011) or 4) restoration/diversification for GRSG habitat improvement. Where appropriate and feasible, diversify seedings, or restore to native vegetation when potential benefits to GRSG habitat outweigh the other potential uses of the non-native seeding, with emphasis on PHMA and IHMA. Allow recolonization of seedings by sagebrush and other native vegetation.

VEG-8: Remove conifers encroaching into sagebrush habitats. Prioritize treatments closest to occupied GRSG habitats and near occupied leks, and where juniper encroachment is phase 1 or phase 2. Use of site-specific analysis and tools like VDDT and the FIAT report (Chambers et. al., 2014) will help refine the location for specific areas to be treated.

Invasive Species

INV-1 (Invasive Species): Incorporate results of the FIAT Assessments into projects and activities addressing invasive species.

INV-2: Implement noxious weed and invasive species control using integrated vegetation management actions per national guidance and local weed management plans for Cooperative Weed Management Areas in cooperation with State and Federal agencies, affected counties, and adjoining private lands owners.

INV-3: Conduct integrated weed management actions for noxious and invasive weed populations that are impacting or threatening GRSG habitat quality using a variety of eradication and control techniques including chemical, mechanical and other appropriate means.

INV-4: Require project proponent (projects described in **Table 2-4** and which are included in the anthropogenic disturbance cap evaluation) to ensure that noxious weeds and invasive species caused as a result of the project are treated to eliminate establishment on the disturbed project construction areas for at least 3 years and monitored and treated during the life of the project.

Wildland Fire Management

Objectives

FUEL-OBJ-1: Design fuel treatments to restore, enhance, or maintain GRSG habitat.

FUEL-OBJ-2: Manage wildfires to minimize loss of sagebrush and protect GRSG habitat.

Wildfire Preparedness/Prevention

WFP-1 (Wildfire Preparedness): Support development and implementation of Rangeland Fire Protection Associations (RFPAs) in coordination with the State of Idaho.

WFP-2: Develop a consistent approach to fire restrictions within GRSG habitat through the existing coordinated inter-agency approach to fire restrictions based upon National Fire Danger Rating System thresholds (fuel conditions, drought conditions, and predicted weather patterns).

WFP-3: Annually incorporate into existing fire management plans results and updates from the Wildfire and Invasive Species Habitat Assessments (FIAT Assessments) described in **Appendix D**, to communicate/explain the resource value of GRSG habitat, including fire prevention messages and actions to reduce human-caused ignitions.

WFP-4: Continue to participate with the Wildland Fire Leadership Council, a cooperative, interagency organization dedicated to achieving consistent implementation of the goals, actions, and policies in the National Fire Plan and the Federal Wildland Fire Management Policy.

WFP-5: Continue annual coordination meetings held between cooperating agencies that have fire suppression responsibilities. Incorporate Rangeland Fire Protection Associations and other stakeholders into this coordination. Discuss priority suppression areas and distribute maps showing priority suppression areas at both the Conservation Area and the local office levels as based on the adaptive management strategy and FIAT Assessments.

WFP-6: Ensure firefighter personnel receive annual orientation regarding GRSG habitat and sagebrush management issues as related to wildfire suppression.

WFP-7: As part of the FIAT Assessments, identify roads, trails, and recreational use areas with high frequency of human caused fires within or adjacent to the PHMA or IHMA. Consider these areas during annual fire restriction evaluations, and as appropriate, through site specific management.

WFP-8: Coordinate with Federal, State and local jurisdictions on fire and litter prevention programs to reduce human caused ignitions.

WFP-9: Implement activities identified within the FIAT Assessments.

Wildfire Suppression

WFS-1: Complete Wildland Fire and Invasive Species Assessments (FIAT Assessments) as described within **Appendix D** and incorporate results into appropriate Fire Management Plans as they are completed. FIAT Assessments are interdisciplinary evaluations of the threats posed by wildfire and invasive species, as well as identification of focal and emphasis

habitats/treatment opportunities for fuels management, fire management, and restoration. These FIAT Assessments identify focal and emphasis habitats and describe strategies for fuels management, suppression and restoration activities. Focal and Emphasis Habitats identified through the FIAT Assessment to further refine priority areas for treatments to reduce the threats posed by wildfire, invasive annual grass and conifer expansion.

WFS-2: As part of the FIAT Assessments incorporate a wildfire response time analysis focusing on response time to identified priority areas within PHMA and IHMA or on those fires that have the potential to impact PHMA and IHMA. Incorporate findings into Unit Initial Attack program that determines initial attack resources.

WFS-3: As part of the FIAT Assessment incorporate a water capacity analysis for suppression purposes, including potential private water sources. Utilized the analysis to ensure water availability for response to fire in or threatening PHMA and IHMA during initial attack.

WFS-4: During high fire danger conditions, stage initial attack and secure additional resources closer to priority areas identified in the FIAT Assessments, based on anticipated fires and weather conditions, with particular consideration of the West Owyhee, Southern and Desert Conservation Areas to ensure quicker response times in or near GRSG habitat after considerations and placement of resources to protect human life and property.

WFS-5: Utilize a full range of fire management strategies and tactics through strategic wildfire suppression planning consistent with appropriate management response and within acceptable risk levels, to achieve resource objectives for GRSG habitat consistent with land use plan direction. Utilizing both direct and indirect attack as appropriate to limit the overall amount of GRSG habitat burned. This could include suppressing fires in intact sagebrush habitats; limiting fire growth in GHMA when suppression resources are available or managing wildfire for resource benefit in areas of conifer (juniper) encroachment.

WFS-6: Suppression priorities: Firefighter and public safety followed by property are the highest priority for protection during suppression activities. Maintaining GRSG habitat will be the highest natural resources priority immediately after human life and property, commensurate with threatened and endangered species habitat or other critical habitats to be protected.

WFS-7: Ensure close coordination with federal and state firefighters including the Rangeland Fire Protection Associations during suppression activities.

Fuels Management

FM-1: Design and implement fuels treatments that would reduce the potential start and spread of unwanted wildfires and provide anchor points or control lines for the containment of wildfires during suppression activities with an emphasis on maintaining, protecting, and expanding sagebrush ecosystems and successfully rehabilitated areas and strategically and effectively reduce wildfire threats in the greatest area.

FM-2: Enhance (or maintain/retain) sagebrush canopy cover and community structure to match expected potential for the ecological site and consistent with GRSG habitat objectives unless fuels management objectives requires additional reduction in sagebrush cover to meet strategic protection of GRSG habitat. Closely evaluate the benefits of the fuel management treatments against the additional loss of sagebrush cover on the local landscape in the NEPA process.

FM-3: Apply appropriate seasonal restrictions for implementing vegetation and fuels management treatments according to the type of seasonal habitats present. Allow no treatments in known winter range unless the treatments are designed to strategically reduce wildfire risk around and/or in the winter range and would protect, maintain, increase, or enhance winter range habitat quality. Ensure chemical applications are utilized where they would assist in success of fuels treatments. Strategically place treatments on a landscape scale to prevent fire from spreading into PHMA or WUI.

FM-4: Develop a fuels continuity and management strategy to expand, enhance, maintain and protect GRSG habitat informed by the FIAT Assessments completed as described in **Appendix D**.

FM-5: When developing the fuels management strategy as part of the FIAT Assessment described in **Appendix D** consider up-to-date fuels profiles; land use plan direction; current and potential habitat fragmentation; sagebrush and GRSG ecological factors; active vegetation management steps to provide critical breaks in fuel continuity where appropriate; incorporate a comparative risk analysis with regard to the risk of increased habitat fragmentation from a proposed action versus the risk of large scale fragmentation posed by wildfires if the action is not taken.

FM-6: Fuel treatments will be designed through an interdisciplinary process to expand, enhance, maintain, and protect GRSG habitat which considers a full range of cost effective fuel reduction techniques, including: chemical, biological (including grazing and targeted grazing), mechanical and prescribed fire treatments.

FM-7: Existing and proposed linear ROWs could be considered for use and maintenance as vegetated fuel breaks in appropriate areas (this activity may

or may not be part of the ROW permit or the responsibility of the permit holder, in cases where this activity is considered part of mitigation for project design then it would be appropriately included as part of the ROW permit and the responsibility of the permit holder for development and maintenance).

FM-8: Fuel breaks would incorporate existing vegetation treatments (seedings), rocky areas or other appropriate topography or features or be located adjacent to existing linear disturbance areas where appropriate. Fuel breaks should be placed in areas with the greatest likelihood of compartmentalizing a fire and/or to foster suppression options to protect existing intact habitat.

FM-9: Strategically pre-treat areas to reduce fine fuels consistent with areas and results identified within the Wildfire and Invasive Species Assessments.

FM-10: Protect vegetation restoration and rehabilitation efforts/projects from subsequent fire events.

FM-11: Targeted grazing as a fuels treatment to adjust the vegetation conditions to reduce the potential start and spread of wildfires may be implemented within existing grazing authorizations if feasible such as through temporary non-renewable authorizations, or through contracts, agreements or other appropriate means separate from existing grazing authorizations and permits.

FM-12: Targeted grazing to achieve fuels management objectives should conform to the following criteria:

a. Targeted grazing should be implemented strategically on the landscape, and directly involve the minimum footprint and grazing intensity required to meet fuels management objectives.

b. Conform to the applicable Standards for Rangeland Health and Guidelines for Livestock Grazing Management (Idaho or Montana) at the assessment scale (pasture/watershed).

c. Where feasible and applicable coordinate with the grazing permittee to strategically reduce fuels through livestock management within the Mandatory Terms and Conditions of the applicable grazing authorizations

FM-13: Prioritize the use of native seeds for fuels management treatment based on availability, adaptation (site potential), and probability of success. Where probability of success or native seed availability is low or non-economical, nonnative seeds may be used to meet GRSG habitat objectives to trend toward restoring the fire regime. When reseeding, use fire resistant native and nonnative species, as appropriate, to provide for fuel breaks.

FM-14: Maintain effectiveness of fuels projects, including fuel breaks, to ensure long-term success, including persistence of seeded species and/or other treatment components while maintaining the integrity of adjacent vegetation.

FM-15: If prescribed fire is used in GRSG habitat, the NEPA analysis for the Burn Plan will address:

- why alternative techniques were not selected as a viable options;
- how GRSG goals and objectives would be met by its use;
- how the COT Report objectives would be addressed and met;
- a risk assessment to address how potential threats to GRSG habitat would be minimized.

a. Allow prescribed fire as a vegetation or fuels treatment in Wyoming big sagebrush sites or other xeric sagebrush species sites, or in areas with a potential for post-fire exotic annual dominance only after the NEPA analysis for the Burn Plan has addressed the four bullets outlined above. Prescribed fire could be used to meet specific fuels objectives that would protect Greater Sage-Grouse habitat in PHMAs (e.g., creation of fuel breaks that would disrupt the fuel continuity across the landscape in stands where annual invasive grasses are a minor component in the understory, burning slash piles from conifer reduction treatments, used as a component with other treatment methods to combat annual grasses and restore native plant communities).

b. Allow prescribed fire in known winter range only after the NEPA analysis for the Burn Plan has addressed the four bullets outlined above. Any prescribed fire in winter habitat would need to be designed to strategically reduce wildfire risk around and/or in the winter range and designed to protect winter range habitat quality.

Wildfire Restoration/Rehabilitation – Emergency Stabilization and Rehabilitation

ESR-1: Utilize the findings and Restoration/Rehabilitation Strategy developed as part of the FIAT Assessment process described in **Appendix D** to determine if GRSG rehabilitation actions are needed, based on ecological potential, and direct emergency stabilization and rehabilitation (ESR) (BLM) or Burned Area Emergency Response (BAER) (Forest Service) actions after fire.

ESR-2: Incorporate GRSG Habitat Management Objectives into ESR/BAER plans based on site potential and in accordance with the Restoration/Rehabilitation Strategy developed as a result of the FIAT Assessments.

ESR-3: Provide adequate rest from livestock grazing to allow natural recovery of existing vegetation and successful establishment of seeded species within burned/ESR areas. All new seedings of grasses and forbs should not be grazed until at least the end of the second growing season, and longer as needed to allow plants to mature and develop robust root systems which will stabilize the site, compete effectively against cheatgrass and other invasive annuals, and remain sustainable under long-term grazing management. Adjust other management activities, as appropriate, to meet ESR objectives.

ESR-4: Adjust, as appropriate, livestock management on adjacent unburned areas to mitigate the effect of the burn on local GRSG populations.

ESR-5: Following seedling establishment, modify grazing management practices if needed to achieve long-term vegetation and habitat objectives.

Livestock Grazing

RM-1 (Range Management): Maintain existing areas designated as available or unavailable for livestock grazing. Existing active AUMs for livestock grazing within the planning area would not be changed at the broad scale, though the number of AUMs available on an allotment may be adjusted based on site-specific conditions to meet management objectives during term permit renewals, AMP development, or other appropriate implementation planning. Additionally, temporary adjustments can be made annually to livestock numbers, the number of AUMs, and season of use in accordance with applicable regulations.

RM-2: Prioritize BLM land health assessments and processing of BLM grazing permits consistent with management area prioritization (MA-3), unless other higher priority considerations exist (RM-16) or other factors such as threatened, endangered and proposed species habitat that livestock grazing could affect. Where possible, conduct land health assessments at the watershed, or other meaningful landscape-scale.

RM-3: Where opportunities exist, coordinate with other land managers to encourage livestock operations that utilize mixed federal, private and/or state land to be managed at the landscape scale to benefit GRSG and their habitat across land ownerships.

RM-4: PHMA & IHMA: During the land health assessment process, identify the type(s) of seasonal habitat the assessed areas are capable of supporting. Utilize the habitat assessment framework, (Stiver et al. 2014 as amended/replaced) or other BLM or Forest Service approved methodology, in accordance with current policy and guidance to determine whether vegetation structure, condition and composition are meeting GRSG habitat objectives including riparian and lentic areas (HM-OBJ-2; **Table 2-3**). Use appropriate Ecological Site Descriptions, reference sheets and state and

transition models to inform desired habitat conditions and expected responses to management changes for the land unit being assessed.

RM-5: When modifying grazing management, analyze indirect effects to habitat, including changes in fuel loading and wildfire behavior.

RM-6: When livestock management practices are determined to not be compatible with meeting or making progress towards achievable habitat objectives following appropriate consultation, cooperating and coordination, implement changes in grazing management through grazing authorization modifications, or allotment management plan implementation. Potential modifications include, but are not limited to, changes in:

1) Season or timing of use;
2) Numbers of livestock;
3) Distribution of livestock use;
4) Duration and/or level of use;
5) Kind of livestock (e.g., cattle, sheep, horses, or goats) (Briske et al. 2011); and
6) Grazing schedules (including rest or deferment).

RM-7: Where opportunities exist, establish forage reserves to facilitate restoration and rehabilitation efforts in GRSG habitat areas. A forage reserve is an area that is set aside for use as needed by various permittees who might be displaced by wildfire, ESR, restoration efforts, etc. rather than having a term permit issued for grazing like a regular allotment.

RM-9: PHMA & IHMA - Where practical, design pasture rotations to utilize non-native perennial grass seedings and/or annual grasslands, during GRSG nesting season annually or periodically.

RM-10: Evaluate the locations where salt/supplements are placed, coordinate salt/supplements placement to reduce impacts to GRSG habitat (e.g., existing disturbed areas).

RM-11: Incorporate RDFs into Terms and Conditions for crossing permits to limit disturbance of occupied leks when trailing livestock across BLM- and Forest Service -administered lands in the spring. Work with permittees in locating over-nighting, watering and bedding locations to minimize impacts to seasonal habitats.

RM-12: Design any new structural range improvements, following appropriate cooperation, consultation and coordination, to minimize and/or mitigate effects to GRSG habitat. Any new structural range improvements should be placed along existing disturbance corridors or in unsuitable habitat, to the

extent practical, and are subject to RDFs (**Appendix B**). Structural range improvement in this context, include, but are not limited to: fences, exclosures, corrals or other livestock handling structures; pipelines, troughs, storage tanks (including moveable tanks used in livestock water hauling), windmills, ponds/reservoirs, solar panels and spring developments.

RM-13: During the land health assessment and grazing permit renewal process, evaluate existing livestock management range improvements with respect to their effect on GRSG habitat. Consider removal of projects that are not needed for effective livestock management, are no longer in working condition, and/or negatively affect GRSG habitat, with the exception of functional projects needed for management of habitat for other threatened, endangered or proposed species or other sensitive resources.

RM-14: Prioritize removal, modification or marking of fences or other structures in areas of high collision risk following appropriate cooperation, consultation and coordination to reduce the incidence of GRSG mortality due to fence strikes (Stevens et al. 2012).

RM-15: In response to weather conditions (i.e. drought) adjust grazing management (i.e., delay turnout, adjust pasture rotations, adjust the amount and/or duration of grazing) as appropriate to provide for adequate food and cover for GRSG.

RM-16: The BLM will prioritize (1) the review of grazing permits/leases, in particular to determine if modification is necessary prior to renewal, and (2) the processing of grazing permits/leases in Sagebrush Focal Areas (SFAs) followed by PHMAs outside of the SFAs. 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 (ex., fire) and legal obligations.

RM-17: The NEPA analysis for renewals and modifications of livestock grazing permits/leases that include lands within SFAs and PHMAs will include specific management thresholds, based on GRSG Habitat Objectives Table, Land Health Standards (43 CFR 4180.2) and ecological site potential, and one or more defined responses that will allow the authorizing officer to make adjustments to livestock grazing that have already been subjected to NEPA analysis.

RM-18: Allotments within SFAs, followed by those within PHMAs, and focusing on those containing riparian areas, including wet meadows, will be prioritized for field checks to help ensure compliance with the terms and conditions of the grazing permits. Field checks could include monitoring for actual use, utilization, and use supervision.

RM-19: At the time a permittee or lessee voluntarily relinquishes a permit or lease, the BLM will consider whether the public lands where that permitted use was authorized should remain available for livestock grazing or be used for other resource management objectives, such as reserve common allotments or fire breaks.

Wild Horses and Burros

WHB-1: Manage herd management areas (HMAs) in GRSG habitat within established AML ranges to achieve and maintain GRSG habitat objectives (**Table 2-3**).

WHB- 2: Complete rangeland health assessments for HMAs containing GRSG habitat using an interdisciplinary team of specialists (e.g. range, wildlife, and riparian). The priorities for conducting assessments are: 1) HMAs Containing SFA; 2) HMAs containing PHMA; 3) HMAs containing IHMA; 4) HMAs containing GHMA; 5) HMAs containing sagebrush habitat outside of PHMA, IHMA, and GHMA mapped habitat; 6) HMAs without GRSG Habitat.

WHB-3: Prioritize gathers and population growth suppression techniques in HMAs in GRSG habitat, unless removals are necessary in other areas to address higher priority environmental issues, including herd health impacts. Place higher priority on Herd Areas not allocated as HMAs and occupied by wild horses and burros in SFAs followed by PHMA.

WHB-4: In SFAs and PHMA outside of SFA, assess and adjust AMLs through the NEPA process within HMAs when wild horses or burros are identified as a significant causal factor in not meeting land health standards, even if current AML is not being exceeded.

WHB-5: In SFAs and PHMA outside of SFA, monitor the effects of wild horse and burro use in relation to GRSG seasonal habitat objectives on an annual basis to help determine future management actions.

WHB-6: Develop or amend herd management area plans (HMAPs) to incorporate GRSG habitat objectives and management considerations for all HMAs within GRSG habitat, with emphasis placed on SFAs and other PHMAs.

WHB-7: Consider removals or exclusion of wild horse and burros during or immediately following emergency situations (such as fire, floods, and drought) to facilitate meeting GRSG habitat objectives where HMAs overlap with GRSG habitat.

WHB-8: When conducting NEPA analysis for wild horse and burro management activities, water developments, or other rangeland improvements for wild horses, address the direct and indirect effects to GRSG populations and

habitat. Implement any water developments or rangeland improvements using the criteria identified for domestic livestock.

WHB-9: Coordinate with professionals from other federal and state agencies, researchers at universities, and others to utilize and evaluate new management tools (e.g., population growth suppression, inventory techniques, and telemetry) for implementing the wild horse and burro program.

Lands and Realty

LR-1 (Lands and Realty): PHMA: Designate and manage PHMA as ROW avoidance areas, consistent with AD-3 and subject to RDFs, buffers and seasonal timing restrictions (**Appendices B** and **C**). IHMA: Designate and manage IHMA as ROW avoidance areas, consistent with AD-4 and subject to RDFs, buffers and seasonal timing restrictions. GHMA (Idaho and Montana): Designate and manage GHMA as open with proposals subject to RDFs, buffers and seasonal timing restrictions.

LR-2: PHMA: Designate and manage PHMA as exclusion areas for utility scale (20 MW) wind and solar testing and development, nuclear and hydropower energy development. IHMA: Designate and manage IHMA as avoidance areas for wind and solar testing and development, nuclear and hydropower development. GHMA (Idaho): Designate and manage GHMA as open for wind and solar testing and development and nuclear and hydropower development subject to RDFs, buffers and seasonal timing restrictions. GHMA (Montana): Designate and manage GHMA as avoidance for wind and solar testing and development and nuclear and hydropower development.

LR-3: PHMA: Development of commercial service airports and facilities (as defined by FAA 2014 – publically owned airports that have at least 2,500 passenger boardings each calendar year and receive scheduled passenger service) would not be allowed within PHMA. IHMA and GHMA are Avoidance and Open respectively for these types of ROW applications as described in LR-1.

LR-4: PHMA: Development of new or expansion of existing landfills would not be allowed within PHMA. IHMA and GHMA are Avoidance and Open respectively for these types of ROW applications as described in LR-1.

LR-5: Consistent with LR-2, LR-3 and LR-4, Rights-of-way for development of new or amended ROWs and land use authorizations (including permits and leases) in PHMA would only be considered when consistent with the Anthropogenic Disturbance Screening Criteria (AD-3); Rights-of-way for development of new or amended ROWs and land use authorizations (including permits and leases) in IHMA could be considered consistent with

the IHMA Anthropogenic Disturbance Development Criteria (AD-4). GHMA: New ROW and land use authorizations could be considered.

LR-6: In PHMA, if a higher voltage transmission line is required adjacent to an existing line (i.e. the project is an incremental upgrade/capacity increase of existing development (i.e. powerline capacity upgrade):

- the existing transmission line must be removed and area rehabilitated within a specified amount of time after the new line is installed and energized; and
- the new line must be constructed in the same alignment as the existing line unless an alternate route would benefit GRSG or GRSG habitat.

LR-7: Existing designated corridors, including Section 368 Corridors, will remain Open in all habitat management areas (subject to the ongoing settlement agreement).

LR-8: Process unauthorized use. If the unauthorized use is subsequently authorized, it would be authorized consistent with direction from this plan including RDFs, buffers and seasonal timing restrictions. If the use is not subsequently authorized the site would be reclaimed by removing these unauthorized (trespass) features and rehabilitating the habitat.

LR-9: Land use authorizations that are temporary (less than 3 years) in nature and are not otherwise excluded or restricted would be subject to seasonal or timing restrictions and mitigation requirements regarding habitat loss as needed.

LR-10: New ROW applications for water facilities (ditches, canals, pipelines), or amendments to existing water facilities which include additional structures to improve fish passage or benefits to fisheries (new diversions, fish screens) would be allowed on a case-by-case basis subject to RDFs to reduce impacts to GRSG habitat and mitigation requirements regarding GRSG habitat loss as needed.

LR-11: When a ROW grant expires and is not requested to be renewed, is relinquished, or terminated, the lease holder would be required to reclaim the site by removing overhead lines and other infrastructure and to eliminate avian predator nesting opportunities provided by anthropogenic development on public lands associated with the now void ROW grant (e.g., remove powerline and communication facilities no longer in service).

LR-12: As opportunities and priorities indicate work with existing ROW holders to retrofit existing towers and structures consistent with RDFs described in **Appendix B**.

LR-13: PHMA (Idaho and Montana) and IHMA (Idaho), and GHMA (Montana only) are designated as avoidance areas for high voltage transmission line and large pipeline ROWs, except for Gateway West and Boardman to Hemingway Transmission Projects. All authorizations in these areas, other than the excepted projects, must comply with the conservation measures outlined in this proposed plan, including the RDFs and avoidance criteria presented in AD-3 and AD-4 of this document. The BLM is currently processing an application for Gateway West and Boardman to Hemingway Transmission Projects and the NEPA review for this project is well underway. These projects are further discussed in the cumulative effects analysis. The BLM is analyzing GRSG mitigation measures through the projects' NEPA review process.

LR-14: Lands classified as PHMA, IHMA, and GHMA for GRSG will be retained in federal management unless: (1) the agency can demonstrate that disposal of the lands will provide a net conservation gain to the GRSG or (2) the agency can demonstrate that the disposal of the lands will have no direct or indirect adverse impact on conservation of the GRSG. Land tenure adjustments would be subject to the following disposal, exchange, and acquisition criteria, which include retaining lands with GRSG habitat. Retention of areas with GRSG would reduce the likelihood of habitat conversion to agriculture, urbanization, or other uses that would remove sagebrush habitat and potentially impact sensitive plants. Criteria:

a. Lands within PHMA, IHMA and GHMA would only be available for disposal through exchange (**Appendix K**).

b. Acquire habitat within PHMA and IHMA, when possible (i.e. willing landowner), and retain ownership of habitat within all Areas, except if a land exchange would allow for additional or more contiguous federal ownership patterns.

c. Lands within PHMA, IHMA and GHMA would be retained unless exchange of those lands would increase the extent or provide for connectivity of PHMA or IHMA.

d. Evaluate potential land exchanges containing historically low-quality GRSG habitat that may be too costly to restore in exchange for lands of higher quality habitat, lands that connect seasonal GRSG habitats or lands providing for threatened and endangered species. These potential exchanges should lead to an increase in the extent or continuity of or provide for improved connectivity of PHMA. Higher priority will be given to exchanges for those in-tact areas of sagebrush that will contribute to the expansion of sagebrush areas within PHMA currently in public ownership. Lower priority would be given to other lands that would promote enhancement in the

PHMA and IHMA (i.e., areas with fragmented or less in-tact sagebrush).

e. Identify lands for acquisition that increase the extent of or provide for connectivity of PHMA.

Minerals

Fluid Minerals (Oil, Gas, and Geothermal)

Objectives

FLM-OBJ-1: Priority will be given to leasing and development of fluid mineral resources, including geothermal, outside of PHMA, IHMA, and GHMA. When analyzing leasing and authorizing development of fluid mineral resources, including geothermal, in PHMA, IHMA, and GHMA, and subject to applicable stipulations for the conservation of GRSG, priority will be given to development in non-habitat areas first and then in the least suitable habitat for GRSG. The implementation of these priorities will be subject to valid existing rights and any applicable law or regulation, including, but not limited to, 30 USC 226(p) and 43 CFR 3162.3-1(h).

FLM-OBJ-2: Where a proposed fluid mineral development project on an existing lease could adversely affect GRSG populations or habitat, the BLM will work with the lessees, operators, or other project proponents to avoid, minimize and apply compensatory mitigation to the extent compatible with lessees' rights to drill and produce fluid mineral resources. The BLM will work with the lessee, operator, or project proponent in developing an APD or Geothermal Drilling Permit (GDP) for the lease to avoid, minimize, and apply compensatory mitigation to impacts to GRSG or its habitat and will ensure that the best information about the GRSG and its habitat informs and helps to guide development of such Federal leases.

Management

FLM-1 (Fluid Minerals): Idaho and Montana: Areas within SFAs would be open to fluid mineral leasing and development and geophysical exploration subject to NSO without waiver, exception, or modification. Areas within PHMA and IHMA would be open to mineral leasing and development and geophysical exploration subject to NSO with a limited exception (FLM-3). GHMA would be open to mineral leasing and development and geophysical exploration subject to CSU which includes buffers, seasonal timing restrictions (see Appendix C) and standard stipulations.

FLM-2: In Idaho, parcels nominated for lease in PHMA or IHMA would be evaluated prior to lease offering to determine if development is feasible. In GHMA, parcels would not be offered for lease if buffers and restrictions (including RDFs) preclude development in the leasing area.

FLM-3: PHMA and IHMA: No waivers or modifications to a fluid mineral lease NSO stipulation will be granted. The Authorized Officer may grant an exception to a fluid mineral lease NSO stipulation only where the proposed action:

i. Would not have direct, indirect, or cumulative effects on GRSG or its habitat; or,

ii. Is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel, and would provide a clear conservation gain to GRSG.

Exceptions based on conservation gain (ii) may only be considered in (a) PHMAs of mixed ownership where federal minerals underlie less than fifty percent of the total surface, or (b) areas of the public lands where the proposed exception is an alternative to an action occurring on a nearby parcel subject to a valid Federal fluid mineral lease existing as of the date of this RMP amendment. Exceptions based on conservation gain must also include measures, such as enforceable institutional controls and buffers, sufficient to allow the BLM to conclude that such benefits will endure for the duration of the proposed action's impacts.

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 GRSG 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 publically available at least quarterly.

Waivers, Exceptions and Modifications (WEMs) (Source IM-2008-032):

- A waiver is a permanent exemption from a lease stipulation, the stipulation would no longer apply anywhere within the lease. Waivers, by regulation, require a 30-day public review if the authorized officer has determined, prior to lease issuance, that a stipulation involves an issue of major concern to the public (43 CFR 3101.4) and are approved and signed by the State Director.

- An exception is a one-time exemption for a particular site within the lease; exceptions are determined on a case-by-case basis; the stipulation continues to apply to all other sites within the lease. An exception is a limited type of waiver.

- A modification is 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 lease to which the restrictive criteria are applied.

FLM-4: Incorporate required design features and best management practices appropriate to the management area as COAs when post leasing activity is proposed into any post-lease authorizations.

FLM-5: In Montana, prior to leasing conduct a Master Leasing Plan process when all four of the following criteria are met:

- A substantial portion of the area to be analyzed in the MLP is not currently leased.
- There is a majority Federal mineral interest.
- The oil and gas industry has expressed a specific interest in leasing, and there is a moderate or high potential for oil and gas confirmed by the discovery of oil and gas in the general area.
- Additional analysis or information is needed to address likely resource or cumulative impacts if oil and gas development were to occur where there are:
  - multiple-use or natural/cultural resource conflicts;
  - impacts to air quality;
  - impacts on the resources or values of any unit of the National Park System, national wildlife refuge, or National Forest wilderness area, as determined after consultation or coordination with the NPS, the USFWS, or the Forest Service; or
  - impacts on other specially designated areas. – analyzing likely development scenarios and varying mitigation levels.

FLM-5: In Idaho, complete a Master Development Plan, consistent with plan development guide on leases where a producing field is proposed to be developed.

FLM-6: Encourage unitization when deemed necessary for proper development and operation of an area (with strong oversight and monitoring). The unitization must be designed in a manner to minimize adverse impacts on GRSG according to the Federal Lease Form, 3100-11, Sections 4 and 6.

FLM-7: Issue Written Orders of the Authorized Officer (43 CFR 3161.2) requiring reasonable protective measures consistent with the lease terms where necessary to avoid or minimize effects to GRSG populations or habitat.

Locatable Minerals

LOC-2: Apply reasonable and appropriate RDFs to locatable minerals consistent with applicable law to prevent unnecessary or undue degradation of GRSG habitat when a Plan of Operations is submitted for BLM or Forest Service approval, in accordance with 43 CFR 3809.411(d)(2) (or 36 CFR 228.5(a)(3) on National Forest System lands).

LOC-3: Recommend SFAs for withdrawal from the General Mining Act of 1872, as amended, subject to valid existing rights.

Mineral Materials (Saleable Minerals)

SAL-1 (Salable Minerals): PHMA: All PHMAs will be closed to mineral materials development. However, existing free use permits and the expansion of existing free use permits may be considered only if the following criteria are met:

- the project area disturbance cap is not exceeded within a BSU;
- the activity is subject to the provisions set forth in the mitigation framework [**Appendix J**];
- all applicable required design features are applied; and
- the activity is permissible under the Idaho exception and development criteria (AD-3 and AD-4)
    - IHMA: All IHMA will be open to mineral materials development, consistent with the Idaho Anthropogenic Disturbance Criteria (AD-4), and subject to RDFs, buffers and seasonal timing restrictions. Sales from existing community pits within IHMA would be subject to seasonal timing restrictions.
    - GHMA: All GHMA will be open to mineral materials development, subject to RDFs, buffers and seasonal timing restrictions. Sales from existing community pits within GHMA would be subject to seasonal timing restrictions.

SAL-2: Restore salable mineral pits no longer in use to meet GRSG habitat management objectives.

SAL-3: Require reclamation bonding that would require restoration of GRSG habitat on new site authorizations for mineral material pits in IHMA (this would not apply to free use permits issued to a government entity such as a county road district, but would apply to non-profit entities).

SAL-4: Montana: PHMAs are closed to new mineral material sales. However, these areas remain "open" to free use permits and the expansion of existing active pits, only if the following criteria are met:

- the activity is within the BSU and project area disturbance cap;
- the activity is subject to the provisions set forth in the mitigation framework [**Appendix J**];
- all applicable required design features are applied; and
- the activity is permissible under the Montana screening criteria (AD-4) Appendix I.

Nonenergy Leasable Minerals

NEL-1 (Nonenergy Leasables): PHMAs are closed to leasing. IHMA and GHMA: Areas within Known Phosphate Leasing Areas (KPLAs) will remain open to leasing subject to standard stipulations. IHMA areas outside of KPLAs are open to prospecting and subsequent leasing provided the Anthropogenic Disturbance Development Criteria (AD-4) and the anthropogenic disturbance cap (AD-1) can be met. RDFs, buffers and seasonal timing restrictions shall be applied to prospecting permits. GHMA: Lands outside KPLAs are available for prospecting and subsequent leasing and initial mine development subject to RDFs, buffers, timing restrictions (seasonal and daily) and standard stipulations.

NEL-2: Require seasonal and daily timing restrictions in undeveloped nonenergy mineral leases when exploration activities or initial mine development is proposed (e.g. exploration drilling, timber removal, shrub clearing, etc.) as COAs.

NEL-3: Include RDFs as COAs to mine plans in undeveloped non-energy mineral leases for exploration activities or initial mine development.

Mineral Split Estate

MSE-1 (Mineral Split Estate): BLM Owns Mineral Estate – non-federal surface owner: Where the federal government owns the mineral estate in PHMAs, IHMAs, and GHMAs, and the surface is in non-federal ownership, apply the same stipulations, COAs, and/or conservation measures and RDFs applied if the mineral estate is developed on BLM-administered lands in that management area, to the maximum extent permissible under existing authorities, and in coordination with the landowner.

MSE-2: BLM owns surface – non-federal mineral estate owner: Where the federal government owns the surface and the mineral estate is in non-federal ownership in PHMA, IHMA, and GHMA, apply appropriate surface use COAs, stipulations, and mineral RDFs through ROW grants or other surface management instruments, to the maximum extent permissible under existing authorities, in coordination with the mineral estate owner/lessee.

Coal (Montana)

Coal-1 At the time an application for a new coal lease or lease modification is submitted to the BLM, the BLM will determine whether the lease application area is "unsuitable" for all or certain coal mining methods pursuant to 43 CFR 3461.5. PHMA is essential habitat for maintaining GRSG for purposes of the suitability criteria set forth at 43 CFR 3461.5(o)(1).

Comprehensive Trails and Travel Management

TM-1 (Travel Management): Limit off-highway vehicle travel within Idaho BLM Field Offices to existing roads, primitive roads, and trails in areas where travel management planning has not been completed or is in progress. This excludes areas previously designated as open through a land use plan decision or currently under review for designation as open, currently being analyzed in ongoing RMP revision efforts in the Four Rivers, Jarbidge and Upper Snake Field Offices.

An off-highway vehicle is any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding: (1) Any nonamphibious registered motorboat; (2) any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes; (3) any vehicle whose use is expressly authorized by the authorized officer, or otherwise officially approved; (4) Vehicles in official use where official use is use by an employee, agent, or designated representative of the Federal Government or one of its contractors, in the course of his employment, agency, or representation.; and (5) any combat or combat support vehicle when used in times of national defense emergencies (43 CFR 8340.0 5).

TM-2: In PHMA, IHMA, and GHMA, temporary closures will be considered in accordance with 43 CFR subpart 8364 (Closures and Restrictions); 43 CFR subpart 8351 (Designated National Area); 43 CFR subpart 6302 (Use of Wilderness Areas, Prohibited Acts, and Penalties); 43 CFR subpart 8341 (Conditions of Use).

Temporary closure or restriction orders under these authorities are enacted at the discretion of the authorized officer to resolve management conflicts and protect persons, property, and public lands and resources. Where an authorized officer determines that off-highway vehicles are causing or will cause considerable adverse effects upon soil, vegetation, wildlife, wildlife habitat, cultural resources, historical resources, threatened or endangered species, wilderness suitability, other authorized uses, or other resources, the affected areas shall be immediately closed to the type(s) of vehicle causing the adverse effect until the adverse effects are eliminated and measures implemented to prevent recurrence. (43 CFR 8341.2) A closure or restriction order should be considered only after other management strategies and alternatives have been explored. The duration of temporary closure or

restriction orders should be limited to 24 months or less; however, certain situations may require longer closures and/or iterative temporary closures. This may include closure of routes or areas.

TM-3: Develop Travel Management Plans for each Field Office as described in the BLM Travel Management Handbook 8342.1 and according to the travel management planning guidelines (**Appendix L**).

TM-4: During subsequent travel management planning design and designate a travel system to minimize adverse effects on GRSG. Locate areas and trails to minimize disturbance of GRSG and/or to have a neural or positive effect on GRSG habitat and populations. Give special attention to protect endangered or threatened species and their habitats. Allow for route upgrade, closure of existing routes, timing restrictions, seasonal closures, and creation of new routes to help protect habitat and meet user group needs, thereby reducing the potential for pioneering unauthorized routes. The emphasis of the comprehensive travel and transportation planning within PHMA would be placed on having a neutral or positive effect on GRSG habitat. Individual route designations would occur during subsequent travel management planning efforts.

TM-5: Conduct road construction, upgrades, and maintenance activities to avoid disturbance during the lekking season – see **Appendix C**.

Recreation and Visitor Services

REC-1: Manage existing recreation uses and sites to minimize adverse effects on GRSG or their habitat through incorporation of RDFs, buffers and seasonal restrictions.

REC-2: In PHMA and IHMA, do not construct new recreation facilities (e.g., campgrounds, trails, trailheads, staging areas) unless the development would have a net conservation gain to GRSG 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.

RDFs are means, measures, or practices intended to reduce or avoid adverse environmental impacts. This LUPA/EIS proposes a suite of design features that would establish the minimum specifications for water developments, certain mineral development, and fire and fuels management and would mitigate adverse impacts. These design features would be required to provide a greater level of regulatory certainty than through implementing BMPs.

In general, the design features are accepted practices that are known to be effective when implemented properly at the project level. However, their applicability and overall effectiveness cannot be fully assessed except at the project-specific level when the project location and design are known. Because of site-specific circumstances, some features may not apply to some projects (e.g., when a resource is not present on a given site) or may

require slight variations from what is described in the LUPA/EIS (e.g., a larger or smaller protective area). All variations in design features would require appropriate analysis and disclosure as part of future project authorizations. Additional mitigation measures may be identified and required during individual project development and environmental review. The proposed RDFs are presented in **Appendix B,** Greater Sage-Grouse Habitat Required Design Features and Best Management Practices.

2.6.3 Forest Service Proposed Plan Amendment

Forest Service Plan Components[1]

Desired condition - A description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. Desired conditions must be described in terms that are specific enough to allow progress toward their achievement to be determined, but do not include completion dates. (36 CFR 219.7(e)(1)(i)) FSH 1909.12, Chapter 20)

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

Objective - A concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions. Objectives should be based on reasonably foreseeable budgets. (36 CFR 219.9(e)(1)(ii)) FSH 1909.12, Chapter 20)

Standard - A mandatory constraint on project and activity decisionmaking, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements. (36 CFR 219.7(e)(1) (iii)) FSH 1909.12, Chapter 20)

The direction in the following standards and guidelines will be applied consistent with applicable valid existing rights, law, and regulations.

General Greater Sage-Grouse

GRSG-GEN-DC-001-Desired Condition – The landscape for GRSG encompasses large contiguous areas of native vegetation, approximately 6 to 62 square miles in area, to provide for multiple aspects of species life requirements. Within these landscapes, a variety of sagebrush-community compositions exist without invasive species, which have variations in subspecies composition, co-dominant vegetation, shrub cover, herbaceous cover, and stand structure, to meet seasonal requirements for food, cover, and nesting for GRSG.

GRSG-GEN-DC-002-Desired Condition – Anthropogenic disturbance is focused in non-habitat areas outside of PHMA, IHMA, GHMA and SFA[2]. Disturbance in GHMA are

[1] Plan component definitions are based on generally accepted meanings under the 1982 rule and the Forest Service Plan Wording Style Guide 2009, http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5260265.pdf.

limited, and there is little to no disturbance in PHMA, IHMA and SFAs except for valid existing rights and existing authorized uses.

GRSG-GEN-DC-003-Desired Condition – In all GRSG seasonal habitats, including all seasonal habitats, 70 percent of lands capable of producing sagebrush have 10 to 30 percent sagebrush canopy cover and less than 10 percent conifer canopy cover. In addition, within breeding and nesting habitat, sufficient herbaceous vegetation structure and height provides overhead and lateral concealment for nesting and early brood rearing life stages. Within brood rearing habitat, wet meadows and riparian areas sustain a rich diversity of perennial forb species relative to site potential. Within winter habitat, sufficient sagebrush height and density provides food and cover for GRSG during this seasonal period. Specific desired conditions for GRSG based on seasonal habitat requirements are in **Table 2-6**, Seasonal Habitat Desired Conditions for GRSG on National Forest System Lands.

GRSG-GEN-ST-004-Standard –In PHMA, IHMA and SFA, do not issue new discretionary written authorizations unless all existing discrete anthropogenic disturbances cover less than 3 percent of the total GRSG habitat within the BSU and the proposed project area, regardless of ownership, and the new use will not cause exceedance of the 3 percent cap (**Appendix G**).

GRSG-GEN-ST-005-Standard - In PHMA, SFA, and IHMA, only allow new authorized land uses if the residual impacts to GRSG or their habitats are fully offset by compensatory mitigation projects that provide a net conservation gain to the species, which will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions. Any compensatory mitigation will be durable, timely, and in addition to what would have resulted without the compens atory mitigation, as addressed in the Mitigation Framework (**Appendix J**).

GRSG-GEN-GL-006-Standard – During lekking (March 1 to April 30) restrict surface disturbing and disruptive activities, including noise at 10dB above ambient (not to exceed 20-24 dB) measured at the perimeter of an occupied lek, to lekking birds from 6 pm to 9 am within a buffer distance[3] of 3.1 miles.

GRSG-GEN-GL-007-Guideline – During breeding and nesting (March 1 to June 15), surface disturbing and disruptive activities to nesting birds should be avoided.

GRSG-GEN-GL-008-Guideline - When breeding and nesting habitat overlaps with other seasonal habitats, habitat should be managed for breeding and nesting desired conditions in **Table 2-6**.

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[2] PHMA and GHMA may contain non-habitat, but management direction would not apply to those areas of non-habitat. However, management direction would apply to all areas within SFAs including non-habitat.

[3] Plan buffer distances reflect lower-interpreted range from Manier, D. J., Bowen, Z. H., Brooks, M. L., Casazza, M. L., Coates, P. S., Deibert, P. A., Hanser, S. E., and Johnson, D. H. 2014. Conservation buffer distance estimates for Greater Sage-Grouse—A review: U.S. Geological Survey Open-File Report 2014-1239, 14 p., http://dx.doi.org/10.3133/ofr20141239.

Table 2-6
Seasonal Habitat Desired Conditions for GRSG on National Forest System Lands

ATTRIBUTE	INDICATORS	DESIRED CONDTION
BREEDING AND NESTING [1,2,3] (Seasonal Use Period March 1-June 15) Apply 6.2 miles from active leks.[4]		
Lek Security	Proximity of trees [5]	Trees or other tall structures are absent to uncommon within 1.86 miles of leks [6,7]
	Proximity of sagebrush to leks [6]	Adjacent protective sagebrush cover within 328 feet of lek [6]
Cover	Seasonal habitat extent [7] (Percent of seasonal habitat meeting desired conditions)	>80% of the breeding and nesting habitat
	Sagebrush canopy cover [6,7,8]	15 to 25%
	Sagebrush height [7] Arid sites [6,7,9] Mesic sites [6,7,10]	 12 to 32 inches 16 to 32 inches
	Predominant sagebrush shape [6]	>50% in spreading [11]
	Perennial grass canopy cover [6,7] Arid sites [7,9] Mesic sites [7,10]	 ≥10% ≥15%
	Perennial grass height [6,7,8]	Provide overhead and lateral concealment from predators [7, 15]
	Perennial forb canopy cover [6,7,8] Arid sites [9] Mesic sites [10]	 ≥5% [6,7] ≥10%[6,7]
BROOD-REARING/SUMMER[1] (Seasonal Use Period June 16-October 31)		
Cover	Seasonal habitat extent [7] (Percent of seasonal habitat meeting desired conditions)	>40% of the brood-rearing/summer habitat
	Sagebrush canopy cover [6,7,8]	10 to 25%
	Sagebrush height [7,8]	16 to 32 inches
	Perennial grass canopy cover and forbs[7,8]	>15%
	Riparian areas/mesic meadows	Proper Functioning Condition [12]
	Upland and riparian perennial forb availability [6,7]	Preferred forbs are common with several preferred species present [13]
WINTER[1] (Seasonal Use Period November 1-February 28)		
Cover and Food	Seasonal habitat extent [6,7,8] (Percent of seasonal habitat meeting desired conditions)	>80% of the winter habitat
	Sagebrush canopy cover above snow [6,7,8]	>10%
	Sagebrush height above snow [6,7,8]	>10 inches [14]

[1]Seasonal dates can be adjusted; that is, start and end dates may be shifted either earlier or later, but the amount of days cannot be shortened or lengthened by the local unit.
[2] Doherty, K. 2008. *Sage-grouse and Energy Development: Integrating Science with Conservation Planning to Reduce Impacts*. University of Montana. Missoula, MT.
[3] Holloran and Anderson. 2005. *Spatial Distribution of Greater Sage-grouse nests in relatively contiguous sagebrush habitats*. Condor 107:742-752.

Table 2-6
Seasonal Habitat Desired Conditions for GRSG on National Forest System Lands

ATTRIBUTE	INDICATORS	DESIRED CONDTION
BREEDING AND NESTING [1,2,3] (Seasonal Use Period March 1-June 15) Apply 6.2 miles from active leks.[4]		
[4] Buffer distance may be changed only if 3 out of 5 years of telemetry studies indicate the 6.2 miles is not appropriate. [5] Baruch-Mordo, S. J.S. Evans, J.P Severson, D.E. Naugle, J. D. Maestas, J.M. Kiesecker, M.J. Falkowski. C.A. Hagen, and K.P. Reese. . 2013. *Saving sage-grouse from trees*: A proactive solution to reducing a key threat to a candidate species. Biological Conservation 167: 233-241. [6] Stiver, S.J., E.T. Rinkes, D.E. Naugle, P.D. Makela, D.A. Nance, and J.W. Karl, eds. [In press]. Sage-Grouse Habitat Assessment Framework: A Multiscale Assessment Tool. Technical Reference 6710-1. Bureau of Land Management and Western Association of Fish and Wildlife Agencies, Denver, Colorado. [7] Connelly, J. M. A. Schroweder, A.R. Sands, and C.E. Braun.2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28 (4): 967-985. [8] Connelly, J. K. Reese, and M. Schroder. 2003. *Monitoring of Greater sage-grouse habitats and populations*. Station Bulletin 80, Contribution 979. University of Idaho, College of Natural Resources Experiment Station. Moscow, ID. [9] 10–12 inch precipitation zone; *Artemisia tridentata wyomingensis* is a common big sagebrush sub-species for this type site (Stiver et al, 2015). [10] ≥12 inch precipitation zone; *Artemisia tridentata vaseyana* is a common big sagebrush sub-species for this type site (Stiver et al, 2015). [11] Sagebrush plants with a spreading shape provide more protective cover than sagebrush plants that are more tree- or columnar shaped (Stiver et al. 2015). [12] Existing land management plan desired conditions for riparian areas/wet meadows (spring seeps) may be used in place of properly functioning conditions, if appropriate for meeting greater sage-grouse habitat requirements. [13] Preferred forbs are listed in Table III-2 (Stiver et al. 2015). Overall total forb cover may be greater than that of preferred forb cover since not all forb species are listed as preferred in Table III-2. [14] The height of sagebrush remaining above the snow depends upon snow depth in a particular year. Intent is to manage for tall, healthy, sagebrush stands. [15]Projects will be designed to provide overhead and lateral concealment of nests on a site specific basis.		

GRSG-GEN-GL-009-Guideline – Development of tall structures within 2.0 miles from the perimeter of occupied leks, as determined by local conditions (e.g., vegetation or topography), with the potential to disrupt breeding or nesting by creating new perching/nesting opportunities for avian predators or by decreasing the use of an area, should be restricted within nesting habitat.

Adaptive Management

GRSG-AM-ST-010-Standard – If a hard trigger is identified, immediate action is necessary to stop a severe deviation from GRSG conservation objectives. Upon reaching a hard trigger, an appropriate component of a more restrictive alternative analyzed in the environmental impact statement will be implemented. The Forest Service will review available and pertinent data in coordination with greater sage-grouse biologists from multiple agencies (**Appendix G**).

GRSG-AM-ST-011-Standard – If a soft trigger is identified, apply more conservative or restrictive implementation measures (e.g., extending seasonal restrictions for seasonal surface disturbing activities, modifying seasons of use for livestock grazing, and applying additional restrictions on discretionary activities) for the specific causal factor in the decline of populations and/or habitats, considering local knowledge and conditions (**Appendix G**).

Lands and Realty

Special Use Authorizations (Non-Recreation)

GRSG-LR-SUA-O-012-Objective - In PHMA, IHMA and SFAs, retrofit existing tall structures (e.g., power poles, cellular towers) with perch deterrents or other anti-perching devices within 2 years of signing the Record of Decision.

GRSG-LR-SUA-ST-013-Standard – In PHMA, IHMA and SFAs, restrict issuance of new lands special use authorizations for infrastructure, such as high-voltage transmission lines, major pipelines, hydropower, distribution lines, and cellular towers. Exceptions must be limited and based on rationale (e.g., monitoring, modeling, or best available science) that explicitly demonstrates that adverse impacts to GRSG will be avoided by the exception. Existing authorized uses will continue to be recognized.

GRSG-LR-SUA-ST-014-Standard – In GHMA, new lands special use authorizations may be issued for infrastructure, such as high-voltage transmission lines, major pipelines, hydropower, distribution lines, and cellular towers, if they can be located within existing designated corridors or ROWs and the authorization includes stipulations to protect GRSG and their habitats. Existing authorized uses will continue to be recognized.

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

GRSG-LR-SUA-ST-016-Standard – In PHMA, IHMA, GHMA and SFAs, require protective stipulations (e.g., noise, tall structure, guy wire removal, perch deterrent installation) when issuing new authorizations or during renewal, amendment, or reissuance of existing authorizations that authorize infrastructure (e.g., high-voltage transmission lines, major pipelines, roads, distribution lines, and cellular towers).

GRSG-LR-SUA-ST-017-Standard – In PHMA, IHMA, GHMA and SFAs, locate upgrades to existing transmission lines within the existing designated corridors or ROWs unless an alternate route would benefit GRSG or their habitats.

GRSG-LR-SUA-ST-018-Standard - In PHMA, IHMA, GHMA and SFAs, when a lands special use authorization is revoked or terminated and no future use is contemplated, require the authorization holder to remove overhead lines and other infrastructure in compliance with 36 CFR 251.60(i).

GRSG-LR-SUA-ST-019-Standard - In PHMA, IHMA, GHMA and SFA, if the potential long-term (i.e., greater than 5 years) impacts of mitigation (e.g., relocating or burying transmission lines and pipelines) to GRSG or their habitats are greater than the potential impacts from infrastructure associated with a new lands special use authorization, do not pursue the mitigation. If mitigation is not feasible or would result in short-term (i.e., less than 5 years) or long-term impacts, incorporate additional terms and conditions in the special use authorization for protection of GRSG or their habitats.

GRSG-LR-SUA-ST-020-Standard – In PHMA, IHMA, GHMA and SFA, co-locate new infrastructure (e.g., high-voltage transmission lines, major pipelines, roads, distribution lines, and cellular towers) with existing infrastructure to limit disturbance to the smallest footprint, or where it best limits impacts to greater sage-grouse or their habitats. If co-location of new infrastructure cannot be accomplished, locate it adjacent to existing infrastructure, roads, or already disturbed areas.

GRSG-LR-SUA-GL-021-Guideline – In PHMA and SFA, outside of existing designated corridors and ROWs, new transmission lines and pipelines should be buried to limit disturbance to the smallest footprint unless explicit rationale is provided that the biological impacts to GRSG and its habitat are being avoided. When new transmission lines and pipelines are not buried, locate them adjacent to existing transmission lines and pipelines.

Land Ownership Adjustments
GRSG-LR-LOA-ST-022-Standard – In PHMA, IHMA, GHMA and SFA, do not approve landownership adjustments unless the action results in a net conservation gain to GRSG or it will not directly or indirectly adversely impact GRSG conservation.

GRSG-LR-LOA-GL-023-Guideline – In PHMA, IHMA, GHMA and SFA with minority federal ownership, consider landownership adjustments to achieve a landownership pattern (e.g., consolidation, reducing fragmentation) that supports improved GRSG population trends and habitats.

Land Withdrawal
GRSG-LR-LW-GL-024-Guideline – In PHMA, IHMA and SFAs use land withdrawals as a tool, where appropriate, to prevent activities that will be detrimental to GRSG or their habitats.

Wind and Solar
GRSG-WS-ST-025-Standard – In PHMA and SFA do not authorize new solar and wind utility-scale and/or commercial energy development except for on-site power generation associated with existing industrial infrastructure (e.g., mine site).

GRSG-WS-GL-026-Guideline – In IHMA, new solar and wind energy utility-scale and/or commercial development should be restricted. If development cannot be restricted due to existing authorized use, adjacent developments, or split estate issues, then ensure that stipulations are incorporated into the authorization to protect GRSG and their habitats.

Greater Sage-Grouse Habitat
GRSG-GRSGH-O-027-Objective – Every 10 years for the next 50 years, improve GRSG habitat by removing invading conifers and other undesirable species based upon the number of acres shown in **Table 2-7**, Treatment Acres per Decade on National Forest System Lands.

Table 2-7
Treatment Acres per Decade on National Forest System Lands

Forest	Mechanical[1]	Prescribed Fire [2]	Grass Restoration[3]
Boise	1,000	2,000	0
Caribou-Targhee-Curlew	3,000	2,000	3,000
Salmon-Challis	5,000	1,000	0
Sawtooth	7,000	1,000	7,000
Beaverhead-Deerlodge	0	0	0

[1] These are estimates of treatments required to achieve and/or maintain desired habitat conditions over a period of ten years. There are many dynamic and highly variable disturbances that may happen over that period of time that could have a significant effect on the amount, type, and timing of treatment needed. Those disturbances are factored into the ten-year simulation using stochastic, not deterministic, techniques. Probabilities of events such as large wildfires are used in the model to make the simulation as realistic as possible, given empirical data about such events in the past, but the results of the simulation cannot be used to predict the future occurrence of such events, including their timing, size, or location, which are essentially random.
[2] Removal of conifers that have invaded sagebrush including phase one juniper that is 10 percent or less and reducing sagebrush cover in areas over 30 percent canopy cover
[3] Acres are those that are greater than 30 percent sagebrush canopy cover and/or invaded by 10 percent or greater conifer.
[4] Acres presently dominated by annual grasses that could be improved by herbicide application and seeding of perennial vegetation.

GRSG-GRSGH-ST-028-Standard – Design habitat restoration projects to move towards desired conditions (**Table 2-6**) and incorporate the concepts outlined in **Appendix D** - *Using resistance and resilience concepts to reduce impacts of invasive annual grasses and altered fire regimes on the sagebrush ecosystem and greater sage-grouse: A strategic multi-scale approac*h.

GRSG-GRSGH-GL-029-Guideline – Sagebrush removal in GRSG breeding and nesting and wintering habitats should be avoided unless necessary to support attainment of desired habitat conditions (**Table 2-6**).

GRSG-GRSGH-GL-030-Guideline – When removing conifers that are encroaching into GRSG habitat, avoid persistent woodlands (i.e., old growth relative to the site or more than 100 years old).

GRSG-GRSGH-GL-031-Guideline – In PHMA, IHMA, GHMA and SFAs, actions and authorizations should include design features to limit the spread and effect of non-native undesirable plant species.

GRSG-GRSGH-GL-032-Guideline - To facilitate safe and effective fire management actions, in PHMA, IHMA, and GHMA and SFAs, fuels treatments in high-risk areas (i.e., areas likely to experience wildfire at an intensity level that might result in movement away from the GRSG desired conditions in **Table 2-6**) should be designed to reduce the spread and/or intensity of wildfire or the susceptibility of GRSG values to move away from desired conditions (**Table 2-6**).

GRSG-GRSGH-GL-033-Guideline - In PHMA, IHMA, GHMA and SFAs, native plant species should be used, when possible, to restore, enhance, or maintain desired conditions (**Table 2-6**).

GRSG-GRSGH-GL-034-Guideline – In PHMA, IHMA and SFAs, vegetation treatment projects should only be conducted if they restore, enhance, or maintain desired conditions (**Table 2-6**).

Livestock Grazing

GRSG-LG-DC-035-Desired Condition – In PHMA, IHMA and SFAs, livestock grazing is managed to ensure adequate nesting cover and does not conflict with the attainment of other vegetation attributes (**Table 2-6**).

GRSG-LG-ST-036-Standard – In PHMA, IHMA and SFAs, do not approve construction of water developments unless beneficial to GRSG habitat.

GRSG-LG-GL-037-Guideline - Grazing guidelines should be applied in each of the seasonal habitats in **Table 2-8**, Grazing Guidelines for GRSG Seasonal Habitat. If values in **Table 2-8** guidelines cannot be achieved based upon a site-specific analysis using Ecological Site Descriptions, long-term ecological site capability analysis, or other similar analysis, adjust grazing management to move towards desired habitat conditions in **Table 2-6** consistent with the ecological site capability. Do not use drought and degraded habitat condition to adjust values. Grazing guidelines in **Table 2-8** would not apply to isolated parcels of National Forest System lands that have less than 200 acres of GRSG habitat.

GRSG-LG-GL-038-Guideline – In PHMA, IHMA, GHMA and SFAs, consider closure of grazing allotments, pastures, or portions of pastures, or managing the allotment as a forage reserve as opportunities arise under applicable regulations, where removal of livestock grazing would enhance the ability to achieve desired habitat conditions (**Table 2-6**).

GRSG-LG-GL-039-Guideline – Bedding sheep and placing camps within 1.2 miles from the perimeter of a lek during lekking (March 1 to April 30) should be restricted.

GRSG-LG-GL-040-Guideline – During the breeding and nesting season (March 1 to June 15), trailing livestock through breeding and nesting habitat should be minimized. Specific routes should be identified, existing trails should be used, and stopovers on active leks should be avoided.

GRSG-LG-GL-041-Guideline – Fences should not be constructed or reconstructed within 1.2 miles from the perimeter of occupied leks, unless the collision risk can be mitigated through design features or markings (e.g., mark, laydown fences, or other design features).

GRSG-LG-GL-042-Guideline – New permanent livestock facilities (e.g., windmills, water tanks, corrals) should not be constructed within 1.2 miles from the perimeter of occupied leks.

Table 2-8
Grazing Guidelines for GRSG Seasonal Habitat

Seasonal Habitat	Grazing Guidelines
Breeding and nesting [1] within 6.2 miles of occupied leks	Perennial grass height: [2] When grazing occurs during breeding and nesting season (March 1 to June 15) manage for upland perennial grass height of 7 inches [3,4,5] When grazing occurs post breeding and nesting season (June 16 to October 30) manage for 4 inches [4,5,6] of perennial grass height.
Brood rearing and summer [1]	Retain an average stubble height of 4 inches for herbaceous riparian/mesic meadow vegetation [7,8]
Winter [1]	≤35% utilization of sagebrush

[1] For descriptions of Seasonal Habitat and Seasonal Periods of greater sage-grouse see table 1.
[2] Grass heights only apply in breeding and nesting habitat with ≥10% sagebrush cover to support nesting.
[3] Holloran et al. 2005. *Greater sage-grouse nesting habitat selection and success in Wyoming.*
[4] Average droop height, assuming current vegetation composition has the capability to achieve these heights. Heights will be measured at the end of the nesting period (Connelly et al. 2000).
[5] Hagen C., J.W. Connelly, and M.A. Schroeder. 2007. *A meta-analysis of greater sage-grouse Centrocercus urophasianus nesting and brood-rearing habitats.* Wildlife Biology 13(1): 42-50.
[6] Stubble height to be measured at the end of the growing season.
[7] In riparian brood-rearing habitat, sage-grouse prefer the lower vegetation (5–15 cm vs. 30–50 cm; Oakleaf 1971, Neel 1980, Klebenow 1982, Evans 1986) and succulent forb growth stimulated by moderate livestock grazing (Neel 1980, Evans 1986); moderate use equates to a 10-cm residual stubble height for most grasses and sedges and 5-cm for Kentucky bluegrass (Mosley et al. 1997, Clary and Leininger 2000) (Crawford et al. 2004. Ecology and Management of sage-grouse grouse habitat).
[8] Stubble height to be measured in the meadow areas used by greater sage-grouse for brood-rearing (not on the hydric greenline).

Fire Management

GRSG-FM-DC-043-Desired Condition – In PHMA, IHMA, GHMA and SFA, the extent and spread of wildfire resulting in loss of sagebrush is minimized, considering firefighter and public safety and other high priority values.

GRSG-FM-ST-044-Standard – In PHMA, IHMA, GHMA and SFA, do not use prescribed fire, except for pile burning, in 12-inch or less precipitation zones unless necessary to facilitate site preparation for restoration of GRSG habitat consistent with desired conditions in **Table 2-6**.

GRSG-FM-ST-045-Standard – In PHMA, SFA, GHMA, if it is necessary to use prescribed fire to facilitate site preparation for restoration of greater sage-grouse habitat consistent with desired conditions in **Table 2-6**, the associated NEPA analysis must identify how the project would move towards GRSG desired conditions, why alternative techniques were not selected, and how potential threats to GRSG habitat would be minimized.

GRSG-FM-GL-046-Guideline – In wintering or breeding and nesting habitat, sagebrush removal or manipulation, including prescribed fire, should be restricted unless the removal strategically reduces the potential impacts from wildfire.

GRSG-FM-GL-047-Guideline – In PHMA, IHMA, GHMA and SFA, when reseeding in fuel breaks, fire resistant native plant species should be used if available, or consider using fire resistant non-native species to meet resource objectives, if analysis demonstrates that non-native plants will not damage GRSG habitat in the long term.

GRSG-FM-GL-048-Guideline – In PHMA, IHMA, GHMA and SFA, fuel treatments should be designed to restore, enhance, or maintain GRSG habitat.

GRSG-FM-GL-049-Guideline – Locating temporary wildfire suppression facilities (e.g., incident command posts, spike camps, helibases, mobile retardant plants) in PHMA, SFA, and GHMA should be avoided.

GRSG-FM-GL-050-Guideline - In PHMA, IHMA, GHMA and SFAs cross-country vehicle travel during fire operations should be restricted, whenever safe and practical to do so, as determined by fireline leadership and incident commanders.

GRSG-FM-GL-051-Guideline – In PHMA, IHMA, GHMA and SFA, use fire management tactics and strategies that seek to minimize loss of existing sagebrush habitat. The safest and most practical means to do so will be determined by fireline leadership and incident commanders.

GRSG-FM-GL-052-Guideline – In PHMA, IHMA, GHMA and SFA, prescribed fire prescriptions should minimize undesirable effects on vegetation and/or soils (e.g., minimize mortality of desirable perennial plant species and reduce risk of hydrophobicity).

GRSG-FM-GL-053-Guideline - In PHMA, IHMA, GHMA and SFA, roads and natural fuel breaks should be incorporated into fuel break design to improve effectiveness and minimize loss of existing sagebrush habitat.

GRSG-FM-GL-054-Guideline - In PHMA, IHMA, GHMA and SFA, all fire-associated vehicles and equipment should be inspected and cleaned using standardized protocols and procedures and approved vehicle/equipment decontamination systems before entering and exiting the area to minimize the introduction of invasive annual grasses and other invasive plant species and noxious weeds.

GRSG-FM-GL-055-Guideline - Unit-specific GRSG fire management toolboxes containing maps, lists, contact information for qualified resource advisors, local guidance, and relevant information should be developed and used.

GRSG-FM-GL-056-Guideline – Localized maps of PHMA, IHMA, GHMA and SFA should be provided to dispatch officers and extended attack incident commanders to use when prioritizing wildfire suppression resources and designing suppression tactics.

GRSG-FM-GL-057-Guideline - In or near PHMA, IHMA, GHMA and SFA, a GRSG resource advisor should be assigned to all extended attack fires.

GRSG-FM-GL-058-Guideline – On critical fire weather days, protection of GRSG habitat should receive high consideration, along with other high values, when positioning resources.

GRSG-FM-GL-059-Guideline – Line officers should be involved in setting pre-season wildfire response priorities and, during periods of multiple fires, prioritizing protection of PHMA, GHMA and SFA.

GRSG-FM-GL-060-Guideline – In PHMA, IHMA, GHMA and SFA, consider using fire retardant and mechanized equipment only if it is likely to result in minimizing burned acreage.

GRSG-FM-GL-061-Guideline – In PHMA, IHMA GHMA, to minimize sagebrush loss, mop-up should be conducted where the burned areas adjoin unburned islands, doglegs, or other habitat features, as safety and available resources allows.

Wild Horse and Burro

GRSG-HB-GL-062-Guideline – In PHMA, IHMA, GHMA and SFA, wild horse and burro populations should be managed within established appropriate management levels to restore, enhance, or maintain GRSG desired habitat conditions (**Table 2-6**).

GRSG-HB-GL-063-Guideline – In PHMA, IHMA, GHMA and SFA, appropriate management levels should be adjusted if GRSG management standards are not met due to degradation that can be at least partially be attributed to wild horse or burro populations.

Recreation

GRSG-R-DC-064-Desired Condition – In PHMA, IHMA, GHMA and SFA, existing and new recreation special use authorizations and expansion of special use authorizations avoids effects to GRSG and their habitats.

GRSG-R-ST-065-Standard – In PHMA, IHMA and SFA, do not authorize temporary recreation uses (i.e., facilities or activities) that result in loss of habitat or would have long-term (i.e., greater than 5 years) negative impacts on GRSG or their habitats.

GRSG-R-GL-066-Guideline – In PHMA, IHMA, GHMA and SFA, terms and conditions that protect and/or restore GRSG habitat within the permit area should be included in new recreation special use authorizations. During renewal, amendment, or reauthorization, terms and conditions in existing permits and operating plans should be modified to protect and/or restore GRSG habitat.

GRSG-R-GL-067-Guideline – In PHMA, SFA, and IHMA, new recreational facilities or expansion of existing recreational facilities (e.g., roads, trails, campgrounds), including special use authorizations for facilities and activities, should not be approved unless the development results in a net conservation gain to GRSG and/or their habitats or the development is required for visitor safety.

Roads/Transportation

GRSG-RT-DC-0068-Desired Condition - In PHMA, IHMA, GHMA and SFAs, within the travel management system, GRSG experience minimal disturbance during breeding and nesting (March 1 to June 15) and wintering (November 1 to February 28) periods.

GRSG-RT-ST-069-Standard – In PHMA, IHMA, GHMA and SFAs, do not conduct or allow new road or trail construction (does not apply to realignments for resource protection) except when necessary for administrative access, public safety, or to access valid existing rights. If necessary to construct new roads and trails for one of these purposes, construct them to the minimum standard, length, and number and avoid, minimize, and mitigate impacts.

GRSG-RT-ST-070-Standard – Do not conduct or allow road and trail maintenance activities within 2 miles from the perimeter of active leks during lekking (March 1 to April 30) from 6 pm to 9 am.

GRSG-RT-ST-071-Standard – In PHMA, IHMA and SFAs, prohibit public access on temporary energy development roads, unless consistent with all other terms and conditions included in the forest plan.

GRSG-RT-GL-072-Guideline – In PHMA, IHMA and SFAs, new roads and road realignments should be designed and administered to reduce collisions with GRSG.

GRSG-RT-GL-073-Guideline – In PHMA, IHMA, and SFAs, road construction within riparian areas and mesic meadows should be restricted. If not possible to restrict construction within riparian areas and mesic meadows, roads should be designed and constructed at right angles to ephemeral drainages and stream crossings, unless topography prevents doing so.

GRSG-RT-GL-074-Guideline – In PHMA, IHMA, GHMA and SFAs, when decommissioning roads and unauthorized routes, restoration activity should be designed to move habitat towards desired conditions (**Table 2-6**).

GRSG-RT-GL-075-Guideline – In PHMA, IHMA, GHMA and SFAs, dust abatement terms and conditions should be included in road use permits when dust has the potential to impact GRSG.

GRSG-RT-GL-076-Guideline - In PHMA, IHMA, GHMA and SFAs, road and road-way maintenance activities should be designed and implemented to reduce the risk of vehicle or human-caused wildfires and the spread of invasive plants. Such activities include but are not limited to the removal or mowing of vegetation a car-width off the edge of roads; use of weed-free earth-moving equipment, gravel, fill, or other materials; and blading or pulling roadsides and ditches that are infested with noxious weeds only if required for public safety or protection of the roadway.

Minerals

Fluid Minerals - Unleased

GRSG-M-FMUL-ST-077-Standard - In PHMA, and IHMA any new oil and gas leases must include an NSO stipulation. There will be no waivers or modifications. An exception could be granted by the authorized officer with unanimous concurrence from a team of agency GRSG experts from the USFWS, Forest Service, and State wildlife agency if:

- There would be no direct, indirect, or cumulative effects to GRSG or their habitats or
- Granting the exception provides an alternative to a similar action occurring on a nearby parcel and
- The exception provides a clear net conservation gain to GRSG.

GRSG-M-FMUL-ST-078-Standard – In GHMA, any new leases must include appropriate CSU and TL stipulations to protect GRSG and their habitat.

GRSG-M-FMUL-ST-079-Standard – In SFA, there will be NSO and no waivers, exceptions, or modifications for fluid mineral leasing.

Fluid Minerals - Leased

GRSG-M-FML-ST-080-Standard – In PHMA, IHMA, and SFA, when approving the Surface Use Plan of Operation portion of the Application for Permit to Drill on existing leases that are not yet developed, require that leaseholders avoid and minimize surface disturbing and disruptive activities consistent with the rights granted in the lease.

GRSG-M-FML-ST-081-Standard – In PHMA, IHMA, and SFA, when facilities are no longer needed or leases are relinquished, require reclamation plans to include terms and conditions to restore habitat to desired conditions as described in **Table 2-6**.

GRSG-M-FML-ST-082-Standard – In GHMA, authorize new transmission line corridors, transmission line ROWs, transmission line construction, or transmission line-facility construction associated with fluid mineral leases with stipulations necessary to protect GRSG and their habitats, consistent with the terms and conditions of the permit.

GRSG-M-FML-ST-083-Standard – Locate compressor stations on portions of a lease that are non-habitat and are not used by GRSG, and if there would be no direct, indirect, or cumulative effects on GRSG or their habitat. If this is not possible, work with the operator to use mufflers, sound insulation, or other features to reduce noise, consistent with GRSG-GEN-ST-006-Standard.

GRSG-M-FML-ST-084-Standard – In PHMA, GHMA and SFA, when authorizing development of fluid mineral resources, work with the operator to minimize impacts to GRSG and their habitat, such as locating facilities in non-habitat areas first and then in the least suitable habitat.

GRSG-M-FML-GL-085-Guideline – In PHMA, IHMA, GHMA and SFA, operators should be encouraged to reduce disturbance to GRSG habitat. At the time of approval of the Surface Use Plan of Operation portion of the Application for Permit to Drill, terms and conditions should be included to reduce disturbance to GRSG habitat, where appropriate and feasible and consistent with the rights granted to the lessee.

GRSG-M-FML-GL-086-Guideline – On existing federal leases in PHMA, IHMA, and SFA, when surface occupancy cannot be restricted due to valid existing rights or development requirements, disturbance and surface occupancy should be limited to areas least harmful to GRSG based on vegetation, topography, or other habitat features.

GRSG-M-FML-GL-087-Guideline - In PHMA, SFA, and GHMA, where the federal government owns the surface and the mineral estate is in non-federal ownership, coordinate with the mineral estate owner/lessee to apply appropriate stipulations, conditions of approval, conservation measures and RDFs to the appropriate surface management instruments to the maximum extent permissible under existing authorities.

Fluid Minerals - Operations

GRSG-M-FMO-ST-088-Standard – In PHMA, IHMA and SFA, do not authorize employee camps.

GRSG-M-FMO-ST-089-Standard – In PHMA, IHMA and SFA, when feasible, do not locate tanks or other structures that may be used as raptor perches. If this is not feasible, use perch deterrents.

GRSG-M-FMO-GL-090-Guideline – In PHMA, IHMA and SFA, closed-loop systems should be used for drilling operations with no reserve pits, where feasible.

GRSG-M-FMO-GL-091-Guideline – In PHMA, IHMA, GHMA and SFA, during drilling operations, soil compaction should be minimized and soil structure should be maintained using the best available techniques to improve vegetation reestablishment.

GRSG-M-FMO-GL-092-Guideline – In PHMA, IHMA, GHMA and SFA, dams, impoundments and ponds for mineral development should be constructed to reduce potential for West Nile virus. Examples of methods to accomplish this include:

- Increase the depth of ponds to accommodate a greater volume of water than is discharged.
- Build steep shorelines (greater than 2 feet) to reduce shallow water and aquatic vegetation around the perimeter of impoundments to reduce breeding habitat for mosquitoes.
- Maintain the water level below that of rooted aquatic and upland vegetation. Avoid flooding terrestrial vegetation in flat terrain or low-lying areas.

- Construct dams or impoundments that restrict down-slope seepage or overflow by digging ponds in flat areas rather than damming natural draws for effluent water storage or lining constructed ponds in areas where seepage is anticipated.
- Line the channel where discharge water flows into the pond with crushed rock or use a horizontal pipe to discharge inflow directly into existing open water.
- Line the overflow spillway with crushed rock and construct the spillway with steep sides.
- Fence pond sites to restrict access by livestock and other wild ungulates.
- Remove or re-inject produced water.
- Treat waters with larvicides to reduce mosquito production where water occurs on the surface.

GRSG-M-FMO-GL-0093-Guideline – In PHMA, IHMA, GHMA and SFA to keep habitat disturbance at a minimum, a phased development approach should be applied to fluid mineral operations, wherever possible, consistent with the rights granted under the lease. Disturbed areas should be reclaimed as soon as they are no longer needed for mineral operations.

Coal Mines - Unleased

GRSG-M-CMUL-ST-094-Standard – In PHMA, IHMA and SFA, do not authorize surface disturbances (e.g., appurtenant facilities) for new underground coal mines.

Coal Mines - Leased

GRSG-M-CML-ST-095-Standard – In PHMA, IHMA and SFA, do not authorize new appurtenant facilities for existing underground mines unless no technically feasible alternative exists. If new appurtenant facilities associated with existing mine leases cannot be located outside of PHMA, IHMA and SFA, co-locate them with any existing disturbed areas, if possible. If co-location is not possible, then construct new facilities to minimize disturbed areas while meeting mine safety standards and requirements, as identified by Mine Safety and Health Administration mine-plan approval process, and locate the facilities in an area least harmful to GRSG habitats based on vegetation, topography, or other habitat features.

GRSG-M-CML-GL-096-Guideline – In PHMA, IHMA, GHMA and SFA, when coal leases are subject to readjustment, additional requirements should be included in the readjusted lease to conserve, enhance, and restore GRSG and their habitat for long-term viability.

Locatable Minerals

GRSG-M-LM-ST-097-Standard – In PHMA, IHMA and SFA, only approve Plans of Operation if they include mitigation to protect GRSG and their habitats, consistent with the rights of the mining claimant as granted by the General Mining Act of 1872, as amended.

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

GRSG-M-LM-GL-099-Guideline - In PHMA, IHMA, GHMA and SFA, abandoned mine sites should be closed or mitigated to reduce predation of GRSG by eliminating tall structures that could provide nesting opportunities and perching sites for predators.

Nonenergy Leasable Minerals

GRSG-M-NEL-GL-100-Guideline – In PHMA, IHMA, GHMA and SFA, at the time of issuance of prospecting permits, exploration licenses and leases, or readjustment of leases, the Forest Service should provide recommendations to the BLM for the protection of GRSG and their habitats.

GRSG-M-NEL-GL-101-Guideline - In PHMA, SFA, GHMA, the Forest Service should recommend to the BLM that expansion or readjustment of existing leases avoid, minimize, or mitigate the effects to GRSG and their habitat.

Mineral Materials

GRSG-M-MM-ST-0102-Standard – In PHMA and SFA, do not allow new mineral material disposal or development.

GRSG-M-MM-ST-103-Standard – In PHMA, IHMA and SFA, free-use mineral material collection permits may be issued and expansion of existing active pits may be allowed, except from March 1 to April 30 between 6 pm and 9 am within 2 miles from the perimeter of occupied leks, within the BSU and proposed project area, if doing so does not exceed the disturbance cap.

GRSG-M-MM-ST-104-Standard - In PHMA, IHMA, GHMA and SFA, any permit for existing mineral material operations must include appropriate requirements for operation and reclamation of the site to restore, enhance, or maintain desired habitat conditions (**Table 2-6**).

2.7 Adaptive Management, Monitoring, and Mitigation

The adaptive management, monitoring, and mitigation descriptions below apply to Alternatives D, E, and the Proposed Plan. In making amendments to this plan, the BLM will coordinate with the USFWS as BLM continues to meet its objective of conserving, enhancing and restoring GRSG habitat by reducing, minimizing or eliminating threats to that habitat.

If the BLM finds that the State of Montana is implementing a GRSG Habitat Conservation Program that is effectively conserving the GRSG, the BLM will review the management goals and objectives to determine if they are being met and whether amendment of the BLM

plan is appropriate to achieve consistent and effective conservation and GRSG management across all lands regardless of ownership.

2.7.1 Adaptive Management Plan

Adaptive management is a decision process that promotes flexible resource management decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood. Careful monitoring of these outcomes both advances scientific understanding and helps with adjusting resource management directions as part of an iterative learning process. Adaptive management also recognizes the importance of natural variability in contributing to ecological resilience and productivity. It is not a 'trial and error' process, but rather emphasizes learning while doing. Adaptive management does not represent an end in itself, but rather a means to more effective decisions and enhanced benefits.

In relation to the BLM/Forest Services' National Greater Sage-grouse Planning Strategy, adaptive management will help identify if GRSG conservation measures presented in this EIS contain the needed level of certainty for effectiveness. Principles of adaptive management are incorporated into the conservation measures in the plan to ameliorate threats to a species, thereby increasing the likelihood that the conservation measure and plan will be effective in reducing threats to that species. The following provides the BLM/Forest Service's adaptive management strategy for the Idaho and southwestern Montana sub-region.

Adaptive Management and Monitoring

This EIS contains a monitoring framework plan (**Appendix E**) that includes an effectiveness monitoring component. The agencies intend to use the data collected from the effectiveness monitoring to identify any changes in habitat conditions related to the goals and objectives of the plan and other range-wide conservation strategies (US Department of the Interior 2004; Stiver et al. 2006; USFWS 2013). The information collected through the Monitoring Framework Plan outlined in **Appendix E** will be used by the BLM/Forest Service to determine when adaptive management hard and soft triggers (discussed below) are met.

The State of Idaho adaptive management plan is presented in **Appendix Q**. The Montana Sage Grouse habitat Conservation Program established by Governor's Executive Order # 10-2014, states under the General Provisions heading, item # 22 "Montana Sage Grouse Oversight Team (MSGOT) shall regularly reevaluate the effectiveness of the Conservation Strategy, at a minimum annually, as new science, information and data emerge regarding the habitats and behavior of sage grouse, and shall recommend such changes as are appropriate."

Adaptive Management Triggers

Soft Triggers
Soft triggers represent an intermediate threshold indicating that management changes are needed at the project/implementation level to address habitat and population losses. If a soft trigger is identified, the BLM/Forest Service will apply more conservative or restrictive implementation conservation measures to mitigate for the specific causal factor in the decline of populations and/or habitats, with consideration of local knowledge and conditions. For example, monitoring data within an already federally authorized project area within a given GRSG population area indicates that there has been a slight decrease in GRSG numbers in this area. Data also suggests the decline may be attributed to GRSG collisions with monitoring tower guy-wires from this federally authorized project. BLM then receives an application for a new tower within the same GRSG population area. The response would be to require the new authorization's tower guy-wires to be flagged. Monitoring data then shows the decline is curtailed. The adaptive management soft trigger response is to require future applications to flag for guy-wires. These types of adjustments will be made to preclude tripping a "hard" trigger (which signals more severe habitat loss or population declines). While there should be no expectation of hitting a hard trigger, if unforeseen circumstances occur that trip either a habitat or population hard trigger, more restrictive management will be required.

Hard Triggers
Hard triggers represent a threshold indicating that immediate action is necessary to stop a severe deviation from GRSG conservation objectives as set forth in the BLM and Forest Service plans. The hard trigger and the proposed management response to this trigger are presented in **Section 2.6.2**, AM-7, AM-9, AM-12, AM-15, and AM-16.

2.7.2 Monitoring for the Greater Sage-grouse Planning Strategy

The BLM's planning regulations, specifically 43 CFR 1610.4-9, require that land use plans establish intervals and standards for monitoring based on the sensitivity of the resource decisions. Land use plan monitoring is the process of tracking the implementation of land use plan decisions (implementation monitoring) and collecting data/information necessary to evaluate the effectiveness of land use plan decisions (effectiveness monitoring). For GRSG, these types of monitoring are also described in the criteria found in the Policy for Evaluation of Conservation Efforts When Making Listing Decisions (50 CFR Vol. 68, No. 60). One of the Policy for Evaluation of Conservation Efforts When Making Listing Decisions criteria evaluates whether provisions for monitoring and reporting progress on implementation (based on compliance with the implementation schedule) and effectiveness (based on evaluation of quantifiable parameters) of the conservation effort are provided.

A guiding principle in the BLM National Sage-grouse Conservation Strategy (US Department of the Interior 2004) is that "the Bureau is committed to sage-grouse and sagebrush conservation and will continue to adjust and adapt our National Sage-grouse Strategy as new information, science, and monitoring results evaluate effectiveness over time." In keeping with the WAFWA Sage-grouse Comprehensive Conservation Strategy (Stiver et al. 2006) and the Greater Sage-grouse Conservation Objectives: Final Report

(USFWS 2013), the BLM and Forest Service will monitor implementation and effectiveness of conservation measures in GRSG habitats.

On March 5, 2010, USFWS' 12-Month Findings for Petitions to List the Greater Sage-Grouse (*Centrocercus urophasianus*) as Threatened or Endangered were posted as a Federal Register notice (75 Federal Register 13910-14014, March 23, 2010). This notice stated:

"…the information collected by BLM could not be used to make broad generalizations about the status of rangelands and management actions. There was a lack of consistency across the range in how questions were interpreted and answered for the data call, which limited our ability to use the results to understand habitat conditions for sage-grouse on BLM lands."

Standardization of monitoring methods and implementation of a defensible monitoring approach (within and across jurisdictions) will resolve this situation. The BLM, Forest Service, and other conservation partners use the resulting information to guide implementation of conservation activities.

Monitoring strategies for GRSG habitat and populations must be collaborative, as habitat occurs across jurisdictional boundaries (52 percent on BLM-administered lands, 31 percent on private lands, 8 percent on National Forest System lands, 5 percent on state lands, 4 percent on tribal and other federal lands) (75 *Federal Register* 13910, March 23, 2010), and state fish and wildlife agencies have primary responsibility for population level wildlife management, including population monitoring. Therefore, population efforts will continue to be conducted in partnership with state fish and wildlife agencies. The BLM and Forest Service have finalized a monitoring framework, which can be found in **Appendix E**. This framework describes the process that the BLM and Forest Service will use to monitor implementation and effectiveness of RMP/LUP decisions. The monitoring framework includes methods, data standards, and intervals of monitoring at broad and mid scales; consistent indicators to measure and metric descriptions for each of the scales; analysis and reporting methods; and the incorporation of monitoring results into adaptive management. The need for fine-scale and site-specific habitat monitoring may vary by area depending on existing conditions, habitat variability, threats, and land health. Indicators at the fine and site scales will be consistent with the Habitat Assessment Framework; however, the values for the indicators could be adjusted for regional conditions.

More specifically, the framework discusses how the BLM and Forest Service will monitor and track implementation and effectiveness of planning decisions (e.g., tracking of waivers, modifications, site-level actions). The two agencies will monitor the effectiveness of RMP/LUP decisions in meeting management and conservation objectives. Effectiveness monitoring will include monitoring disturbance in habitats, as well as landscape habitat attributes. To monitor habitats, the BLM and Forest Service will measure and track attributes of occupied habitat, PHMA, IHMA, and GHMA at the broad scale, and attributes of habitat availability, patch size, connectivity, linkage/connectivity habitat, edge effect, and anthropogenic disturbances at the mid-scale. Disturbance monitoring will measure and track changes in the amount of sagebrush in the landscape and changes in the anthropogenic

footprint, including change energy development density. The framework also includes methodology for analysis and reporting for field offices, states, ranger districts, BLM districts, National Forests, and Forest regions, including geospatial and tabular data for disturbance mapping (e.g., geospatial footprint of new permitted disturbances) and management actions effectiveness.

2.7.3 Regional Mitigation

Consistent with the Proposed Plan's goal outlined in **Section 2.6.2**, the intent of the Idaho and southwestern Montana GRSG LUPA/EIS is to provide a net conservation gain to the species. To do so, in undertaking BLM and Forest Service 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. This will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions. This is also consistent with BLM Manual 6840 – Special Status Species Management, Section .02B, which states "to initiate proactive conservation measures that reduce or eliminate threats to Bureau sensitive species to minimize the likelihood of the need for listing of these species under the ESA."

Mitigation

Mitigation Standards. In undertaking BLM and Forest Service 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. Actions which result in habitat loss and degradation include those identified as threats which contribute to GRSG disturbance as identified by the USFWS in its 2010 listing decision (75 FR 13910) and shown in **Table 1** in **Appendix G**. This will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions. Mitigation will follow the regulations from the White House Council on Environmental Quality (CEQ) (40 CFR 1508.20; e.g. avoid, minimize, and compensate), hereafter referred to as the mitigation hierarchy. If impacts from BLM and 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. Any compensatory mitigation will be durable, timely, and in addition to that which would have resulted without the compensatory mitigation (see the concepts of durability, timeliness, and additionality as described further in **Appendix J**).

Greater Sage-Grouse Conservation Team. The BLM and Forest Service will establish a WAFWA Management Zone Greater Sage-Grouse Conservation Team (hereafter, Team) to help guide the conservation of GRSG, within 90 days of the issuance of the Record of Decision. This Team will develop a WAFWA Management Zone Regional Mitigation Strategy (hereafter, Regional Mitigation Strategy). The Team will also compile and report on monitoring data (including data on habitat condition, population trends, and mitigation effectiveness) from

States across the WAFWA Management Zone (see MON-1 through MON-7 and **Appendix E**). Subsequently, the Team will use these data to either modify the appropriate Regional Mitigation Strategy or recommend adaptive management actions (see AM-1 through AM-16 and **Appendix G**).

The BLM and Forest Service will invite governmental and Tribal partners to participate in this Team, including the State Wildlife Agencies and USFWS, in compliance with the exemptions provided for committees defined in the Federal Advisory Committee Act and the regulations that implement that act. The BLM and Forest Service will strive for a collaborative and unified approach between Federal agencies (e.g. USFWS, BLM, and Forest Service), Tribal governments, state and local government(s), and other stakeholders for GRSG conservation. The Team will provide advice, and will not make any decisions that impact Federal lands. The BLM and Forest Service will remain responsible for making decisions that affect Federal lands.

Developing a Regional Mitigation Strategy. The Team will develop a Regional Mitigation Strategy to inform the mitigation components of NEPA analyses for BLM and Forest Service management actions and third party actions that result in habitat loss and degradation. The Strategy will be developed within one year of the issuance of the Record of Decision. The BLM's Regional Mitigation Manual MS-1794 will serve as a framework for developing the Regional Mitigation Strategy. The Regional Mitigation Strategy will be applicable to the States/Field Offices/Forests within the WAFWA Management Zone's boundaries.

Regional mitigation is a landscape-scale approach to mitigating impacts to resources. This involves anticipating future mitigation needs and strategically identifying mitigation sites and measures that can provide a net conservation gain to the species. The Regional Mitigation Strategy developed by the Team will elaborate on the components identified above (i.e. avoidance, minimization, and compensation; additionality, timeliness, and durability) and further explained in **Appendix J**.

In the time period before the Strategy is developed, BLM will consider regional conditions, trends, and sites, to the greatest extent possible, when applying the mitigation hierarchy and will ensure that mitigation is consistent with the standards set forth in the first paragraph of this section.

Incorporating the Regional Mitigation Strategy into NEPA Analyses. The BLM and Forest Service will include the avoidance, minimization, and compensatory recommendations from the Regional Mitigation Strategy in one or more of the NEPA analysis' alternatives for BLM and Forest Service management actions and third party actions that result in habitat loss and degradation and the appropriate mitigation actions will be carried forward into the decision.

Implementing a Compensatory Mitigation Program. Consistent with the principles identified above, the BLM and Forest Service need to ensure that compensatory mitigation is strategically implemented to provide a net conservation gain to the species, as identified in the Regional Mitigation Strategy. In order to align with existing compensatory mitigation efforts, this compensatory mitigation program will be implemented at a State-level (as opposed to a

WAFWA Management Zone, a Field Office, or a Forest), in collaboration with our partners (e.g. Federal, Tribal, and State agencies).

To ensure transparent and effective management of the compensatory mitigation funds, the BLM and Forest Service will enter into a contract or agreement with a third-party to help manage the State-level compensatory mitigation funds, within one year of the issuance of the Record of Decision. The selection of the third-party compensatory mitigation administrator will conform to all relevant laws, regulations, and policies. The BLM and Forest Service will remain responsible for making decisions that affect Federal lands.

2.8 Draft LUPA/EIS Alternatives

The following are alternatives to the Proposed Plan and were presented and analyzed in the Draft LUPA/EIS. Alternative F has been refined based on public comment to clarify grazing and ACEC management.

2.8.1 Alternative A (No Action)

The No Action Alternative (Alternative A) represents the continuation of current management direction in the 21 BLM Field Office LUPs and 8 Forest Service LUPs, and proposes no new plan or management actions. Existing GRSG-related management direction is provided in BLM WO IM 2012-043, Greater Sage-Grouse Interim Management Policies and Procedures; Forest Service WO 2600 Memo, Interim Conservation Recommendations for Greater Sage-Grouse and Greater Sage-Grouse Habitat; BLM WO IM 2013-128, Sage-Grouse Conservation in Fire Operations and Fuels Management; Forest Service WO letter 5100, Sage-Grouse Conservation Methods 2013; Idaho BLM IM 2013-036, Greater Sage-Grouse Habitat and Wildland Fire Objectives; and Idaho BLM Information Bulletin (IB) 2013-036, Interim Framework for Evaluating Proposed Activities Within Greater Sage-Grouse Preliminary Priority and Preliminary General Habitats on Bureau of Land Management (BLM) Land in Idaho). A no action alternative is required by CEQ regulations and provides a baseline for comparison of the other alternatives (CEQ 1981).

2.8.2 Management Common to Action Alternatives

The following would be common to all action alternatives:

- Allowable uses and management actions from the existing LUPs that remain valid and do not require amending are carried forward
- Where more restrictive land use allocations or decisions are made in existing RMPs, those more restrictive land use allocations or decisions will remain in effect and will not be amended by this LUPA.
- Existing requirements regarding site-specific environmental analysis, public involvement, consultation with tribes and other agencies, or compliance with applicable laws without waiver are maintained

- Appropriate, site-specific analysis as described in NEPA and any requisite site-specific decision making (i.e., 43 CFR Subpart 4160, or 36 CFR Part 251) would be conducted prior to approving proposed management actions
- Impacts analysis on other sagebrush steppe species and impacts on state endowment trust lands managed by the Idaho Department of Lands would be analyzed during site-specific project NEPA review
- Activities not specifically addressed by the alternative would still be subject to the allowances and restrictions of the applicable resource management plans
- Information in the Management Plan and Conservation Strategies for Sage-Grouse in Montana would be considered when designing projects that may affect sensitive species or federally listed species in Montana
- An oil and gas leasing decision would be made and would be consistent with the BLM and Forest Service requirements for a leasing decision as found in 43 CFR Part 3101 and 36 CFR 228.102, respectively.

Habitat boundary adjustments are described in **Appendix F**.

2.8.3 Alternative B

BLM and Forest Service management actions, in concert with other state and federal agencies and private landowners, play a critical role in the future trends of GRSG populations. The BLM National Policy Team, as part of the National Greater Sage-Grouse Planning Strategy, established the NTT in August 2011. The NTT's mission was to develop and describe conservation measures to be considered while new or revised range-wide and long term regulatory mechanisms were developed through LUPAs to conserve, enhance, and restore the portions of GRSG habitat on BLM- and Forest Service-administered lands. The BLM and Forest Service used GRSG conservation measures in A Report on National Greater Sage-Grouse Conservation Measures (Sage-Grouse National Technical Team 2011, also referred as to the NTT Report) to form management direction under Alternative B.

Conservation measures under Alternative B are focused on PHMAs (areas that have the highest conservation value to maintaining or increasing GRSG populations) and on Great Basin-wide concerns for GRSG. GRSG GHMAs are also identified, encompassing seasonal or year-round habitat. Acreages of each management area are shown in Table 2-9, Comparative Summary of Alternatives by Acres Allotted1 (Within GRSG Habitat). The BLM and Forest Service would apply a three percent surface disturbance cap on anthropogenic disturbances (not including fire) in PHMAs.

2.8.4 Alternative C

During scoping for this LUPA/EIS, individuals and conservation groups submitted management direction recommendations for protecting and conserving GRSG and habitat range-wide. The recommendations, in conjunction with resource allocation opportunities and internal sub-regional BLM and Forest Service input, were reviewed in order to develop

BLM and Forest Service management direction for GRSG under Alternative C. Management actions in Alternative C are applied to all occupied habitat (PHMA) and focus on the removal of livestock grazing from the landscape to alleviate threats to GRSG. The acreage of PHMA is shown in **Table 2-9**. Similar to Alternative B, the BLM and Forest Service would apply a three percent surface disturbance cap on anthropogenic disturbances (not including fire) in PHMAs. The BLM would designate 4 new ACECs.

2.8.5 Alternative D

This is the Idaho and Southwestern Montana Sub-region alternative. It describes conservation measures to conserve, enhance, and restore GRSG habitat on BLM- and Forest Service-administered lands, while balancing resources and resource use among competing human interests, land uses, and the conservation of natural and cultural resource values, and sustaining and enhancing ecological integrity across the landscape, including plant, wildlife, and fish habitat. This alternative incorporates the NTT strategy and includes local adjustments to A Report on National Greater Sage-Grouse Conservation Measures (NTT 2011) and habitat boundaries to provide a balanced level of protection, restoration, enhancement, and use of resources and services to meet ongoing programs and land uses.

Conservation measures under Alternative D apply to three GRSG management areas – preliminary priority management area, GHMA, and IHMA. PHMAs contain the most important and relatively intact habitats and potential restoration areas for conserving GRSG, IHMAs have some level of development or disturbance that reduces the effective character for GRSG but still provides better quality habitat than GHMAs. GHMAs represent the remaining occupied or potentially occupied habitat outside of PHMAs and IHMAs. Acreages of each management area are shown in **Table 2-9**. Under Alternative D, the BLM and Forest Service would require no net unmitigated loss of PHMAs instead of a disturbance cap.

2.8.6 Alternative E

The Idaho Governor's Alternative (Governor's Alternative), which provides the basis for Alternative E in this EIS, was developed from recommendations by the State of Idaho's GRSG Task Force and provides recommendations and policies to aid the State of Idaho in developing a conservation plan specifically adapted to Idaho GRSG populations with the objective of precluding the need to list the species under the ESA (Idaho Governor's Sage-grouse Task Force 2012). Conservation measures under Alternative E for lands in Idaho would apply to three GRSG management areas: CHZ, IHZ, and GHZ. Acreages of each habitat zone are shown in **Table 2-9**. The three proposed habitat zones represent a management continuum that includes at one end, a relatively restrictive approach aimed at providing a high level of protection to the most important CHZ. On the other end is a relatively flexible approach for GHZ, allowing for more multiple-use activities. Management under IHZ contemplates greater flexibility than in CHZ, but the overall quality and ecological importance of most of the habitat within this theme is more closely aligned with the habitat in CHZ than in GHZ. Alternative E includes a three percent disturbance cap on fluid mineral development in CHZ in Idaho and a five percent disturbance cap for IHZ. Since the sub-regional planning boundary extends into southwestern Montana and the

Sawtooth National Forest portion of Utah, management for these areas in this alternative reflect the approaches described through coordination with Montana Fish Wildlife and Parks (as part of previous planning) and the State of Utah. Lands in Montana would be managed under Alternative A. For the portion of the sub-region within Utah, PHMA and GHMA would be delineated, with the same definitions as under Alternative B.

2.8.7 Alternative F

Similar to Alternative C, Alternative F was derived from individual and conservation group scoping comments. This alternative contains a mixture of management actions from *A Report on National Greater Sage-Grouse Conservation Measures* as well as additional restrictions on resource uses and increased resource protection. As such, Alternative F provides greater restrictions on allowable uses and less resource management flexibility than Alternative B. Conservation measures in Alternative F are focused on PHMAs, GHMAs, and RHMAs. Acreages of each management area are shown in **Table 2-9**. The BLM and Forest Service would apply a three percent disturbance cap on surface disturbances (including fire) in PHMAs.

2.9 Summary Comparison of Proposed Plan Amendment and Draft Alternatives

This section summarizes and compares Alternatives A through F and the BLM and Forest Service Proposed Plans considered in the Final EIS. Combined with the appendices and maps, **Table 2-9**, Comparative Summary of Allocation Decisions of the Proposed Plan Amendment and Draft Alternatives, provides the differences among the alternatives relative to what they establish and where they occur. The table compares the differences with the most potential to affect resources among the alternatives.

Table 2-9
Comparative Summary of Alternatives by Acres Allotted[1] (Within GRSG Habitat)

Resource or Resource Use *Resources*	Total Planning Area[6]	Alternative A[7]	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
GRSG Habitat Areas (acres)		*Figure 2-17*	*Figure 2-18*	*Figure 2-19*	*Figure 2-20*	*Figure 2-21*	*Figure 2-22*	*Figure 2-3*
Planning Area Acres	**25,711,800**							
BLM	12,449,000							
Forest Service	13,262,800							
Total GRSG Management Areas		**11,338,300**	**11,106,900**	**11,106,900**	**11,338,300**	**11,149,400**	**11,607,200**	**11,106,400**
BLM		9,290,100	9,243,900	9,243,900	9,290,100	9,281,100	9,744,100	9,544,500
Forest Service		2,048,200	1,863,000	1,863,000	2,048,200	1,868,300	1,863,100	1,561,900
Priority Habitat Management Area[2]		**8,235,900**	**8,235,900**	**11,106,900**	**6,849,200**	**4,908,100**	**8,235,900**	**5,192,600**
BLM		7,272,100	7,272,100	9,243,900	6,143,500	4,367,400	7,272,100	4,627,200
Forest Service		963,900	963,900	1,863,000	705,700	540,800	963,900	565,500
Preliminary General Management Area[3]		**3,102,400**	**2,870,900**		**3,102,400**	**4,908,100**	**2,870,900**	**2,760,500**
BLM		2,018,100	1,971,800		2,018,100	4,367,400	1,971,800	2,179,700
Forest Service		1,084,300	899,100		1,084,300	540,800	899,100	580,800
Important Habitat Management Area[8]					**1,386,800**	**2,743,800**		**3,153,300**
BLM					1,128,600	2,369,500		2,737,600
Forest Service					258,200	374,300		415,700
Restoration Habitat Management Area[4]							**500,300**	
BLM							500,200	
Forest Service							150	
Sagebrush Focal Area								**3,842,900**
BLM								3,606,100
Forest Service								236,800
Livestock Grazing		*Figure 2-23*	*Figure 2-24*	*Figure 2-25*	*Figure 2-26*	*Figure 2-27*	*Figure 2-28*	*Figure 2-5*
Acres available for livestock grazing (Total)		**PHMA: 8,054,100** **GHMA: 3,019,700**	**PHMA: 8,054,100** **GHMA: 2,801,000**	**PHMA: 0**	**PHMA: 6,673,500** **IHMA: 1,380,600** **GHMA: 3,019,700**	**PHMA: 4,739,000** **IHMA: 2,712,000** **GHMA: 3,446,500**	**PHMA: 8,054,100** **GHMA: 2,801,000** **RHMA: 500,300**	**PHMA: 5,021,400** **IHMA: 3,113,500** **GHMA: 2,732,300**
Acres available for livestock grazing (BLM)		PHMA: 7,125,700 GHMA: 2,015,200	PHMA: 7,125,700 GHMA: 1,967,900	PHMA: 0	PHMA: 5,999,800 IHMA: 1,125,900 GHMA: 2,015,200	PHMA: 4,216,900 IHMA: 2,356,200 GHMA: 2,557,600	PHMA: 7,125,700 GHMA: 1,967,900 RHMA: 500,200	PHMA: 4,474,400 IHMA: 2,719,800 GHMA: 2,194,600

Table 2-9
Comparative Summary of Alternatives by Acres Allotted[1] (Within GRSG Habitat)

Resource or Resource Use	Total Planning Area[6]	Alternative A[7]	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
Acres available for livestock grazing (Forest Service)		PHMA: 928,400 GHMA: 1,004,600	PHMA: 928,400 GHMA: 833,100	PHMA: 0	PHMA: 673,800 IHMA: 254,700 GHMA: 1,004,600	PHMA: 522,100 IHMA: 355,800 GHMA: 888,900	PHMA: 928,400 GHMA: 833,100 RHMA: 140	PHMA: 547,0100 IHMA: 393,800 GHMA: 537,700
Acres unavailable for livestock grazing (Total)		**PHMA: 179,800** **GHMA: 107,800**	**PHMA: 179,800** **GHMA: 94,500**	**PHMA: 11,132,500**	**PHMA: 173,900** **IHMA: 5,900** **GHMA: 107,800**	**PHMA: 168,000** **IHMA: 31,100** **GHMA: 75,200**	**PHMA: 179,800** **GHMA: 94,500** **RHMA: 0**	**PHMA: 169,800** **IHMA: 39,200** **GHMA: 53,100**
Acres unavailable for livestock grazing (BLM)		PHMA: 146,300 GHMA: 29,500	PHMA: 146,300 GHMA: 29,500	PHMA: 9,269,500	PHMA: 143,600 IHMA: 2,680 GHMA: 29,500	PHMA: 150,400 IHMA: 13,300 GHMA: 12,200	PHMA: 146,300 GHMA: 29,500 RHMA: 0	PHMA: 152,800 IHMA: 17,800 GHMA: 10,700
Acres unavailable for livestock grazing (Forest Service)		PHMA: 33,500 GHMA: 78,300	PHMA: 33,500 GHMA: 64,900	PHMA: 1,863,000	PHMA: 30,300 IHMA: 3,240 GHMA: 78,300	PHMA: 17,600 IHMA: 17,800 GHMA: 63,000	PHMA: 33,500 GHMA: 65,000 RHMA: 0	PHMA: 17,000 IHMA: 21,300 GHMA: 42,400
Travel and Transportation		***Figure 2-29***	***Figure 2-30***	***Figure 2-31***	***Figure 2-32***	***Figure 2-33***	***Figure 2-34***	***Figure 2-16***
Acres open to cross-county OHV travel (Total)		**PHMA: 2,215,000** **GHMA: 666,600**	**PHMA: 790** **GHMA: 560**	**PHMA: 1,350**	**PHMA: 0** **IHMA: 790** **GHMA: 560**	**PHMA: 530** **IHMA: 708,700** **GHMA: 1,075,100**	**PHMA: 790** **GHMA: 560** **RHMA: 254,800**	**PHMA: 0** **IHMA: 4,160** **GHMA: 420**

Table 2-9
Comparative Summary of Alternatives by Acres Allotted[1] (Within GRSG Habitat)

Resource or Resource Use	Total Planning Area[6]	Alternative A[7]	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
Open to cross-country OHV travel (BLM)		PHMA: 2,214,200 GHMA: 666,100	PHMA: 0 GHMA: 50	PHMA: 50	PHMA: 0 IHMA: 0 GHMA: 50	PHMA: 530 IHMA: 707,900 GHMA: 1,074,600	PHMA: 0 GHMA: 50 RHMA: 254,800	PHMA: 0 IHMA: 3,360 GHMA: 0
Open to cross-country OHV travel (Forest Service)		PHMA: 790 GHMA: 500	PHMA: 790 GHMA: 500	PHMA: 1,300	PHMA: 0 IHMA: 790 GHMA: 500	PHMA: 0 IHMA: 800 GHMA: 500	PHMA: 790 GHMA: 500 RHMA: 0	PHMA: 0 IHMA: 800 GHMA: 420
Acres closed to OHV travel (Total)		**PHMA: 551,600 GHMA: 166,000**	**PHMA: 551,600 GHMA: 154,500**	**PHMA: 706,200**	**PHMA: 519,700 IHMA: 31,900 GHMA: 166,000**	**PHMA: 505,600 IHMA: 96,600 GHMA: 105,600**	**PHMA: 551,600 GHMA: 154,500 RHMA: 10,700**	**PHMA: 556,000 IHMA: 82,500 GHMA: 72,200**
Closed to OHV travel (BLM)		PHMA: 551,600 GHMA: 159,800	PHMA: 551,600 GHMA: 154,500	PHMA: 706,200	PHMA: 519,700 IHMA: 31,900 GHMA: 159,800	PHMA: 505,600 IHMA: 96,600 GHMA: 105,600	PHMA: 551,600 GHMA: 154,500 RHMA: 10,700	PHMA: 556,000 IHMA: 82,500 GHMA: 72,200
Closed to OHV travel (Forest Service)		PHMA: 0 GHMA: 6,190	PHMA: 0 GHMA: 0	PHMA: 0	PHMA: 0 IHMA: 0 GHMA: 6,190	PHMA: 0 IHMA: 0 GHMA: 0	PHMA: 0 GHMA: 0 RHMA 0	PHMA: 0 IHMA: 0 GHMA: 0

Table 2-9
Comparative Summary of Alternatives by Acres Allotted[1] (Within GRSG Habitat)

Resource or Resource Use	Total Planning Area[6]	Alternative A[7]	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
Acres limited to existing or designated routes (Total)		**PHMA: 5,469,300** **GHMA: 2,296,500**	**PHMA: 7,683,500** **GHMA: 2,741,400**	**PHMA: 10,425,000**	**PHMA: 6,329,400** **IHMA: 1,354,100** **GHMA: 2,962,500**	**PHMA: 4,402,000** **IHMA: 1,938,500** **GHMA: 2,342,300**	**PHMA: 7,683,500** **GHMA: 2,741,400** **RHMA: 234,900**	**PHMA: 4,636,600** **IHMA: 3,066,700** **GHMA: 2,713,500**
Limited to existing roads and trails (BLM)		PHMA: 4,506,200 GHMA: 1,218,800	PHMA: 6,720,400 GHMA: 1,842,800	PHMA: 8,563,300	PHMA: 5,623,700 IHMA: 1,096,700 GHMA: 1,884,900	PHMA: 3,861,200 IHMA: 1,565,000 GHMA: 1,389,600	PHMA: 6,720,400 GHMA: 1,842,800 RHMA: 234,700	PHMA: 4,071,200 IHMA: 2,651,800 GHMA: 2,133,200
Limited to designated routes (Forest Service)		PHMA: 963,100 GHMA: 1,077,600	PHMA: 963,100 GHMA: 898,600	PHMA: 1,861,700	PHMA: 705,700 IHMA: 257,400 GHMA: 1,077,600	PHMA: 540,800 IHMA: 373,500 GHMA: 952,700	PHMA: 963,100 GHMA: 898,600 RHMA: 150	PHMA: 565,400 IHMA: 414,900 GHMA: 580,300
Total Acres		**11,365,000**	**11,132,500**	**11,132,500**	**11,365,000**	**11,175,000**	**11,632,800**	**11,132,000**
Lands and Realty (acres)								
High Voltage Transmission Line and Large Pipeline ROW		***Figure 2-35***	***Figure 2-36***	***Figure 2-37***	***Figure 2-38***	***Figure 2-39***	***Figure 2-40***	***Figure 2-8***
Right-of-way (ROW) exclusion areas (Total)		**PHMA: 685,000** **GHMA: 343,500**	**PHMA: 8,191,300** **GHMA: 292,700**	**PHMA: 11,023,100**	**PHMA: 544,800** **IHMA: 140,300** **GHMA: 343,400**	**PHMA: 491,100** **IHMA: 178,000** **GHMA: 310,000**	**PHMA: 8,191,300** **GHMA: 292,700** **RHMA: 39,400**	**PHMA: 4,542,000** **IHMA: 2,994,900** **GHMA: 828,100**

Table 2-9
Comparative Summary of Alternatives by Acres Allotted[1] (Within GRSG Habitat)

Resource or Resource Use	Total Planning Area[6]	Alternative A[7]	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
ROW exclusion areas (BLM)		PHMA: 609,300 GHMA: 191,000	PHMA: 7,229,300 GHMA: 191,000	PHMA: 9,162,100	PHMA: 469,700 IHMA: 139,600 GHMA: 191,000	PHMA: 417,500 IHMA: 176,300 GHMA: 208,200	PHMA: 7,229,300 GHMA: 191,000 RHMA: 39,400	PHMA: 472,400 IHMA: 130,600 GHMA: 247,200
ROW exclusion areas (Forest Service)		PHMA: 75,700 GHMA: 152,500	PHMA: 962,100 GHMA: 101,700	PHMA: 1,860,900	PHMA: 75,100 IHMA: 670 GHMA: 152,500	PHMA: 73,600 IHMA: 1,730 GHMA: 101,800	PHMA: 962,100 GHMA: 101,700 RHMA: 0	PHMA: 77,400 IHMA: 1,760 GHMA: 84,300
ROW exclusion with limited exceptions (BLM)		PHMA: 0 GHMA: 0	PHMA: 6,616,100 GHMA: 0	PHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0	PHMA: 0 GHMA: 0 RHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0
ROW exclusion with limited exceptions (Forest Service)		PHMA: 0 GHMA: 0	PHMA: 884,900 GHMA: 0	PHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0	PHMA: 0 GHMA: 0 RHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0
ROW avoidance areas (Total)		**PHMA: 1,117,800 GHMA: 838,400**	**PHMA: 0 GHMA: 2,539,000**	**PHMA: 0**	**PHMA: 0 IHMA: 1,241,800 GHMA: 2,718,000**	**PHMA: 3,974,200 IHMA: 2,553,100 GHMA: 816,100**	**PHMA: 0 GHMA: 2,539,000 RHMA: 17,300**	**PHMA: 4,542,000 IHMA: 2,994,900 GHMA: 828,100**
ROW avoidance areas (BLM)		PHMA: 601,900 GHMA: 258,900	PHMA: 0 GHMA: 1,741,900	PHMA: 0	PHMA: 0 IHMA: 986,100 GHMA: 1,786,400	PHMA: 3,507,700 IHMA: 2,182,300 GHMA: 274,600	PHMA: 0 GHMA: 1,741,900 RHMA: 17,100	PHMA: 4,125,900 IHMA: 2,583,200 GHMA: 365,200

Table 2-9
Comparative Summary of Alternatives by Acres Allotted[1] (Within GRSG Habitat)

Resource or Resource Use	Total Planning Area[6]	Alternative A[7]	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
ROW avoidance areas (Forest Service)		PHMA: 515,900 GHMA: 579,500	PHMA: 0 GHMA: 797,200	PHMA: 0	PHMA: 0 IHMA: 255,700 GHMA: 931,600	PHMA: 466,600 IHMA: 370,800 GHMA: 541,500	PHMA: 0 GHMA: 797,200 RHMA: 140	PHMA: 416,100 IHMA: 411,700 GHMA: 462,900
ROW avoidance with limited exclusion (BLM)		PHMA: 0 GHMA: 0	PHMA: 0 GHMA: 0	PHMA: 0	PHMA: 5,633,900 IHMA: 0 GHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0	PHMA: 0 GHMA: 0 RHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0
ROW avoidance with limited exclusion (Forest Service)		PHMA: 0 GHMA: 0	PHMA: 0 GHMA: 0	PHMA: 0	PHMA: 630,600 IHMA: 0 GHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0	PHMA: 0 GHMA: 0 RHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0
Minor ROW		***Figure 2-35***	***Figure 2-36***	***Figure 2-37***	***Figure 2-38***	***Figure 2-39***	***Figure 2-40***	***Figure 2-9***
Right-of-way (ROW) exclusion areas (Total)		**PHMA: 685,000** **GHMA: 343,500**	**PHMA: 690,400** **GHMA: 292,700**	**PHMA: 11,023,100**	**PHMA: 544,800** **IHMA: 140,300** **GHMA: 343,400**	**PHMA: 491,100** **IHMA: 178,000** **GHMA: 310,000**	**PHMA: 8,191,300** **GHMA: 292,700** **RHMA: 39,400**	**PHMA: 549,800** **IHMA: 132,400** **GHMA: 331,500**
ROW exclusion areas (BLM)		PHMA: 609,300 GHMA: 191,000	PHMA: 613,200 GHMA: 191,000	PHMA: 9,162,100	PHMA: 469,700 IHMA: 139,600 GHMA: 191,000	PHMA: 417,500 IHMA: 176,300 GHMA: 208,200	PHMA: 7,229,300 GHMA: 191,000 RHMA: 39,400	PHMA: 472,400 IHMA: 130,600 GHMA: 247,200

Table 2-9
Comparative Summary of Alternatives by Acres Allotted[1] (Within GRSG Habitat)

Resource or Resource Use	Total Planning Area[6]	Alternative A[7]	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
ROW exclusion areas (Forest Service)		PHMA: 75,700 GHMA: 152,500	PHMA: 77,200 GHMA: 101,700	PHMA: 1,860,900	PHMA: 75,100 IHMA: 670 GHMA: 152,500	PHMA: 73,600 IHMA: 1,730 GHMA: 101,800	PHMA: 962,100 GHMA: 101,700 RHMA: 0	PHMA: 77,400 IHMA: 1,760 GHMA: 84,300
ROW exclusion with limited exceptions (BLM)		PHMA: 0 GHMA: 0	PHMA: 6,616,100 GHMA: 0	PHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0	PHMA: 9 GHMA: 0 RHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0
ROW exclusion with limited exceptions (Forest Service)		PHMA: 0 GHMA: 0	PHMA: 884,900 GHMA: 0	PHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0	PHMA: 0 GHMA: 0 RHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0
ROW avoidance areas (Total)		**PHMA: 1,117,800 GHMA: 838,400**	**PHMA: 0 GHMA: 2,539,000**	**PHMA: 0**	**PHMA: 0 IHMA: 1,241,800 GHMA: 2,718,000**	**PHMA: 3,974,200 IHMA: 2,553,100 GHMA: 816,100**	**PHMA: 0 GHMA: 2,539,000 RHMA: 17,300**	**PHMA: 4,613,900 IHMA: 2,994,900 GHMA: 664,500**
ROW avoidance areas (BLM)		PHMA: 601,900 GHMA: 258,900	PHMA: 0 GHMA: 1,741,900	PHMA: 0	PHMA: 0 IHMA: 986,100 GHMA: 1,786,400	PHMA: 3,507,700 IHMA: 2,182,300 GHMA: 274,600	PHMA: 0 GHMA: 1,741,900 RHMA: 17,100	PHMA: 4,125,900 IHMA: 2,583,200 GHMA: 168,000
ROW avoidance areas (Forest Service)		PHMA: 515,900 GHMA: 579,500	PHMA: 0 GHMA: 797,200	PHMA: 0	PHMA: 0 IHMA: 255,700 GHMA: 931,600	PHMA: 466,600 IHMA: 370,800 GHMA: 541,500	PHMA: 0 GHMA: 797,200 RHMA: 140	PHMA: 488,000 IHMA: 411,700 GHMA: 496,400

Table 2-9
Comparative Summary of Alternatives by Acres Allotted[1] (Within GRSG Habitat)

Resource or Resource Use	Total Planning Area[6]	Alternative A[7]	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
ROW avoidance with limited exclusion (BLM)		PHMA: 0 GHMA: 0	PHMA: 0 GHMA: 0	PHMA: 0	PHMA: 5,633,900 IHMA: 0 GHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0	PHMA: 0 GHMA: 0 RHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0
ROW avoidance with limited exclusion (Forest Service)		PHMA: 0 GHMA: 0	PHMA: 0 GHMA: 0	PHMA: 0	PHMA: 630,600 IHMA: 0 GHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0	PHMA: 0 GHMA: 0 RHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0
Wind and Solar ROW		***Figure 2-41***	***Figure 2-42***	***Figure 2-43***	***Figure 2-44***	***Figure 2-45***	***Figure 2-46***	***Figure 2-4***
Wind / Solar Exclusion Area (Total)		**PHMA: 523,700** **GHMA: 1,419,900**	**PHMA: 8,139,300** **GHMA: 460,400**	**PHMA: 10,983,000**	**PHMA: 6,756,600** **IHMA: 0** **GHMA: 0**	**PHMA: 1,046,900** **IHMA: 253,700** **GHMA: 588,400**	**PHMA: 8,139,300** **GHMA: 460,400** **RHMA: 59,300**	**PHMA: 5,120,700** **IHMA: 778,400** **GHMA: 453,100**
Wind / Solar Exclusion Area (BLM)		PHMA: 371,700 GHMA: 1,344,100	PHMA: 7,248,500 GHMA: 359,000	PHMA: 9,193,100	PHMA: 6,122,800 IHMA: 0 GHMA: 0	PHMA: 973,300 IHMA: 251,900 GHMA: 486,900	PHMA: 7,248,500 GHMA: 359,000 RHMA: 59,300	PHMA: 4,627,200 IHMA: 362,700 GHMA: 369,000
Wind / Solar Exclusion Area (Forest Service)		PHMA: 152,000 GHMA: 75,700	PHMA: 890,800 GHMA: 101,400	PHMA: 1,789,900	PHMA: 633,800 IHMA: 0 GHMA: 0	PHMA: 73,600 IHMA: 1,730 GHMA: 101,500	PHMA: 890,800 GHMA: 101,400 RHMA: 0	PHMA: 493,500 IHMA: 415,700 GHMA: 84,100
Wind / Solar Avoidance Area (Total)		**PHMA: 716,500** **GHMA: 622,700**	**PHMA: 0** **GHMA: 2,383,200**	**PHMA: 0**	**PHMA: 0** **IHMA: 1,382,700** **GHMA: 3,075,100**	**PHMA: 3,384,600** **IHMA: 2,478,500** **GHMA: 684,000**	**PHMA: 0** **GHMA: 2,383,200** **RHMA: 6,880**	**PHMA: 0** **IHMA: 2,374,900** **GHMA: 610,300**

Table 2-9
Comparative Summary of Alternatives by Acres Allotted[1] (Within GRSG Habitat)

Resource or Resource Use	Total Planning Area[6]	Alternative A[7]	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
Wind / Solar Avoidance Area (BLM)		PHMA: 140,800 GHMA: 179,400	PHMA: 0 GHMA: 1,585,600	PHMA: 0	PHMA: 0 IHMA: 1,125,700 GHMA: 1,990,800	PHMA: 2,990,000 IHMA: 2,107,000 GHMA: 144,700	PHMA: 0 GHMA: 1,585,600 RHMA: 6,740	PHMA: 0 IHMA: 2,374,900 GHMA: 113,600
Wind / Solar Avoidance Area (Forest Service)		PHMA: 575,600 GHMA: 443,300	PHMA: 0 GHMA: 797,600	PHMA: 0	PHMA: 0 IHMA: 257,100 GHMA: 1,084,300	PHMA: 394,700 IHMA: 371,500 GHMA: 539,200	PHMA: 0 GHMA: 797,600 RHMA: 140	PHMA: 0 IHMA: 0 GHMA: 496,700
Wind / Solar Open Area (Total)		**PHMA: 1,862,300 GHMA: 6,121,500**	**PHMA: 24,700 GHMA: 27,300**	**PHMA: 52,000**	**PHMA: 20,600 IHMA: 4,050 GHMA: 27,300**	**PHMA: 404,700 IHMA: 11,700 GHMA: 2,225,000**	**PHMA: 24,700 GHMA: 27,300 RHMA: 434,100**	**PHMA: 0 IHMA: 0 GHMA: 1,697,000**
Wind / Solar Open Area (BLM)		PHMA: 1,505,500 GHMA: 5,748,500	PHMA: 23,600 GHMA: 27,200	PHMA: 50,800	PHMA: 20,600 IHMA: 2,940 GHMA: 27,200	PHMA: 404,100 IHMA: 10,600 GHMA: 1,912,600	PHMA: 23,600 GHMA: 27,200 RHMA: 434,100	PHMA: 0 IHMA: 0 GHMA: 1,697,000
Wind / Solar Open Area (Forest Service)		PHMA: 356,700 GHMA: 372,900	PHMA: 1,110 GHMA: 40	PHMA: 1,160	PHMA: 0 IHMA: 1,110 GHMA: 40	PHMA: 590 IHMA: 1,110 GHMA: 312,400	PHMA: 1,110 GHMA: 40 RHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0
Existing Designated Utility Corridors		***Figure 2-47***	***Figure 2-48***	***Figure 2-49***	***Figure 2-50***	***Figure 2-51***	***Figure 2-52***	***Figure 2-7***

Table 2-9
Comparative Summary of Alternatives by Acres Allotted[1] (Within GRSG Habitat)

Resource or Resource Use	Total Planning Area[6]	Alternative A[7]	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
Utility Corridors (Total)		**PHMA: 44,600** **GHMA: 41,000**	**PHMA: 44,600** **GHMA: 39,200**	**PHMA: 83,800**	**PHMA: 39,800** **IHMA: 4,750** **GHMA: 41,000**	**PHMA: 31,000** **IHMA: 12,800** **GHMA: 40,000**	**PHMA: 44,600** **GHMA: 39,200** **RHMA: 6,450**	**PHMA: 28,900** **IHMA: 26,000** **GHMA: 33,600**
Utility corridors (BLM)		PHMA: 42,800 GHMA: 40,700	PHMA: 42,800 GHMA: 39,000	PHMA: 81,700	PHMA: 39,800 IHMA: 2,940 GHMA: 40,700	PHMA: 31,000 IHMA: 11,000 GHMA: 39,800	PHMA: 42,800 GHMA: 39,000 RHMA: 6,450	PHMA: 28,900 IHMA: 23,800 GHMA: 33,600
Utility corridors (Forest Service)		PHMA: 1,800 GHMA: 250	PHMA: 1,800 GHMA: 250	PHMA: 2,050	PHMA: 0 IHMA: 1,800 GHMA: 250	PHMA: 0 IHMA: 1,800 GHMA: 250	PHMA: 1,800 GHMA: 250 RHMA: 0	PHMA: 0 IHMA: 2,200 GHMA: 0
Fluid Mineral Leasing (acres)[1]		***Figures 2-53, 2-59***	***Figures 2-54, 2-60***	***Figures 2-55, 2-61***	***Figures 2-56, 2-62***	***Figures 2-57, 2-63***	***Figures 2-58, 2-64***	***Figures 2-11, 2-12***
<u>Closed</u> to fluid mineral leasing (Total)		**PHMA: 1,723,900** **GHMA: 990,800**	**PHMA: 9,101,600** **GHMA: 1,090,400**	**PHMA: 20,168,900**	**PHMA: 6,545,200** **IHMA: 1,355,700** **GHMA: 990,800**	**PHMA: 1,142,800** **IHMA: 424,200** **GHMA: 1,045,000**	**PHMA: 8,056,200** **GHMA: 878,100** **RHMA: 32,100**	**SFA: 936,000** **PHMA: 260,300** **IHMA: 607,800** **GHMA: 549,100**

Table 2-9
Comparative Summary of Alternatives by Acres Allotted[1] (Within GRSG Habitat)

Resource or Resource Use	Total Planning Area[6]	Alternative A[7]	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
BLM		PHMA: 1,177,200 GHMA: 295,400	PHMA: 7,203,600 GHMA: 287,400	PHMA: 10,011,300	PHMA: 5,947,700 IHMA: 1,112,100 GHMA: 295,400	PHMA: 809,100 IHMA: 238,900 GHMA: 420,700	PHMA: 7,203,600 GHMA: 287,400 RHMA: 32,100	SFA: 804,500 PHMA: 45,100 IHMA: 394,200 GHMA: 203,100
Forest Service		PHMA: 546,700 GHMA: 695,400	PHMA: 852,600 GHMA: 590,700	PHMA: 10,157,600	PHMA: 597,500 IHMA: 243,600 GHMA: 695,300	PHMA: 333,600 IHMA: 185,300 GHMA: 624,300	PHMA: 852,600 GHMA: 590,700 RHMA: 0	SFA: 130,900 PHMA: 208,700 IHMA: 209,700 GHMA: 338,300
<u>Open</u> to fluid mineral leasing (Total)		**PHMA: 6,973,000 GHMA: 2,531,000**	**PHMA: 0 GHMA: 2,384,600**	**PHMA: 6,093,000**	**PHMA: 217,100 IHMA: 0 GHMA: 2,531,000**	**PHMA: 4,032,300 IHMA: 2,461,100 GHMA: 2,898,000**	**PHMA: 0 GHMA: 2,384,600 RHMA: 509,500**	**SFA: 3,162,400 PHMA: 1,579,500 IHMA: 3,104,700 GHMA: 2,667,000**
BLM		PHMA: 6,667,100 GHMA: 2,161,200	PHMA: 0 GHMA: 2,093,300	PHMA: 3,238,100	PHMA: 205,700 IHMA: 0 GHMA: 2,161,200	PHMA: 3,897,400 IHMA: 2,304,000 GHMA: 2,593,700	PHMA: 0 GHMA: 2,093,300 RHMA: 509,300	SFA: 2,924,200 PHMA: 1,379,700 IHMA: 2,761,700 GHMA: 2,435,500

Table 2-9
Comparative Summary of Alternatives by Acres Allotted[1] (Within GRSG Habitat)

Resource or Resource Use	Total Planning Area[6]	Alternative A[7]	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
Forest Service		PHMA: 305,900 GHMA: 369,800	PHMA: 0 GHMA: 291,300	PHMA: 2,854,900	PHMA: 11,500 IHMA: 0 GHMA: 369,800	PHMA: 134,900 IHMA: 157,200 GHMA: 304,300	PHMA: 0 GHMA: 291,300 RHMA: 150	SFA: 238,200 PHMA: 199,800 IHMA: 343,100 GHMA: 231,500
Open to fluid mineral leasing subject to standard lease stipulations		**PHMA: 4,942,000** **GHMA: 1,385,500**	**PHMA: 0** **GHMA: 1,361,100**	**PHMA: 2,741,600**	**PHMA: 0** **IHMA: 0** **GHMA: 0**	**PHMA: 54,500** **IHMA: 0** **GHMA: 1,752,500**	**PHMA: 0** **GHMA: 1,361,100** **RHMA: 462,500**	**SFA: 0** **PHMA: 0** **IHMA: 0** **GHMA: 0**
BLM		PHMA: 4,884,240 GHMA: 1,324,028	PHMA: 0 GHMA: 1,318,211	PHMA: 1,883,674	PHMA: 0 IHMA: 0 GHMA: 0	PHMA: 54,420 IHMA: 0 GHMA: 1,707,682	PHMA: 0 GHMA: 1,318,211 RHMA: 462,504	SFA: 0 PHMA: 0 IHMA: 0 GHMA: 0
Forest Service		PHMA: 57,700 GHMA: 61,500	PHMA: 0 GHMA: 42,900	PHMA: 857,900	PHMA: 0 IHMA: 0 GHMA: 0	PHMA: 60 IHMA: 0 GHMA: 44,900	PHMA: 0 GHMA: 42,900 RHMA: 0	SFA: 0 PHMA: 0 IHMA: 0 GHMA: 0
Open to leasing subject to No Surface Occupancy (NSO)		**PHMA: 587,700** **GHMA: 343,300**	**PHMA: 0** **GHMA: 271,100**	**PHMA: 928,600**	**PHMA: 62,600** **IHMA: 0** **GHMA: 368,700**	**PHMA: 3,380,400** **IHMA: 2,260,500** **GHMA: 338,500**	**PHMA: 0** **GHMA: 271,100** **RHMA: 5,480**	**SFA: 3,138,700** **PHMA: 4,292,500** **IHMA: 2,913,900** **GHMA: 321,200**

Table 2-9
Comparative Summary of Alternatives by Acres Allotted[1] (Within GRSG Habitat)

Resource or Resource Use	Total Planning Area[6]	Alternative A[7]	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
BLM		PHMA: 546,100 GHMA: 192,500	PHMA: 0 GHMA: 180,300	PHMA: 273,100	PHMA: 51,200 IHMA: 0 GHMA: 216,800	PHMA: 3,245,800 IHMA: 2,103,300 GHMA: 247,400	PHMA: 0 GHMA: 180,300 RHMA: 5,480	SFA: 2,900,500 PHMA: 3,854,500 IHMA: 2,570,800 GHMA: 239,700
Forest Service		PHMA: 41,600 GHMA: 150,800	PHMA: 0 GHMA: 90,800	PHMA: 655,500	PHMA: 11,400 IHMA: 0 GHMA: 152,000	PHMA: 134,500 IHMA: 157,200 GHMA: 91,100	PHMA: 0 GHMA: 90,800 RHMA: 0	SFA: 238,200 PHMA: 438,000 IHMA: 343,100 GHMA: 81,600
Open to leasing subject to Controlled Surface Use (CSU)		**PHMA: 206,400 GHMA: 150,400**	**PHMA: 0 GHMA: 150,400**	**PHMA: 1,306,500**	**PHMA: 92,700 IHMA: 0 GHMA: 149,500**	**PHMA: 0 IHMA: 0 GHMA: 161,500**	**PHMA: 0 GHMA: 150,400 RHMA: 140**	**SFA: 0 PHMA: 0 IHMA: 0 GHMA: 1,861,900**
BLM		PHMA: 350 GHMA: 1,380	PHMA: 0 GHMA: 1,380	PHMA: 4,300	PHMA: 92,600 IHMA: 0 GHMA: 1,370	PHMA: 0 IHMA: 0 GHMA: 1,730	PHMA: 0 GHMA: 1,380 RHMA: 0	SFA: 0 PHMA: 0 IHMA: 0 GHMA: 1,716,000
Forest Service		PHMA: 206,100 GHMA: 149,000	PHMA: 0 GHMA: 149,000	PHMA: 1,302,200	PHMA: 40 IHMA: 0 GHMA: 148,200	PHMA: 0 IHMA: 0 GHMA: 159,800	PHMA: 0 GHMA: 149,000 RHMA: 0	SFA: 0 PHMA: 0 IHMA: 0 GHMA: 145,900
Open to leasing subject to Timing		**PHMA:**	**PHMA: 0**	**PHMA:**	**PHMA: 0**	**PHMA:**	**PHMA: 0**	**SFA: 0**

Table 2-9
Comparative Summary of Alternatives by Acres Allotted[1] (Within GRSG Habitat)

Resource or Resource Use	Total Planning Area[6]	Alternative A[7]	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
Limitations (TL)		**596,200** **GHMA: 192,500**	 **GHMA: 172,600**	**193,700**	 **IHMA: 0** **GHMA: 1,553,300**	**218,900** **IHMA: 0** **GHMA: 152,100**	 **GHMA: 172,600** **RHMA: 0**	**PHMA: 0** **IHMA: 0** **GHMA: 4,030**
BLM		PHMA: 595,700 GHMA: 183,900	PHMA: 0 GHMA: 164,000	PHMA: 154,300	PHMA: 0 IHMA: 0 GHMA: 1,483,600	PHMA: 218,500 IHMA: 0 GHMA: 143,500	PHMA: 0 GHMA: 164,000 RHMA: 0	SFA: 0 PHMA: 0 IHMA: 0 GHMA: 0
Forest Service		PHMA: 430 GHMA: 8,600	PHMA: 0 GHMA: 8,570	PHMA: 39,300	PHMA: 0 IHMA: 0 GHMA: 69,700	PHMA: 360 IHMA: 0 GHMA: 8,580	PHMA: 0 GHMA: 8,570 RHMA: 0	SFA: 0 PHMA: 0 IHMA: 0 GHMA: 4,030
Locatable Minerals, Mineral Materials, and Non-Energy Solid Leasable Minerals (acres)								
Locatable minerals		***Figure 2-65***	***Figure 2-66***	***Figure 2-67***	***Figure 2-68***	***Figure 2-69***	***Figure 2-70***	***Figure 2-13***
Locatable minerals - withdrawn or recommended for withdrawal		**PHMA: 1,365,000** **GHMA: 433,200**	**PHMA: 9,365,600** **GHMA: 417,600**	**PHMA: 13,337,700**	**PHMA: 1,217,300** **IHMA: 147,800** **GHMA: 433,200**	**PHMA: 958,700** **IHMA: 321,200** **GHMA: 511,200**	**PHMA: 9,365,600** **GHMA: 417,600** **RHMA: 82,600**	**SFA: 3,861,300** **PHMA: 91,800** **IHMA: 447,700** **GHMA: 316,300**

Table 2-9
Comparative Summary of Alternatives by Acres Allotted[1] (Within GRSG Habitat)

Resource or Resource Use	Total Planning Area[6]	Alternative A[7]	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
BLM		PHMA: 1,343,200 GHMA: 390,200	PHMA: 8,403,700 GHMA: 382,200	PHMA: 11,481,100	PHMA: 1,207,600 IHMA: 135,600 GHMA: 390,200	PHMA: 951,700 IHMA: 307,300 GHMA: 474,800	PHMA: 8,403,700 GHMA: 382,200 RHMA: 82,600	SFA: 3,624,600 PHMA: 88,700 IHMA: 432,800 GHMA: 276,500
Forest Service		PHMA: 21,800 GHMA: 43,000	PHMA: 962,000 GHMA: 35,400	PHMA: 1,856,600	PHMA: 9,680 IHMA: 12,100 GHMA: 43,000	PHMA: 7,040 IHMA: 13,800 GHMA: 36,400	PHMA: 962,000 GHMA: 35,400 RHMA: 0	SFA: 236,700 PHMA: 3,080 IHMA: 14,900 GHMA: 39,800
Mineral Materials		***Figure 2-77***	***Figure 2-78***	***Figure 2-79***	***Figure 2-80***	***Figure 2-81***	***Figure 2-82***	***Figure 2-15***
Closed to mineral materials disposal		**PHMA: 1,038,400 GHMA: 820,400**	**PHMA: 8,772,500 GHMA: 718,600**	**PHMA: 12,015,700**	**PHMA: 3,004,800 IHMA: 359,600 GHMA: 934,700**	**PHMA: 819,500 IHMA: 261,000 GHMA: 686,100**	**PHMA: 8,127,400 GHMA: 717,100 RHMA: 14,100**	**PHMA: 5,583,000 IHMA: 283,100 GHMA: 405,400**
BLM		PHMA: 542,300 GHMA: 168,500	PHMA: 7,848,200 GHMA: 168,500	PHMA: 10,209,700	PHMA: 2,583,500 IHMA: 209,300 GHMA: 270,600	PHMA: 504,700 IHMA: 103,700 GHMA: 105,900	PHMA: 7,203,200 GHMA: 167,000 RHMA: 14,100	PHMA: 5,018,100 IHMA: 86,500 GHMA: 72,900

Table 2-9
Comparative Summary of Alternatives by Acres Allotted[1] (Within GRSG Habitat)

Resource or Resource Use	Total Planning Area[6]	Alternative A[7]	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
Forest Service		PHMA: 496,100 GHMA: 651,900	PHMA: 550,100 GHMA: 924,200	PHMA: 1,806,000	PHMA: 421,300 IHMA: 150,300 GHMA: 664,100	PHMA: 314,800 IHMA: 157,300 GHMA: 580,200	PHMA: 924,200 GHMA: 550,100 RHMA: 0	PHMA: 564,800 IHMA: 196,600 GHMA: 332,500
Nonenergy Leasable Minerals		***Figure 2-71***	***Figure 2-72***	***Figure 2-73***	***Figure 2-74***	***Figure 2-75***	***Figure 2-76***	***Figure 2-14***
Closed to non-energy mineral leasing		**PHMA: 1,351,600** **GHMA: 893,100**	**PHMA: 8,055,600** **GHMA: 782,700**	**PHMA: 10,887,500**	**PHMA: 1,154,800** **IHMA: 196,800** **GHMA: 893,100**	**PHMA: 1,046,800** **IHMA: 308,600** **GHMA: 788,900**	**PHMA: 8,055,600** **GHMA: 782,700** **RHMA: 29,800**	**PHMA: 5,079,100** **IHMA: 369,800** **GHMA: 465,000**
BLM		PHMA: 855,100 GHMA: 225,300	PHMA: 7,203,200 GHMA: 217,300	PHMA: 9,153,400	PHMA: 805,300 IHMA: 49,800 GHMA: 225,300	PHMA: 732,000 IHMA: 150,800 GHMA: 193,500	PHMA: 7,203,200 GHMA: 217,300 RHMA: 29,800	PHMA: 4,586,100 IHMA: 172,600 GHMA: 116,800
Forest Service		PHMA: 496,500 GHMA: 667,800	PHMA: 852,400 GHMA: 565,400	PHMA: 1,734,100	PHMA: 349,500 IHMA: 147,000 GHMA: 667,800	PHMA: 314,800 IHMA: 157,800 GHMA: 595,400	PHMA: 852,400 GHMA: 565,400 RHMA: 0	PHMA: 493,000 IHMA: 197,200 GHMA: 348,300
Special Designations								
Areas of Critical Environmental Concern (acres, BLM only)		***Figure 2-83***		***Figure 2-84***			***Figures 2-85, 2-86***	

Table 2-9
Comparative Summary of Alternatives by Acres Allotted[1] (Within GRSG Habitat)

Resource or Resource Use	Total Planning Area[6]	Alternative A[7]	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
ACEC		PHMA: 342,400 GHMA: 126,800	PHMA: 342,400 GHMA: 126,800	PHMA: 3,118,700	PHMA: 317,300 IHMA: 25,100 GHMA: 126,800	PHMA: 356,900 IHMA: 51,400 GHMA: 62,000	Alternative F1 PHMA: 6,929,600 GHMA: 0 RHMA: 0 Alternative F2 PHMA: 1,379,100 GHMA: 0 RHMA: 0	PHMA: 331,900 IHMA: 79,400 GHMA: 57,900
Zoological Areas		PHMA: 0 GHMA: 0	PHMA: 0 GHMA: 0	PHMA: 38,800	PHMA: 0 IHMA: 0 GHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0	Alternative F1 PHMA: 963,800 GHMA: 0 RHMA: 0 Alternative F2 PHMA: 223,700 GHMA: 0 RHMA: 0	PHMA: 0 IHMA: 0 GHMA: 0
Wilderness Study Areas								
Wilderness Study Areas		**PHMA: 420,100 GHMA: 98,000**	**PHMA: 420,100 GHMA: 90,000**	**PHMA: 510,200**	**PHMA: 397,600 IHMA: 22,600 GHMA: 98,000**	**PHMA: 335,500 IHMA: 58,300 GHMA: 119,200**	**PHMA: 420,100 GHMA: 90,000 RHMA: 14,100**	**PHMA: 318,700 IHMA: 110,200 GHMA: 53,100**

Table 2-9
Comparative Summary of Alternatives by Acres Allotted[1] (Within GRSG Habitat)

Resource or Resource Use	Total Planning Area[6]	Alternative A[7]	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
BLM		PHMA: 420,100 GHMA: 98,000	PHMA: 420,100 GHMA: 90,000	PHMA: 510,100	PHMA: 397,600 IHMA: 22,500 GHMA: 98,000	PHMA: 335,400 IHMA: 58,300 GHMA: 119,200	PHMA: 420,100 GHMA: 90,000 RHMA: 14,100	PHMA: 318,700 IHMA: 110,200 GHMA: 53,100
Forest Service		PHMA: 20 GHMA: 70	PHMA: 20 GHMA: 50	PHMA: 70	PHMA: 10 IHMA: 10 GHMA: 70	PHMA: 10 IHMA: 0 GHMA: 70	PHMA: 20 GHMA: 50 RHMA: 0	PHMA: 30 IHMA: 30 GHMA: 0

Source: BLM GIS 2015
[1]Table presents acres of allocations within GRSG habitat. Acres outside occupied GRSG habitat are noted where applicable.
[2]Priority Habitat under Alternative A is managed on BLM-administered lands in Montana only. This row also includes Core Habitat Zones under Alternative E.
[3]General Habitat under Alternative A is managed on BLM-administered lands in Montana only. This row also includes General Habitat Zones under Alternative E.
[4]All acres in Restoration Habitat under Alternative F are outside occupied GRSG habitat and are presented separately in this table.
[5]Travel management decisions under Alternative D in Idaho would apply to BLM-administered lands within the entire state of Idaho regardless of GRSG habitat; travel management decisions under Alternative D in southwestern Montana would apply to only GRSG habitat in the Dillon Field Office.
[6]The planning area includes acres within both GRSG habitat and nonhabitat.
[7]Acres under Alternative A represent an overlay with PPH/PGH as well as the inclusion of several Forest Service GRSG management areas that are outside of PPH/PGH.
[8] This row also includes Important Habitat Zones under Alternative E.

Note: Figures referenced in this table are presented in **Appendix A**.

2.10 Detailed Description of Draft Alternatives

2.10.1 How to Read Tables 2-10 and 2-11

The following describes how **Table 2-10**, Goals and Objectives by Alternative, and **Table 2-11**, Management Actions by Alternative, below, are written and formatted to show the land use plan decisions proposed for each alternative.

In accordance with Appendix C of the BLM's *Land Use Planning Handbook* (H-1601-1), land use plan and plan amendment decisions are broad-scale decisions that guide future land management actions and subsequent site-specific implementation decisions (BLM 2005). Land use plan decisions fall into two categories, which establish the base structure for desired outcomes (goals and objectives), and allowable uses and actions to achieve outcomes.

- Goals are broad statements of desired outcomes that usually are not quantifiable.
- Objectives identify specific desired outcomes for resources. They may be quantifiable and measurable and may have established timeframes for achievement, as appropriate.
- Allowable uses identify uses, or allocations, that are allowable, restricted, or prohibited on BLM-administered lands and mineral estate.
- Actions identify measures or criteria to achieve desired objectives, including actions to maintain, restore, or improve land health.

Stipulations (NSO and CSU, which fall under the allowable uses category) are also applied to surface-disturbing activities to achieve desired outcomes (i.e., objectives).

In general, only those resources and resource uses that have been identified as planning issues have notable differences between the alternatives.

Actions that are applicable to all alternatives are shown in one cell across a row. These particular objectives and actions would be implemented regardless of which alternative is ultimately selected.

Actions that are applicable to more than one but not all alternatives are indicated by either combining cells for the same alternatives, or by denoting those objectives or actions as the "same as Alternative A," for example.

In some cells, "No Similar Action" is used to indicate that there is no similar goal, objective or action to the other alternatives, or that the similar goal, objective or action is reflected in another management action in the alternative.

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2.10.2 Goals and Objectives

Table 2-10
Goals and Objectives by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Goals					
A-GOAL-1: No common goal across LUPs within the sub-region	**B-GOAL-1:** Maintain and/or increase GRSG abundance and distribution by conserving, enhancing or restoring the sagebrush ecosystem upon which populations depend in cooperation with other conservation partners.	**C-GOAL-1**: Same as Alternative A.	**D-GOAL-1:** Maintain and/or increase GRSG abundance and distribution by conserving, enhancing or restoring the sagebrush ecosystem upon which populations depend in cooperation with other conservation partners.	**E-GOAL-1:** Conserve the GRSG and its habitat to avoid a listing under the ESA (see NTT 2011).	**F-GOAL -1:** Maintain and increase current GRSG abundance and distribution by conserving, enhancing or restoring the sagebrush ecosystem
Objectives					
A-OBJ-1: No common objective across LUPs within the sub-region.	**B-OBJ-1:** Protect priority GRSG habitats from anthropogenic disturbances that will reduce distribution or abundance of GRSG.	**C-OBJ-1:** —	**D-OBJ-1:** Manage anthropogenic development and human disturbance in priority habitat to minimize the likelihood of adverse local population-level effects on GRSG.	**E-OBJ-1:** CHZ: Provide a level of protection sufficient to conserve at least 65% of the current known leks occurring in the State within CHZ through implementation of regulatory mechanisms. IHZ: Provide a population buffer to CHZ to minimize the risk of habitat loss from wildfire, invasive species while providing the opportunity to consider limited high-value infrastructure development.	**F-OBJ-1:** —
A-OBJ-2: No common objective across LUPs within the sub-region.	**B-OBJ-2:** Manage land uses, habitat treatments, and anthropogenic disturbances below thresholds necessary to conserve local GRSG populations, sagebrush communities and landscapes	**C-OBJ-2:** —	**D-OBJ-2:** —	**E-OBJ-2:** CHZ and IHZ: Limit habitat loss in CHZ and IHZ during the first three-year period of implementation (2014-2017) to no more than 10% loss due to fire and/or infrastructure development resulting in a proportionate reduction of males counted on leks within a particular CA.	**F-OBJ-2:** —
A-OBJ-3: No common objective across LUPs within the sub-region.	**B-OBJ-3**: Sub-objective: Manage priority GRSG habitats so that discrete anthropogenic disturbances cover less than 3% of the total GRSG habitat regardless of ownership. Anthropogenic features include but are not limited to paved highways, graded gravel roads, transmission lines, substations, wind turbines, oil and gas wells, geothermal wells and associated facilities, pipelines, landfills, homes, and mines. In priority habitats where	**C-OBJ-3:** —	**D-OBJ-3:** —	**E-OBJ-3:** —	**F-OBJ-3:** —

Table 2-10
Goals and Objectives by Alternative

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

Table 2-10
Goals and Objectives by Alternative

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

Table 2-10
Goals and Objectives by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-OBJ-12: No common objective across LUPs within the sub-region.	**B-OBJ-12:** —	**C-OBJ-12:** —	**D-OBJ-12:** Conserve, enhance or restore GHMAs to improve habitat condition and connectivity between PHMAs.	**E-OBJ-12:** —	**F-OBJ-12:** Restore and maintain sagebrush steppe to its ecological potential in occupied GRSG habitat.
A-OBJ-13: No common objective across LUPs within the sub-region.	**B-OBJ-13:** —	**C-OBJ-13:** —	**D-OBJ-13:** Reduce or minimize risk of West Nile Virus or other diseases.	**E-OBJ-13:** —	**F-OBJ-13:** —

2.10.3 Management Actions

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
				as Alternative A and are summarized in **Appendix U**. **Utah Habitat:** Designate PHMA on 71,800 acres. All lands with GRSG habitat in the portion of the Sawtooth National Forest sub-region in Utah are PHMA (see **Table 2-9**).	

A-SSS-2: —.	**B-SSS-2: PHMA:** —.
	
	GHMA: —.
		C-SSS-2: PHMA: —.	**D-SSS-2: PHMA:** —.
			
			IHMA: —.
			
			GHMA: —.
				E-SSS-2: Idaho – Common to All Habitats: —.
				
				Utah Habitat: Limit or ameliorate impacts from activities as identified in this matrix through the use of the following stipulations:
				• New permanent disturbance, including structures, fences, and buildings, should not be located within the occupied lek itself.
				• No permanent disturbance within 1 mile of an occupied lek, unless it is not visible to the GRSG using the lek.
				• New permanent tall structures should not be located within one mile of the lek, if visible by the birds within the lek.
				• A disturbance outside the lek should not produce noise more than 10 dBs above the ambient (background) level at the edge of the lek during breeding season.
				• Apply time-of-day stipulations when the lek is active (e.g., no activity from 2-hours before sunrise to 2-hours after sunrise).
				• Avoid activities (construction, vehicle noise, etc.) in the following seasons and habitats:
				  ○ On leks from February 15 – May 15 to avoid activities that will disturb lek attendance or breeding.
				  ○ In nesting and brood-rearing
					F-SSS-2: PHMA: —.
					
					GHMA: —.
					
					RHMA: —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
				areas from April 1 – August 15. ○ In winter habitat from November 15 – March 15. • Specific time and distance determinations for seasonal stipulations would be based on site-specific conditions, in coordination with the local Utah Department of Wildlife Resources biologist. • Avoid disturbance within PHMA (nesting and brood-rearing areas, winter habitat, other habitat), if possible. Project proponents must demonstrate why avoidance is not possible. If avoidance in PHMA is not possible, minimize as appropriate to the area (e.g., try to minimize effects by locating development in habitat of the least importance, take advantage of topographic to screen the disturbance, or maintaining and enhancing wet meadow and riparian vegetation). • After minimization, mitigation is required (see mitigation section). • Cumulative new permanent disturbance should not exceed 5% of surface area of nesting, winter, or other habitat, within the population area's PHMA. • Manage PHMA to avoid barriers to migration, if applicable.	

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-SSS-3: No disturbance cap is managed across the sub-region.	**B-SSS-3: PHMA:** Apply a three percent surface disturbance cap on anthropogenic disturbances (not including fire). **GHMA:** —.	**C-SSS-3:** Same as Alternative B.	**D-SSS-3: PHMA:** Require no net unmitigated loss of PHMAs. **IHMA:** —. **GHMA:** —.	**E-SSS-3: Idaho – CHZ:** Apply a three percent surface disturbance cap on fluid mineral development. **Idaho – IHZ:** Apply a five percent surface disturbance cap on fluid mineral development. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-SSS-3: PHMA: A**pply a three percent disturbance cap on surface disturbances, including fire.
Monitoring					
A-SSS-4: —.	**B-SSS-4:** Develop a Monitoring Framework to include: methods, data standards, and intervals of monitoring at broad and mid scales; consistent indicators to measure and metric descriptions for each of the scales [see Habitat Assessment Framework (HAF) and Assessment, Inventory and Monitoring core indicators]; analysis and reporting methods; and the incorporation of monitoring results into adaptive management.	**C-SSS-4:** Same as Alternative B.	**D-SSS-4:** Same as Alternative B.	**E-SSS-4:** Utilize lek monitoring and habitat monitoring to annually assess adaptive management triggers.	**F-SSS-4:** Same as Alternative B.
Adaptive Management					
A-SSS-5: —.	**B-SSS-5:** Develop an adaptive management strategy to provide certainty that unintended negative impacts on GRSG will be addressed before consequences become severe or irreversible and to provide regulatory certainty to the USFWS that appropriate action will be taken by the BLM and Forest Service.	**C-SSS-5:** Same as Alternative B.	**D-SSS-5:** Use habitat and population triggers to adjust management in IHMA. All management identified for PHMAs would apply to IHMAs in response to triggers. See **Section 2.6.4** for details.	**E-SSS-5:** Use hard and soft population and habitat triggers to adjust management in IHZ. Management from CHZs, primarily for infrastructure, would apply to IHZ in response to triggers. Develop the following: • Fuel Break Strategy • Response Time Analysis • Water Availability Analysis • Restoration Strategy (see **Appendix Q**)	**F-SSS-5:** Same as Alternative B.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Vegetation					
A-VG-1: —.	**B-VG-1: PHMA:** --. **GHMA:** —.	**C-VG-1: PHMA:** —.	**D-VG-1: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-VG-1: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-1: PHMA:** In PHMA, ensure that soil cover and native herbaceous plants are at their Ecological Site Description potential to help protect against invasive plants. In areas without Ecological Site Descriptions, reference sites would be utilized to identify appropriate vegetation communities and soil cover. **GHMA:** —. **RHMA:** —.
Habitat Restoration					

A-VG-2: In most LUPs, either no priorities are established or prioritization is given to projects that benefit multiple resources (e.g., livestock, wildlife, wild horses and burros, special status species).
 	
All LUPs which recognize conifer expansion and its effects on sagebrush steppe habitat uniformly identify the need for controlling conifer expansion through various methods including: hand cutting, wood cutting, mechanical, prescribed fire, chemical treatments, and through the use of wildfire where feasible.
 	
Montana BLM: Restore vegetation to benefit multiple uses. Promote the use of native species where possible (See ROD pg. 51 Actions 3, 12, 14 and Appendix X of Dillon ROD/RMP). Restore and maintain desired ecological conditions and fuel loadings. Evaluate benefits against loss of sagebrush in NEPA process. Do not burn Wyoming sagebrush.
	B-VG-2: PHMA: Prioritize implementation of restoration projects based on environmental variables that improve chances for project success in areas most likely to benefit GRSG (Meinke et al. 2009). Prioritize restoration in seasonal habitats that are thought to be limiting GRSG distribution and/or abundance.
	
	GHMA: —.
		C-VG-2: PHMA: Same as Alternative B.	**D-VG-2: PHMA:** Prioritize implementation of vegetation rehabilitation projects to achieve the greatest improvement in GRSG habitat. Factors contributing to higher emphasis for implementation include:
			• Sites where environmental variables contribute to improved chances for project success (Meinke et al. 2009).
			• Improvement of seasonal habitats that are thought to be limiting GRSG distribution and/or abundance (wintering areas , wet meadows and riparian areas, nesting areas, leks, etc.).
			• Re-establishment of sagebrush cover in otherwise suitable GRSG with consideration to local needs and conditions using the general priorities in the following order:
			  • Native grassland with suitable forb component
			  • Nonnative grassland with suitable forb component
			  • Recently burned native areas
			  • Native grassland
			  • Nonnative grassland
				E-VG-2: Idaho – CHZ: Prioritize the removal of conifers through methods appropriate for the terrain and most likely to facilitate expeditious GRSG population and habitat recovery. To the extent possible, utilize removal methods creating the least amount of disturbance.
				a. Efforts should focus on areas with highest restoration potential typically evidenced by low canopy cover, existing sagebrush understory, and adjacent current populations.
				b. Refrain from using prescribed fire and conducting removal projects in juniper stands older than one hundred years.
				c. Maximize the use of Natural Resource Conservation Service funding through permittee grants under the Environmental Quality Incentives Program and Wildlife Habitat Improvement programs.
				
				Idaho – IHZ: Prioritize the removal of conifers through methods appropriate for the terrain and most likely to facilitate expeditious GRSG habitat recovery. Especially prioritize and target
					F-VG-2: PHMA: Prioritize implementation of restoration projects based on environmental variables that improve chances for project success in areas most likely to benefit GRSG (Meinke et al. 2009).
					
					Prioritize restoration in seasonal habitats that are thought to be limiting GRSG distribution and/or abundance and where factors causing degradation have already been addressed (e.g., changes in livestock management).
					
					GHMA: —.
					
					RHMA: —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
			• Where desirable perennial bunchgrasses and/or forbs are deficient in existing sagebrush stands, use appropriate mechanical, aerial or other techniques to re-establish them. Examples include but are not limited to, use of a Lawson aerator with seeding, harrow or chain with seeding, drill seeding, hand planting plugs, aerial seeding or other appropriate technique. • Cooperative efforts that may improve GRSG habitat quality over multiple ownerships. • Projects in GHMA that may provide connectivity between suitable habitats or expand existing good quality habitats. • Projects that address conifer encroachment into important GRSG habitats. In general the priority for treatment is 1) Phase 1 (≤10% conifer cover), 2) Phase 2 (10-30%), and 3) Phase 3 (>30%). • Replacing stands of annual grasses within otherwise good quality habitats with desirable perennial species. Other factors that contribute to the importance of the restoration project in maintaining or improving GRSG habitat. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	removal treatments adjacent to CHZ. To the extent possible, utilize methods creating the least amount of disturbance. a. Areas with highest restoration potential will typically have low canopy cover, existing sagebrush understory, and adjacent current populations. b. Refrain from using prescribed fire and conducting removal projects in juniper stands older than one-hundred years. c. Maximize the use of Natural Resource Conservation Service funding through permittee grants under the Environmental Quality Incentives Program and Wildlife Habitat Improvement programs. **Idaho – GHZ:** —. **Montana Habitat:** Same as Alternative A. **Utah Habitat:** Protection of GRSG habitat is the primary focus of conservation efforts, but many locations can be reclaimed or restored by active vegetation management actions. For example: • removal of encroaching conifers may create new habitat or increase the carrying capacity of habitat and thereby expand GRSG populations, or • the distribution of water into wet meadow areas may improve seasonal brood-rearing range and enhance GRSG recruitment. Aggressively remove encroaching conifers and other plant species to expand GRSG habitat where possible.	

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
				Sagebrush treatment projects within nesting and winter habitat should be limited and require pre-approval by the appropriate regulatory agency in discussions with DWR. Sagebrush treatment projects should maintain 80% of the available habitat as sagebrush within the project area; 20% of the habitat can be managed for younger age classes of sagebrush, if appropriate. These treatments are generally recommended only to improve brood-rearing habitat, but need to be carefully considered before use in winter and other habitat.	
A-VG-3: Guidance and management direction for general vegetation is fairly broad and trends toward maintaining the components of the vegetative community in the same relative proportion as those which would have historically occurred in the area. Some LUPs contain objectives for maintaining, improving, or restoring sagebrush plant communities. The level of detail varies depending on the age of the land use plan.	**B-VG-3: PHMA:** —. **GHMA:** —.	**C-VG-3: PHMA:** Composition, function, and structure of native vegetation communities will be consistent with the reference state of the appropriate Ecological Site Description and will be maximized to provide for healthy, resilient, and recovering GRSG habitat components.	**D-VG-3: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-VG-3: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-3: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-VG-4: All recent LUPs include management actions that promote use of native species where possible, acknowledging that in some instances, vegetative treatments may not be successful without the use of nonnative desired species. Older plans typically do not include a similar management action.	**B-VG-4: PHMA:** Require use of native seeds for restoration based on availability, adaptation (ecological site potential), and probability of success (Richards et al. 1998). Where probability of success or adapted seed availability is low, nonnative seeds may be used as long as they support GRSG habitat objectives (Pyke 2011). **GHMA:** —.	**C-VG-4: PHMA:** Same as Alternative B.	**D-VG-4: PHMA:** Same as Alternative B. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-VG-4: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-4: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-VG-5: All LUPs, which are written in accordance with applicable program direction, include management actions that allow the administrating agency to make adjustments to livestock grazing, wild horse and burro management, and travel management on a case-by case basis following restoration activities.	**B-VG-5: PHMA:** Design post restoration management to ensure long term persistence. This could include changes in livestock grazing management, wild horse and burro management and travel management, etc., to achieve and maintain the desired condition of the restoration effort that benefits GRSG (Eiswerth and Shonkwiler 2006). **GHMA:** —.	**C-VG-5: PHMA:** Same as Alternative B.	**D-VG-5: PHMA:** Implement management changes, as necessary, to maintain suitable GRSG habitat, improve unsuitable GRSG habitat and to ensure long-term persistence of improved GRSG habitat achieved through restoration efforts (Eiswerth and Shonkwiler 2006). Management changes could be considered for livestock grazing, wild horse and burros, travel planning, and other resources. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-VG-5: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-5: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.
A-VG-6: —.	**B-VG-6: PHMA:** Consider potential changes in climate (Miller et al. 2011) when proposing restoration seedings when using native plants. Consider collection from the warmer component of the species current range when selecting native species (Kramer and Havens 2009). **GHMA:** —.	**C-VG-6: PHMA:** Same as Alternative B.	**D-VG-6: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-VG-6: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-6: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.
A-VG-7: Most LUPs do not include specific management actions related to seedings. Plans do include generic decisions that allow maintenance of existing range improvements, which includes maintenance of historical seedings. Recently completed LUPs promote use of native species when conducting restoration activities. This would include restoration projects conducted in areas that have perennial grass cover. Older plans do not include a similar management action.	**B-VG-7: PHMA:** Restore native (or desirable) plants and create landscape patterns which most benefit GRSG. **GHMA:** —.	**C-VG-7: PHMA**: Exotic seedings will be rehabbed, interseeded, restored to recover sagebrush in areas to expand occupied habitats.	**D-VG-7: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-VG-7: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-7: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-VG-8: Some LUPs contain objectives for maintaining improving, or restoring sagebrush plant communities. The level of detail varies depending on the age of the land use plan. All LUPs address vegetation treatments for improvement of wildlife habitat overall or to provide increased forage for wildlife, livestock, and wild horses and burros. Recent LUPs may include management actions that purposely restore or enhance GRSG habitat.	**B-VG-8: PHMA:** Make re-establishment of sagebrush cover and desirable understory plants (relative to ecological site potential) the highest priority for restoration efforts. **GHMA:** —.	**C-VG-8: PHMA**: Same as Alternative B.	**D-VG-8: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-VG-8: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-8: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-VG-9: —.	**B-VG-9: PHMA:** In fire prone areas where sagebrush seed is required for GRSG habitat restoration, consider establishing seed harvest areas that are managed for seed production (Armstrong 2007) and are a priority for protection from outside disturbances. **GHMA:** —.	**C-VG-9: PHMA**: Same as Alternative B.	**D-VG-9: PHMA:** In fire prone areas where sagebrush seed is required for GRSG habitat restoration, consider establishing seed harvest areas that are managed for seed production (Armstrong 2007). **IHMA:** Same as PHMA. **GHMA:** —.	**E-VG-9: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-9: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.
A-VG-10: —.	**B-VG-10: PHMA:** —. **GHMA:** —.	**C-VG-10: PHMA:** Active restoration practices: • Removal of livestock water troughs, pipelines, and wells. • Where possible, without further damage to springs/water sources, remove waterline piping and maximize water at spring/stream sources supporting diverse riparian and meadow vegetation. • Promote natural healing of headcuts to the maximum extent possible by limiting disturbance throughout the watershed. At times, a combination of methods may need to be used – but gabions and structural devises and boulder dumping should be limited, and restoration should strive for a	**D-VG-10: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-VG-10: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-10: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
		functioning system. • Ripping/recontouring of roads and seeding with native local ecotypes of shrubs and grasses.			
A-VG-11: —.	**B-VG-11: PHMA:** —. **GHMA:** —.	**C-VG-11: PHMA:** Active restoration of crested wheatgrass seedings. This can be accomplished, following targeted restoration planning to expand, reconnect or recover habitats required by GRSG by: • Inter-seeding sagebrush seed or seedlings. • Removal of crested wheatgrass through plowing while minimizing use of herbicides. Subsequent re-seeding with local native ecotypes. • Active restoration of cheatgrass infestation areas. • In all cases, local native plant ecotype seeds and seedlings must be used.	**D-VG-11: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-VG-11: Idaho – Common to All Habitats:** —. **Utah Habitat:** Limit or ameliorate impacts through the use of the general stipulations identified in the GRSG section. Engage in reclamation efforts as projects advance or are completed. Recognize that stipulations for other species (e.g., raptors) may impede the ability to effectively reclaim disturbed areas, and remove those barriers in order to achieve immediate and effective reclamation, if otherwise allowable by law. Prioritize areas for habitat improvement to make best use of mitigation funds.	**F-VG-11: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-VG-12: —.	**B-VG-12: PHMA:** —. **GHMA:** —.	**C-VG-12: PHMA:** —.	**D-VG-12: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-VG-12: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-12: PHMA Habitat:** Avoid sagebrush reduction/treatments to increase livestock or big game forage in PHMA and include plans to restore high-quality habitat in areas with invasive species. **GHMA:** —. **RHMA:** —.
A-VG-13: —.	**B-VG-13: PHMA:** —. **GHMA:** —.	**C-VG-13: PHMA:** —.	**D-VG-13: PHMA:** Utilize cooperative planning efforts to develop and implement habitat restoration projects. Expertise and ideas from local landowners, working groups, and other federal, state, county, and private organizations should be solicited and considered in development of projects. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-VG-13: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-13: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-VG-14: —.	**B-VG-14: PHMA:** —.	**C-VG-14: PHMA:** —.	**D-VG-14: PHMA:** Consider design	**E-VG-14: Idaho – Common to All**	**F-VG-14: PHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
	GHMA: —.		features that will contribute to the most favorable conditions for success when planning and implementing rehabilitation projects. Considerations should include: • Careful review of available plant species and their adaptation to the site when developing seed mixes. (Lambert 2005; VegSpec). • The impacts of potential climate changes (Miller et al. 2011), consider utilizing the warmer component of a species' current range when selecting native species for restoration (Kramer and Havens 2009). • The need to reduce annual grass densities and competition through herbicide, targeted grazing, tillage, prescribed fire, etc. (Pyke 2011). • The need to reduce density and competition of perennial grasses and techniques to accomplish this reduction (Pellant and Lysne 2005). • Techniques to introduce desired species to the site such as drill seeding, broadcast seeding followed by a seed coverage technique, such as harrowing, chaining or livestock trampling, and transplanting container or bare-root seedlings • Assessment of on-site vegetation to ascertain if enough desirable perennial vegetation exists to consider techniques to increase on-site seed production to facilitate an increase in density of desired species. • Use of site preparation techniques that retain existing desirable vegetation. • Use of "mother plant" techniques or planting of satellite populations of desirable plants to serve as seed	**Habitats:** —. **Utah Habitat:** —.	**GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
			sources. • The need for post-treatment control of annual grass and other invasive species. The availability of new tools and use of new science and research as it becomes available. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.		
A-VG-15: Recently completed LUPs promote use of native species when conducting restoration activities. This would include restoration projects conducted in areas that have perennial grass cover. Older plans do not include a similar management action.	**B-VG-15: PHMA:** —. **GHMA:** —.	**C-VG-15: PHMA:** —.	**D-VG-15: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-VG-15: Idaho – CHZ:** Emphasize the use of native seeds for fuels management treatment based on availability, adaptation (site potential), and probability of success. **Idaho – IHZ:** Same as Idaho – CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-VG-15: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-VG-16: —.	**B-VG-16: PHMA:** —. **GHMA:** —.	**C-VG-16: PHMA:** —.	**D-VG-16: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-VG-16: Idaho – CHZ:** Reallocate native plant seeds for ESR from outside the Sage-Grouse Management Area and GHZ to this management zone if necessary. **Idaho – IHZ:** Same as Idaho - CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-VG-16: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-VG-17: —.	**B-VG-17: PHMA:** Prioritize native seed allocation for use in GRSG habitat in years when preferred native seed is in short supply. This may require reallocation of native seed from ESR (BLM) and/or BAER (Forest Service) projects outside of PHMA to those inside it. Use of native plant seeds for ESR or BAER seedings is required based on availability, adaptation (site potential), and probability of success (Richards et al. 1998). Where probability of success or native seed availability is low, nonnative seeds may be used as long as they GRSG habitat conservation objectives (Pyke 2011). Re-establishment of appropriate sagebrush species/subspecies and important understory plants, relative to site potential, shall be the highest priority for rehabilitation efforts. **GHMA:** —.	**C-VG-17: PHMA:** Same as Alternative B.	**D-VG-17: PHMA:** Prioritize native seed allocation for use in GRSG habitat in years when preferred native seed is in short supply. This may require reallocation of native seed from ESR (BLM) and/or BAER (Forest Service) projects outside of PHMA to those inside it. Where probability of success or native seed availability is low, nonnative seeds may be used as long as they meet GRSG habitat conservation objectives (Pyke 2011). Re-establishment of appropriate sagebrush species/subspecies and important understory plants, relative to site potential, shall be the highest priority for rehabilitation efforts. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-VG-17: Idaho – CHZ:** Where the probability of obtaining sufficient native seed is low, nonnative seeds may be used provided GRSG habitat objectives are met. **Idaho – IHZ:** Same as Idaho - CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-VG-17: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-VG-18: All LUPs, which are written in accordance with applicable program direction, include management actions that allow the administrating agency to make adjustments to livestock grazing, wild horse and burro management, and travel management on a case-by case basis following restoration activities.	**B-VG-18: PHMA:** Design post ESR and BAER management to ensure long term persistence of seeded or pre-burn native plants. This may require temporary or long-term changes in livestock grazing, wild horse and burro, and travel management, etc., to achieve and maintain the desired condition of ESR and BAER projects to benefit GRSG (Eiswerth and Shonkwiler 2006). **GHMA:** —.	**C-VG-18: PHMA:** Same as Alternative B.	**D-VG-18: PHMA:** Design post fuel, restoration, and ESR management to ensure long term persistence of seeded or pre-burn native plants. Use chemical, mechanical, and seeding treatments with appropriate plant materials to attempt to stabilize sites and prevent dominance of invasive, annual vegetation, and noxious weeds. Use native plant materials were determined to be appropriate and practical at the project-implementation level. This may require temporary or long-term changes in livestock grazing, wild horse and burro, and travel management, fuels and rehabilitation, etc., to achieve and maintain the desired condition of ESR projects to benefit GRSG (Eiswerth and Shonkwiler 2006). **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-VG-18: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-18: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.
A-VG-19: —.	**B-VG-19: PHMA:** Consider potential changes in climate (Miller at al. 2011) when proposing post-fire seedings using native plants. Consider seed collections from the warmer component within a species' current range for selection of native seed. (Kramer and Havens 2009). **GHMA:** —.	**C-VG-19: PHMA:** Same as Alternative B.	**D-VG-19: PHMA:** Consider utilizing the warmer component of a species' current range where feasible (financially, seed availability, etc.) when selecting native species for restoration and when such a strategy would not jeopardize the success of the seeding. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-VG-19: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-19: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.
A-VG-20: —.	**B-VG-20: PHMA:** —. **GHMA:** —.	**C-VG-20: PHMA:** —.	**D-VG-20: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-VG-20: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-20: PHMA:** Establish and strengthen networks with seed growers to assure availability of native seed for ESR projects. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-VG-21: All LUPs, which are written in accordance with applicable program direction, include management actions that allow the administrating agency to make adjustments to livestock grazing, wild horse and burro management, and travel management on a case-by case basis following restoration activities.	**B-VG-21: PHMA:** —. **GHMA:** —.	**C-VG-21: PHMA:** —.	**D-VG-21: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-VG-21: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-21: PHMA:** Post fire recovery must include establishing adequately sized exclosures (free of livestock grazing) that can be used to assess recovery. **GHMA:** —. **RHMA:** —.
A-VG-22: All LUPs, which are written in accordance with applicable program direction, include management actions that allow the administrating agency to make adjustments to livestock grazing, wild horse and burro management, and travel management on a case-by case basis following restoration activities.	**B-VG-22: PHMA:** —. **GHMA:** —.	**C-VG-22: PHMA:** —.	**D-VG-22: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-VG-22: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-22: PHMA:** Livestock grazing should be excluded from burned areas until woody and herbaceous plants achieve GRSG habitat objectives. **GHMA:** —. **RHMA:** —.
A-VG-23: All LUPs, which are written in accordance with applicable program direction, include management actions that allow the administrating agency to make adjustments to livestock grazing, wild horse and burro management, and travel management on a case-by case basis following restoration activities.	**B-VG-23: PHMA:** —. **GHMA:** —.	**C-VG-23: PHMA:** —.	**D-VG-23: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-VG-23: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-23: PHMA:** Where burned GRSG habitat cannot be fenced from other unburned habitat, the entire area (e.g., allotment/pasture) should be closed to grazing until recovered. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-VG-24: Most LUPs do not include specific management actions related to seedings. Plans do include generic decisions that allow maintenance of existing range improvements, which includes maintenance of historical seedings. Recently completed LUPs promote use of native species when conducting restoration activities. This would include restoration projects conducted in areas that have perennial grass cover. Older plans do not include a similar management action.	**B-VG-24: PHMA:** Evaluate the role of existing seedings that are currently composed of primarily introduced perennial grasses in and adjacent to PHMA to determine if they should be restored to sagebrush or habitat of higher quality for GRSG. If these seedings are part of an AMP/Conservation Plan or if they provide value in conserving or enhancing the rest of PHMA, then no restoration would be necessary. Assess the compatibility of these seedings for GRSG habitat or as a component of a grazing system during the land health assessments (or other analyses [Forest Service only]) (Davies et al. 2011). **GHMA:** —.	**C-VG-24: PHMA:** —.	**D-VG-24: PHMA:** Assess the compatibility of existing nonnative seedings for GRSG habitat or as a component of a grazing system or forage reserve during land health assessments (Davies et al. 2011). Evaluate existing seedings currently dominated by introduced perennial grasses in and adjacent to PHMA to determine if they should be diversified with native grasses, forbs, and shrubs, including sagebrush. If these seedings are part of an AMP/Conservation Plan and if they provide value in conserving or enhancing the rest of PHMA, restoration may not be appropriate. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-VG-24: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-24: PHMA:** Evaluate the role of existing seedings that are currently composed of primarily introduced perennial grasses in and adjacent to PHMA to determine if they should be restored to sagebrush or habitat of higher quality for GRSG. If these seedings are part of an AMP/Conservation Plan or if they provide value in conserving or enhancing the rest of PHMA, then no restoration would be necessary. Assess the compatibility of these seedings for GRSG habitat or as a component of a grazing system during the land health assessments (Davies et al. 2011). **GHMA:** —. **RHMA:** —.
A-VG-25: —.	**B-VG-25: PHMA:** —. **GHMA:** —.	**C-VG-25: PHMA:** —.	**D-VG-25: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-VG-25: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-25: PHMA:** Any vegetation treatment plan must include pretreatment data on wildlife and habitat condition, establish non-grazing exclosures, and include long-term monitoring where treated areas are monitored for at least three years before grazing returns. Continue monitoring for five years after livestock are returned to the area, and compare to treated, ungrazed exclosures, as well as untreated areas. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-VG-26: Many older LUPs include specific objectives for vegetation treatments that increased desirable forage species for livestock, usually focusing on reducing the sagebrush overstory. More recent LUPs generally prescribe management that moves rangeland communities toward historical vegetative conditions.	**B-VG-26: PHMA:** —. **GHMA:** —.	**C-VG-26: PHMA:** —.	**D-VG-26: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-VG-26: Idaho – CHZ:** Initiate vegetative manipulation projects where sagebrush canopy cover exceeds optimal characteristics to promote grass and forb understory growth only where the project can be achieved without negatively impacting GRSG. **Idaho – IHZ:** Same as Idaho - CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-VG-26: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-VG-27: All LUPs address vegetation treatments for improvement of wildlife habitat overall or to provide increased forage for wildlife, livestock, and wild horses and burros.	**B-VG-27: PHMA:** —. **GHMA:** —.	**C-VG-27: PHMA:** —.	**D-VG-27: PHMA:** Implement rehabilitation projects in areas that have the potential to provide for GRSG habitat. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-VG-27: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-27: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-VG-28: —.	**B-VG-28: PHMA:** —. **GHMA:** —.	**C-VG-28: PHMA:** —.	**D-VG-28: PHMA:** Make progress toward desired future condition in the Low-elevation Shrub, Perennial Grass, Invasive Annual Grass, Mid-Elevation Shrub, Mountain Shrubs, and Juniper vegetation types. Use chemical, mechanical, seeding, and prescribed fire treatments as appropriate to enhance and restore habitats that are currently in Fire Regime Condition Class (FRCC) 2 and FRCC3. In Perennial Grass, Invasive Annual Grass, and juniper-invaded cover types, restore sagebrush steppe with an aggressive sagebrush seeding effort, using the appropriate sagebrush subspecies for the treatment area. Conduct vegetation treatments in areas that pose a wildland fire risk to GRSG habitats. Treat areas within GRSG habitats that have low resiliency to disturbance (i.e., areas characterized by lower native plant species diversity than expected for the site, undesirable plant species composition, and dead or	**E-VG-28: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-28: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
			decadent sagebrush) to improve long-term habitat suitability for GRSG. Treat GRSG habitat and potential restoration areas to expand PHMA. Improve GRSG potential restoration habitats (perennial grassland, annual grassland, conifer encroachment areas) and maintain or improve sagebrush portions of PHMA. Conduct vegetation treatments (including fuel breaks) in restoration and key habitats to reduce risk of wildland fire and reconnect PHMA. Make progress toward Desired Future Condition in historically frequent fire regimes (Aspen/Conifer, Dry Conifer, Mid-Elevation Shrub encroached by juniper, Mountain Shrub by increasing wildfire managed for LUP objectives and prescribed fire to create a fire regime within the historical range of variability. Use mechanical and chemical treatments to prepare areas in FRCC2 and FRCC3 for prescribed fire. Monitor and control invasive vegetation post-treatment. Rest treated areas from grazing or modify grazing until vegetation objectives have been met. Ensure that any proposed sagebrush treatment acreage is conservative in the context of surrounding seasonal habitats and landscape. Monitor and if necessary control invasive vegetation post-treatment. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.		

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-VG-29: Allow treatments that provide benefits for multiple resources. Additional forage will be appropriated to livestock, wild horses and burros (where applicable), and wildlife.	**B-VG-29: PHMA:** Only allow treatments that conserve, enhance or restore GRSG habitat (this includes treatments that benefit livestock as part of an AMP/Conservation Plan to improve GRSG habitat). **GHMA:** —.	**C-VG-29: PHMA:** —.	**D-VG-29: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-VG-29: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-VG-29: PHMA:** Ensure that vegetation treatments Restore native (or desirable) plants and create landscape patterns which most benefit GRSG. Only allow treatments that conserve, enhance, or restore GRSG habitat are demonstrated to benefit GRSG and retain sagebrush height and cover consistent with GRSG habitat objectives (this includes treatments that benefit livestock as part of an AMP/Conservation Plan to improve GRSG habitat). **GHMA:** —. **RHMA:** —.
A-VG-30: —.	**B-VG-30: PHMA:** —. **GHMA:** —.	**C-VG-30: PHMA:** —.	**D-VG-30: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-VG-30: Idaho – Common to All Habitats:** The State will establish a mitigation bank of GRSG habitation restoration projects that future development projects would repay through compensatory mitigation requirements. **Utah Habitat:** —.	**F-VG-30: PHMA:** —. **GHMA:** —. **RHMA:** —.
Integrated Invasive Species					
A-IIS-1: Implement noxious weed and invasive species control using integrated weed management actions per national guidance and local weed management plans in cooperation with State and Federal agencies, affected counties, and adjoining private lands owners. In most LUPs, either no priorities are established or prioritization is given to projects that benefit multiple resources (e.g., livestock, wildlife, wild horses and burros, special status species). Montana BLM: Implement noxious weed and invasive species control, using integrated weed management, in cooperation with state and federal agencies, counties, and private	**B-IIS-1: PHMA:** Integrated Vegetation Management would be used to control, suppress, and eradicate, where possible, noxious and invasive species per BLM Handbook H-1740-2. **GHMA:** —.	**C-IIS-1: PHMA:** —.	**D-IIS-1: PHMA:** Implement integrated weed management actions for noxious and invasive weed populations that are impacting or threatening GRSG habitat quality. In concert with partners and/or weed management areas as appropriate apply education, inventory, prevention, control, rehabilitation, and monitoring strategies that protect or enhance GRSG habitat. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-IIS-1: Idaho – CHZ:** Actively manage exotic undesirable species sufficiently to limit presence and prevent invasion. **Idaho – IHZ:** Actively manage exotic undesirable species to limit presence and prevent invasion in CHZ without impairing GRSG populations. **Idaho – GHZ:** Aggressively manage exotic undesirable species in conjunction with coordinated weed management areas to limit presence and prevent invasion into other management zones. **Montana Habitat:** Same as Alternative	**F-IIS-1: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
landowners (ROD**,** p. 49, Action 11.)**.** Emphasize control of invasive weeds in occupied GRSG breeding habitat				A. **Utah Habitat:** Aggressively respond to new infestations to keeping invasive species from spreading. Every effort should be made to identify and treat new infestations before they become larger problems. Containment of known infestations in or near sagebrush habitats should be a high priority for all land management agencies.	
A-IIS-2: —.	**B-IIS-2: PHMA:** —. **GHMA:** —.	**C-IIS-2: PHMA:** —.	**D-IIS-2: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-IIS-2: Idaho – CHZ:** Control invasive vegetation within post-wildfire treatment areas for at least three years post treatment. **Idaho – IHZ:** Same as Idaho - CHZ. **Idaho – GHZ:** —. **Utah Habitat:** Immediate, proactive means to reduce or eliminate the spread of invasive species, particularly cheatgrass, after a wildfire, is a high priority.	**F-IIS-2: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-IIS-3: Implement noxious weed and invasive species control using integrated weed management actions per national guidance and local weed management plans in cooperation with State and Federal agencies, affected counties, and adjoining private lands owners.	**B-IIS-3: PHMA:** —. **GHMA:** —.	**C-IIS-3: PHMA:** —.	**D-IIS-3: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-IIS-3: Idaho – CHZ:** —. **Idaho – IHZ:** Eradicate or control noxious weeds and/or invasive species posing a risk to GRSG habitats using a variety of chemical, mechanical and other appropriate means in coordination with the local Cooperative Weed Management Area. **Idaho – GHZ:** Same as IHZ. **Utah Habitat:** —.	**F-IIS-3: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-IIS-4: Implement noxious weed and invasive species control using integrated weed management actions per national guidance and local weed management plans in cooperation with State and Federal agencies, affected counties, and adjoining private lands owners.	**B-IIS-4: PHMA:** Monitor for, and treat invasive species associated with existing range improvements (Gelbard and Belnap 2003; Bergquist et al. 2007). **GHMA:** —.	**C-IIS-4: PHMA:** —.	**D-IIS-4: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-IIS-4: Idaho – CHZ:** Treat and monitor invasive species associated with existing range improvements. **Idaho – IHZ:** Same as Idaho - CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-IIS-4: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.
A-IIS-5: —.	**B-IIS-5: PHMA:** —. **GHMA:** —.	**C-IIS-5: PHMA:** —.	**D-IIS-5: PHMA:** Following project construction treat noxious weeds and invasive species, establish desirable perennial vegetation to compete with invasive species on disturbed areas, and monitor and continue treating the project area for noxious weed and invasive species for at least 3 years, unless control is achieved earlier. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-IIS-5: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-IIS-5: PHMA:** —. **GHMA:** —. **RHMA:** —.
Wild Horse and Burro					
A-WHB-1: Prepare or amend herd management area plans on an as-needed basis.	**B-WHB-1: PHMA:** Develop or amend BLM Herd Management Area Plans and Forest Service Wild Horse Territory Plans to incorporate GRSG habitat objectives and management considerations for all BLM HMAs) and Forest Service Wild Horse Territories. **GHMA:** —.	**C-WHB-1: PHMA:** Same as Alternative A.	**D-WHB-1: PHMA:** Same as Alternative B. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-WHB-1: Idaho – Common to All Habitats:** —. **Utah Habitat:** Same as Alternative A.	**F-WHB-1: PHMA:** Reduce AMLs within HMAs within occupied GRSG habitat by 25 percent to meet habitat objectives. **GHMA:** Same as PHMA **RHMA:** —.
A-WHB-2: Periodically evaluate and make adjustments to AMLs based on monitoring data.	**B-WHB-2: PHMA:** For all BLM HMAs and Forest Service Wild Horse Territories within PHMA, prioritize the evaluation of all AMLs based on indicators that address structure/condition/composition of vegetation and measurements specific to achieving GRSG habitat objectives. **GHMA:** —.	**C-WHB-2: PHMA:** Same as Alternative A.	**D-WHB-2: PHMA:** When evaluating AML on HMAs within PHMA, evaluate indicators that address structure/condition/composition of vegetation and measurements specific to achieving GRSG habitat objectives. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-WHB-2: Idaho – Common to All Habitats:** —. **Utah Habitat:** Same as Alternative A.	**F-WHB-2: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
				Idaho – GHZ: —. **Utah Habitat:** —.	
A-WFM-4: —.	**B-WFM-4: PHMA:** —. **GHMA:** —.	**C-WFM-4: PHMA:** —.	**D-WFM-4: PHMA:** Use knowledgeable resource advisors during extended attack. Resource Advisors should also be available on short notice during red flag conditions. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-WFM-4: Idaho Common to All Habitats:** —. **Utah Habitat**: —.	**F-WFM-4: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-WFM-5: —.	**B-WFM-5: PHMA:** —. **GHMA:** —.	**C-WFM-5: PHMA:** —.	**D-WFM-5: PHMA:** During high fire danger conditions, stage initial attack and secure additional resources closer to the Idaho Desert, Southern Idaho, and Owyhee populations to ensure quicker response times in or near GRSG habitat. **IHMA:** —. **GHMA:** —.	**E-WFM-5: Idaho -- Common to All Habitats:** —. **Utah Habitat:** —.	**F-WFM-5: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-WFM-6: —.	**B-WFM-6: PHMA:** —. **GHMA:** —.	**C-WFM-6: PHMA:** —.	**D-WFM-6: PHMA:** —. **IHMA:** Follow Standard procedures described in Fire Management Plan. **GHMA:** —.	**E-WFM-6: Idaho -- Common to All Habitats:** —. **Utah Habitat:** —.	**F-WFM-6: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-WFM-7: —.	**B-WFM-7: PHMA:** —. **GHMA:** —.	**C-WFM-7: PHMA:** —.	**D-WFM-7: PHMA:** Consider conifer (juniper) encroachment areas as areas to manage wildfire for resource benefit. **IHMA**: Same as PHMA. **GHMA**: Same as PHMA.	**E-WFM-7: Idaho -- Common to All Habitats:** —. **Utah Habitat:** —.	**F-WFM-7: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-WFM-8: —.	**B-WFM-8: PHMA:** —. **GHMA:** —.	**C-WFM-8: PHMA:** —.	**D-WFM-8: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-WFM-8: Idaho – Common to All Habitats:** Reduce the number and size of wildfires, especially in the West Owyhee CA, by marshaling existing and targeting future federal resources. **Idaho – CHZ:** Utilize and employ more aggressive wildfire and invasive	**F-WFM-8: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
				species management practices to prevent further encroachment of these two primary threats into CHZ on Federal lands. **Idaho – IHZ:** Same as Idaho - CHZ. **Idaho – GHZ:** —. **Utah Habitat:** Create and implement a statewide fire agency agreement(s) that will eliminate jurisdictional boundaries and allow for immediate response to natural fire in PHMA. These should include fire suppression actions recommended locally, including, but not limited to: • first strike agreements that allow aggressive fire control on an all-land jurisdictional basis; • allocation of resources to maintain enhanced abilities of all fire agencies to combat ignitions in PHMA. • allocation of resources to immediately commence restoration of habitats impacted by wildfire by all responsible agencies; and • removal or establishment of waiver provisions for procedural barriers that may impact the ability of responsible agencies to respond to wildfire with effective reclamation or rehabilitation, such as federal raptor stipulations, cultural assessments, and the like.	
A-WFM-9: —.	**B-WFM-9: PHMA:** —. **GHMA:** —.	**C-WFM-9: PHMA:** —.	**D-WFM-9: PHMA:** BLM and Forest Service planning units (Districts and Forests), in coordination with the USFWS and relevant state agencies, would complete and continue to update GRSG Landscape Wildfire and Invasive Species Habitat Assessments to	**E-WFM-9: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-WFM-9: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
burn Wyoming sagebrush.	Allow no fuels treatments in known winter range unless the treatments are designed to strategically reduce wildfire risk around or in the winter range and will maintain winter range habitat quality. Do not use fire to treat sagebrush in less than 12-inch precipitation zones (e.g., Wyoming big sagebrush or other xeric sagebrush species; Connelly et al. 2000, Hagen et al. 2007, Beck et al. 2009). However, if as a last resort and after all other treatment opportunities have been explored and site specific variables allow, the use of prescribed fire for fuel breaks that would disrupt the fuel continuity across the landscape could be considered, in stands where cheatgrass is a very minor component in the understory (Brown 1982). Monitor and control invasive vegetation post-treatment. Rest treated areas from grazing for two full growing seasons unless vegetation recovery dictates otherwise (WGFD 2011). Require use of native seeds for fuels management treatment based on availability, adaptation (site potential), and probability of success (Richards et al. 1998). Where probability of success or native seed availability is low, nonnative seeds may be used as long as they meet GRSG habitat objectives (Pyke 2011). Design post fuels management projects to ensure long term persistence of seeded or pre-treatment native plants. This may require temporary or long-term changes in livestock grazing management, wild horse and burro management, travel management, or other activities to achieve and maintain the desired condition of the fuels management project (Eiswerth and Shonkwiler 2006).		on the local landscape in the NEPA process. Apply appropriate seasonal restrictions for implementing fuels management treatments according to the type of seasonal habitats present in PHMA. Allow no treatments in known winter range unless the treatments are designed to strategically reduce wildfire risk around and/or in the winter range and will maintain, increase, or enhance winter range habitat quality. Ensure chemical applications are utilized where they would assist in success of fuels treatments. Strategically place treatments on a landscape scale to prevent fire from spreading into PHMA or WUI. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	single greatest threat to GRSG in Utah. While unscheduled fires may occur, response to fire can have a large impact on the severity of the effects, especially over time as rehabilitation or restoration continues. Implement the following: • Create and implement a statewide fire agency agreement(s) that will eliminate jurisdictional boundaries and allow for immediate response to natural fire in PHMA. • Allow use of fire-retardant vegetation that will buffer areas of high quality GRSG habitat from catastrophic fire. • Use prescriptive fire with caution in sagebrush habitat. The WAFWA has prepared information that explains the risks from using prescribed fire in xeric sagebrush habitats. • Prescribed fire should only be used at higher elevations and in a manner designed prescriptively to benefit GRSG. • Conduct effective research into controlling fire size and protecting remaining GRSG areas that are adjacent to high-risk cheatgrass areas. • Focus research efforts on effective reclamation and restoration of landscapes altered by wildfire. • Within winter habitat, manage to maintain maximum amount of sagebrush, especially tall sagebrush, which would be available to GRSG above snow during a severe winter. Tall sagebrush is capable of standing above heavier than normal snowfall.	Allow no fuels treatments in known winter range unless the treatments are designed to strategically reduce wildfire risk around or in the winter range and will maintain winter range habitat quality. Do not use fire to treat sagebrush in less than 12-inch precipitation zones (e.g., Wyoming big sagebrush or other xeric sagebrush species; Connelly et al. 2000, Hagen et al. 2007, Beck et al. 2009). However, if as a last resort and after all other treatment opportunities have been explored and site specific variables allow, the use of prescribed fire for fuel breaks that would disrupt the fuel continuity across the landscape could be considered, in stands where cheatgrass is a very minor component in the understory (Brown 1982). Monitor and control invasive vegetation post-treatment. Rest treated areas from grazing for two full growing seasons unless vegetation recovery dictates otherwise (WGFD 2011). Require use of native seeds for fuels management treatment based on availability, adaptation (site potential), and probability of success (Richards et al. 1998). Where probability of success or native seed availability is low, nonnative seeds may be used as long as they meet GRSG habitat objectives (Pyke 2011). Design post fuels management projects to ensure long term persistence of seeded or pre-treatment native plants, including sagebrush. This may require temporary or long-term changes in livestock grazing management, wild horse and burro management, travel management, or other activities to achieve and maintain the desired condition of the fuels management project (Eiswerth and Shonkwiler

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
	GHMA: —.			• Sagebrush treatment projects within winter habitat need pre-approval by the appropriate regulatory agency in coordination with the Utah Department of Wildlife Resources. Sagebrush treatment projects within winter habitat should maintain 80% of the available habitat as tall sagebrush; 20% of the habitat can be managed for younger age classes, if appropriate. • Coordinate the needs and efforts related to GRSG with the State of Utah committee that was formed to develop a collaborative process to protect the health and welfare by reducing the size and frequency of catastrophic fires.	2006). **GHMA:** —. **RHMA:** —.
A-FM-2: Design projects to minimize the size of wildfire and prevent the further loss of sagebrush.	**B-FM-2: PHMA:** Design fuels management projects in PHMA to strategically and effectively reduce wildfire threats in the greatest area. This may require fuels treatments implemented in a more linear versus block design (Launchbaugh et al. 2007). **GHMA:** —.	**C-FM-2: PHMA:** Same as Alternative B.	**D-FM-2: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-FM-2: Idaho – CHZ:** Fuel break prioritization should be in areas within the WUI where human life and safety are at risk. Fuel break projects should be designed to secure the WUI and free up firefighting resources to be focused on providing initial attack on wildfires in areas that have the potential to impact GRSG within CHZ and IHZ. Prioritization of fuel breaks should then go to areas of high human ignition. **Idaho – IHZ:** Same as Idaho - CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-FM-2: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-FM-3: —.	**B-FM-3: PHMA:** —. **GHMA:** —.	**C-FM-3: PHMA:** —.	**D-FM-3: PHMA:** —. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-FM-3: Idaho – CHZ:** —. **Idaho – IHZ:** Create and maintain effective fuel breaks in strategic locations that will modify fire behavior and increase fire suppression effectiveness through: a. Establishing fuel breaks along existing roads or other disturbances.	**F-FM-3: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-FM-5: Design fuels treatment projects to minimize the size of wildfire and prevent the further loss of sagebrush.	**B-FM-5: PHMA:** —. **GHMA:** —.	**C-FM-5: PHMA:** Mowing of grass will be used in any fuel break fuels reduction project (roadsides or other areas).	**D-FM-5: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-FM-5: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-FM-5: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-FM-6: —.	**B-FM-6: PHMA:** During fuels management project design, consider the utility of using livestock to strategically reduce fine fuels (Diamond et al. 2009), and implement grazing management that will accomplish this objective (Davies et al. 2011, Launchbaugh et al. 2007). Consult with ecologists to minimize impacts on native perennial grasses. **GHMA:** —.	**C-FM-6: PHMA:** Same as Alternative B.	**D-FM-6: PHMA:** Grazing to achieve fuels management objectives should conform to the following criteria: • Grazing management should be implemented strategically on the landscape, and directly involve the minimum footprint and grazing intensity required to meet fuels management objectives. • Conform to the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management in areas where the Standards apply. • Coordinate with the permittee to coordinate fuels reduction by livestock within the Mandatory Terms and Conditions of the applicable grazing authorizations However, in some cases targeted grazing may be authorized or contracted to a non-permit holder to achieve desired fuels reduction. • Use the appropriate kind and number of animals at the appropriate season, considering vegetation palatability and livestock preferences, to reduce targeted fuels types. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-FM-6: Idaho – CHZ:** Prescribe or target livestock grazing where demonstrated to be appropriate as a tool for reducing fuel loads, reducing invasive species populations and maintaining functional fire breaks and testing the effectiveness and monitoring the results on a site-specific basis through stewardship contracting. **Idaho – IHZ:** Same as Idaho – CHZ. **Idaho – GHZ:** Prescribe or target livestock grazing as a primary tool for reducing fuel loads, reducing invasive species populations and maintaining functional fire breaks to the extent such activities do not adversely affect breeding habitats (i.e., occupied leks, nesting and early brood-rearing). **Utah Habitat:** Consider the use of prescriptive grazing to specifically reduce fire size and intensity on all types of landownership, where appropriate. This could be particularly effective in areas where cheatgrass is encroaching on sagebrush habitat. This will require cooperation and coordination among different land managers and owners and livestock owners. In some cases feed supplementation and water hauling may need to be utilized to obtain the desired results.	**F-FM-6: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-FM-7: —.	**B-FM-7: PHMA:** —. **GHMA:** —.	**C-FM-7: PHMA:** —.	**D-FM-7: PHMA:** Existing and proposed linear ROWs could be considered for use and maintenance as vegetated fuel breaks in appropriate areas to meet fire management goals	**E-FM-7: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-FM-7: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
			and objectives. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.		
A-FM-8: —.	**B-FM-8: PHMA:** —. **GHMA:** —.	**C-FM-8: PHMA:** —.	**D-FM-8: PHMA:** Where appropriate fuel breaks would incorporate existing vegetation treatments (seedings) or be located adjacent to existing linear disturbance areas. Fuel breaks should be placed in areas with the greatest likelihood of intersecting a fire and protecting existing intact habitat. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-FM-8: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-FM-8: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-FM-9: —.	**B-FM-9: PHMA:** —. **GHMA:** —.	**C-FM-9: PHMA:** —.	**D-FM-9: PHMA:** Strategically pre-treat areas to reduce fine fuels through mechanical treatments, grazing strategies, chemical or biological application (brown stripping). **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-FM-9: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-FM-9: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-FM-10: —.	**B-FM-10: PHMA:** —. **GHMA:** —.	**C-FM-10: PHMA:** —.	**D-FM-10: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-FM-10: Idaho – CHZ:** —. **Idaho – IHZ:** Develop more aggressive strategies to reduce fuel loads, where appropriate. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-FM-10: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-FM-11: —.	**B-FM-11: PHMA:** —. **GHMA:** —.	**C-FM-11: PHMA:** Any fuels treatments will focus on interfaces with human habitation or significant existing disturbances.	**D-FM-11: PHMA:** Fuel treatments will be designed though an interdisciplinary process to expand, enhance, maintain, and protect GRSG habitat. Use green strips and/or fuel breaks, where appropriate, to protect seeding efforts from subsequent fire events. In coordination with the USFWS and	**E-FM-11: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-FM-11: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
			relevant state agencies, BLM and Forest Service planning units (Districts/Forests) with large blocks of GRSG habitat will develop, using the assessment process described in **Appendix D**, a fuels management strategy which considers an up-to-date fuels profile, land use plan direction, current and potential habitat fragmentation, sagebrush and GRSG ecological factors, and active vegetation management steps to provide critical breaks in fuel continuity, where appropriate. When developing this strategy, planning units will consider the risk of increased habitat fragmentation from a proposed action versus the risk of large scale fragmentation posed by wildfires if the action is not taken. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.		
A-FM-12: —.	**B-FM-12: PHMA:** —. **GHMA:** —.	**C-FM-12: PHMA:** —.	**D-FM-12: PHMA:** Utilizing an interdisciplinary approach, a full range of fuel reduction techniques will be available. Fuel reduction techniques such as grazing, prescribed fire, chemical, biological and mechanical treatments are acceptable. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-FM-12: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-FM-12: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-FM-13: —.	**B-FM-13: PHMA:** —. **GHMA:** —.	**C-FM-13: PHMA:** —.	**D-FM-13: PHMA:** Prioritize the use of native seeds for fuels management treatment based on availability, adaptation (site potential), and probability of success. Where probability of success or native seed availability is low, nonnative seeds may be used to meet GRSG habitat objectives to trend toward restoring the fire regime. When reseeding, use fire resistant native and nonnative species,	**E-FM-13: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-FM-13: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
			as appropriate, to provide for fuel breaks. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.		
A-FM-14: —.	**B-FM-14: PHMA:** —. **GHMA:** —.	**C-FM-14: PHMA:** —.	**D-FM-14: PHMA:** Upon project completion, monitor and manage fuels projects to ensure long-term success, including persistence of seeded species and/or other treatment components. Control invasive vegetation post-treatment. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-FM-14: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-FM-14: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-FM-15: —.	**B-FM-15: PHMA:** —. **GHMA:** —.	**C-FM-15: PHMA:** —.	**D-FM-15: PHMA:** Apply seasonal restriction, as needed, for implementing fuels management treatments according to the type of seasonal habitat present. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-FM-15: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-FM-15: PHMA:** —. **GHMA:** —. **RHMA:** —.
Preparedness					
A-PRE-1: —.	**B-PRE-1: PHMA:** —. **GHMA:** —.	**C-PRE-1: PHMA:** —.	**D-PRE-1: PHMA:** Implement a coordinated inter-agency approach to fire restrictions based upon National Fire Danger Rating System thresholds (fuel conditions, drought conditions and predicted weather patterns) for GRSG habitat. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-PRE-1: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-PRE-1: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-PRE-2: —.	**B-PRE-2: PHMA:** —. **GHMA:** —.	**C-PRE-2: PHMA:** —.	**D-PRE-2: PHMA:** Develop wildfire prevention plans that explain the resource value of GRSG habitat and include fire prevention messages and actions to reduce human-caused ignitions.	**E-PRE-2: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-PRE-2: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-SUP-3: —.	**B-SUP-3: PHMA:** —. **GHMA:** —.	**C-SUP-3: PHMA:** —.	**D-SUP-3: PHMA:** Within acceptable risk levels utilize a full range of fire management strategies and tactics, including the management of wildfires to achieve resource objectives, across the range of GRSG habitat consistent with land use plan direction. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-SUP-3: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-SUP-3: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-SUP-4: Prioritize fire suppression to protect firefighter and public safety. Each LUP supports the development and adherence to a more detailed fire management plan that outlines priorities and levels of suppression for particular vegetation classes or resource protection. Montana BLM: Emphasis on firefighter and public safety. Decisions based on relative values to be protected commensurate with fire management costs.	**B-SUP-4: PHMA:** In PHMA, prioritize suppression, immediately after life and property, to conserve the habitat. **GHMA:** In GHMA, prioritize suppression where wildfires threaten PHMA.	**C-SUP-4: PHMA:** Same as Alternative B.	**D-SUP-4: PHMA:** Prioritize firefighter and public safety, followed by suppression of fires in PHMA, with consideration given to threatened and endangered species habitat. **IHMA:** Prioritize suppression of fires in IHMA and threatened and endangered species habitat after PHMA. **GHMA:** Prioritize suppression of fires in GHMA and threatened and endangered species habitat after PHMA and IHMA.	**E-SUP-4: Idaho – CHZ:** Prioritize protection of GRSG habitat after human safety and structure protection. **Idaho – IHZ:** Prioritize protection of GRSG habitat after human safety and structure protection and GRSG habitat in CHZ. **Idaho – GHZ:** Emphasize aggressive fire suppression techniques and efforts, recognizing that other local, regional, and national fire suppression priorities may take precedence. **Montana Habitat:** Same as Alternative A. **Utah Habitat:** Address fire by natural ignition as a serious threat.	**F-SUP-4: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.
A-SUP-5: —.	**B-SUP-5: PHMA:** —. **GHMA:** —.	**C-SUP-5: PHMA:** —.	**D-SUP-5: PHMA:** Ensure firefighter personnel receive orientation regarding GRSG/sagebrush management issues as related to wildfire suppression. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-SUP-5: Idaho Common to All Habitats:** —. **Utah Habitat**: —.	**F-SUP-5: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-SUP-6: No similar action for sub-region. Montana BLM: Approximately 777,000 acres managed with considerations to wildlife habitat, air quality, and threatened and endangered species.	**B-SUP-6: PHMA:** —. **GHMA:** —.	**C-SUP-6: PHMA:** —.	**D-SUP-6: PHMA:** Suppress wildland fires in intact GRSG habitats and use managed wildfire where needed to improve GRSG habitat. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-SUP-6: Idaho – Common to All Habitats:** —. **Montana Habitat:** Same as Alternative A. **Utah Habitat:** —.	**F-SUP-6: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-SUP-7: —.	**B-SUP-7: PHMA:** —. **GHMA:** —.	**C-SUP-7: PHMA:** —.	**D-SUP-7: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-SUP-7: Idaho – CHZ:** Prioritize funding for fire suppression. **Idaho – IHZ:** —. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-SUP-7: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-SUP-8: During suppression, protect GRSG habitats from fire through strategic wildfire suppression planning. Planning measures may include: • Conducting burnout/backfiring operations in a manner that minimizes the loss of sagebrush when possible • The agency administrator or duty officer will prioritize the assignment of resources for suppression in the event of multiple wildfire starts in PHMA • Retain all unburned sagebrush islands unless firefighter safety and the success of the suppression operations are compromised	**B-SUP-8: PHMA:** —. **GHMA:** —.	**C-SUP-8: PHMA:** —.	**D-SUP-8: PHMA:** Same as Alternative A. **IHMA:** Same as Alternative A. **GHMA:** Same as Alternative A.	**E-SUP-8: Idaho – CHZ:** Develop a consistent wildfire suppression plan that improves on the current wildfire suppression baseline within 1 year of the ROD through: a. Ensuring close coordination with federal and state firefighters, local fire departments, and local expertise to create the best possible network of strategic fuel breaks and road access to minimize and reduce the size of a wildfire following ignition b. Developing consistent fire response plans and mutual aid agreements c. Requesting and placing additional firefighting resources and establish new incident attack centers, with particular emphasis in the West Owyhee CA; d. Creating and maintaining effective fuel breaks in strategic locations that will modify fire behavior and increase fire suppression effectiveness according to the following criteria: • Targeting establishment of fuel breaks along existing roads or other disturbances • Identifying and targeting higher-risk roads for fuel break construction and maintenance	**F-SUP-8: PHMA:** —. **GHMA:** —. **RHMA:** —.

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Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
				based on fire history maps • Implementing a strategic approach to using these roads for rapid fire response • Analyzing the benefits of the fuel break against the additional loss of sagebrush cover and risk on invasive weeds • Maintaining fire breaks to meet objectives e. Requesting the necessary federal appropriations to achieve this objective **Idaho – IHZ:** Develop a wildfire suppression plan that improves on the fire suppression baseline through: a. Ensuring close coordination with federal and state firefighters, local fire departments, and local expertise (e.g., livestock grazing permittees and road maintenance personnel) to create the best possible network of strategic fuel breaks and road access to minimize and reduce the size of a wildfire following ignition b. Developing consistent fire response plans and mutual aid agreements c. Requesting the necessary federal appropriations to achieve this objective. **Idaho – GHZ:** —. **Utah Habitat:** —.	

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Emergency Stabilization and Rehabilitation (ESR-BLM) and Burned Area Emergency Response (BAER-FS)					
A-ESR-1: —.	**B-ESR-1: PHMA:** —. **GHMA:** —.	**C-ESR-1: PHMA:** —.	**D-ESR-1: PHMA:** Incorporate measurable groundcover and vegetation objectives (e.g., density and cover) into ESR/BAER plans. Qualitative objectives, such as plant vigor, seed production, and growing season conditions, should also be considered. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-ESR-1: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-ESR-1: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-ESR-2: —.	**B-ESR-2: PHMA:** —. **GHMA:** —.	**C-ESR-2: PHMA:** —.	**D-ESR-2: PHMA:** Ensure that appropriate GRSG seasonal habitat objectives are considered in ESR (BLM) and BAER (Forest Service) plans that contain PHMA, IHMA, or GHMA. The primary short-term objective is to establish or recover shrubs, grasses, and forbs appropriate for the ecological site. In seedings, native plant material is preferred but introduced species may also be required to compete with invasives, especially on harsher sites. The longer-term objective (i.e., 10 years-plus) is to achieve a robust perennial herbaceous understory with at least 10% sagebrush canopy cover that provides functional GRSG habitat. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-ESR-2: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-ESR-2: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-ESR-3: —.	**B-ESR-3: PHMA:** —. **GHMA:** —.	**C-ESR-3: PHMA:** —.	**D-ESR-3: PHMA:** In the short term, ensure an appropriate rest period from livestock grazing to allow natural recovery of existing seedings or the establishment of new seedings that are within PHMA, IHMA, or GHMA. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-ESR-3: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-ESR-3: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-ESR-4: —.	**B-ESR-4: PHMA:** —. **GHMA:** —.	**C-ESR-4: PHMA:** —.	**D-ESR-4: PHMA:** Once seeded or naturally recovered areas within PHMA, IHMA, or GHMA can be reopened to livestock grazing, incorporate long-term management that will maintain the seeding investment, promote long-term plant community health, and promote the achievement of GRSG habitat objectives. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-ESR-4: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-ESR-4: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-ESR-5: —.	**B-ESR-5: PHMA:** —. **GHMA:** —.	**C-ESR-5: PHMA:** —.	**D-ESR-5: PHMA:** Consider adjusting livestock management on adjacent unburned areas to mitigate the effect of the burn on local GRSG populations. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-ESR-5: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-ESR-5: PHMA:** —. **GHMA:** —. **RHMA:** —.
Livestock Grazing					
A-LG/RM-1: Continue to make GRSG habitat available for livestock grazing (see **Table 2-9**). Active AUMs for livestock grazing would remain the same, though the number of AUMs on a permit may be adjusted during site-specific evaluations conducted during term permit renewals, AMP development, or other appropriate implementation activity. Additionally, temporary adjustments can be made annually to livestock numbers, the number of AUMs, season of use, and other aspects of grazing within the terms and conditions of the permit based on the permittees livestock operation and/or an evaluation of a variety of forage and resource site-specific conditions. Montana BLM: Continue to manage under current guidance. Consider	**B-LG/RM-1: PHMA:** Same as Alternative A (see **Table 2-9**). **GHMA:** Same as PHMA.	**C-LG/RM-1: PHMA:** No grazing will be allowed in occupied GRSG habitat (see **Table 2-9**). Grazing will remain unchanged in areas outside of occupied GRSG habitat.	**D-LG/RM-1: PHMA:** Same as Alternative A (see **Table 2-9**). **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-LG/RM-1: Idaho – Common to All Habitats:** Same as Alternative A (see **Table 2-9**). **Montana Habitat:** Same as Alternative A. **Utah Habitat:** Same as Alternative A (see **Table 2-9**).	**F-LG/RM-1: PHMA:** Grazing would be reduced by 25% (see **Table 2-9**). Reductions by allotment will occur by Field Office based on a review of the site-specific information (e.g., range condition, utilization levels, type and condition of GRSG habitat). Based on the Field Office review, the reductions in AUMs would occur in allotments that overlap occupied GRSG habitat, whether partial reductions in active use or closing specific allotments. The reductions would be implemented during renewal of term grazing permits. **GHMA:** Grazing would be reduced by 25% (see **Table 2-9**). **RHMA:** Same as Alternative A.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
changes in grazing management on a case-by-case basis. 456,100 acres PPH available for livestock grazing and 212,200 acres PGH available for grazing					
A-LG/RM-2: —.	**B-LG/RM-2: PHMA:** Incorporate GRSG habitat objectives and management considerations into all BLM and Forest Service grazing allotments through AMPs or permit renewals and/or Forest Service Annual Operating Instructions. **GHMA:** —.	**C-LG/RM-2: PHMA:** —.	**D-LG/RM-2: PHMA:** Within grazing allotments containing GRSG habitat, incorporate grazing management measures designed to meet GRSG habitat objectives through AMPs, grazing permit renewal or permit modification processes. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-LG/RM-2: Idaho – CHZ:** Prioritize permit renewal and land health assessment processes for allotments with declining GRSG populations in conjunction with scheduled term grazing permit renewals, or where the adaptive regulatory trigger has been tripped and livestock grazing has been identified as a potential causal factor. **Idaho – IHZ:** Prioritize permit renewal and land health assessment processes for allotments with declining GRSG populations. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-LG/RM-2: PHMA:** Same as Alternative B. **GHMA:** Same as Alternative B. **RHMA:** Same as Alternative B.
A-LG/RM-3: Consider adjustments to allotment boundaries that provide for single unit or landscape level grazing approaches to habitat improvement on a case-by-case basis.	**B-LG/RM-3: PHMA:** Work cooperatively on integrated ranch planning within GRSG habitat so operations with deeded/BLM and/or Forest Service allotments can be planned as single units. **GHMA:** —.	**C-LG/RM-3: PHMA:** —.	**D-LG/RM-3: PHMA:** Work cooperatively with other land managers to allow livestock operations that utilize mixed federal, private and/or state land to be managed at the landscape scale to benefit GRSG and their habitat. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-LG/RM-3: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LG/RM-3: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.
A-LG/RM-4: Complete rangeland health assessments for each allotment at least once every ten years for consideration during the permit renewal process. Monitor vegetation trends (including composition, cover, and age class), noxious weeds, riparian Proper Functioning Condition (PFC), etc. as part of the grazing management	**B-LG/RM-4: PHMA:** Prioritize completion of land health assessments (Forest Service may use other analyses) and processing grazing permits within PHMA. Focus this process on allotments that have the best opportunities for conserving, enhancing or restoring habitat for GRSG. Utilize BLM Ecological Site Descriptions (Forest Service may use other methods) to conduct land health assessments to	**C-LG/RM-4: PHMA:** —.	**D-LG/RM-4: PHMA:** PHMA is the highest priority for BLM land health assessments and processing of BLM grazing permits with consideration for threatened and endangered species. Where possible, conduct land health assessments at the watershed, or other meaningful landscape-scale. **IHMA:** Prioritize BLM land health assessments and processing of BLM	**E-LG/RM-4: Idaho – Common to All Habitats:** Complete the allotment assessment process in conjunction with scheduled term grazing permit renewals (i.e., every ten years), giving priority to areas that have the potential to provide the greatest benefit to GRSG. **Idaho – CHZ:** Prioritize and concentrate allocation of resources for assessment and permit renewal on	**F-LG/RM-4: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
program. BLM plans do not contain grazing management decisions specific to conserving GRSG habitat. Forest Service LUPs contain specific management actions for permitted livestock grazing that take in to consideration established habitat management objectives.	determine if standards of range-land health are being met. **GHMA:** —.		grazing permits after PHMA with consideration for threatened and endangered species. Where possible, conduct land health assessments at the watershed, or other meaningful landscape-scale. **GHMA:** Prioritize BLM land health assessments and processing of BLM grazing permits after IHMA, with consideration for threatened and endangered species. Where possible, conduct land health assessments at the watershed, or other meaningful landscape-scale.	allotments within CHZ that have declining GRSG populations, with secondary priority given to stable or increasing populations within CHZ. **Idaho – IHZ:** Prioritize allotments within IHZ containing breeding habitats that have decreasing lek counts after permits within CHZ. GRSG populations that are stable or trending upward will be a lower priority for permit renewal and the assessment process. **Idaho – GHZ:** —. **Utah Habitat:** —.	
A-LG/RM-5: —.	**B-LG/RM-5: PHMA:** Conduct land health assessments that include (at a minimum) indicators and measurements of structure/condition/composition of vegetation specific to achieving GRSG habitat objectives (Doherty et al. 2011a). If local/state seasonal habitat objectives are not available, use GRSG habitat recommendations from Connelly et al. 2000 and Hagen et al. 2007. **GHMA:** —.	**C-LG/RM-5: PHMA:** —.	**D-LG/RM-5: PHMA:** During the land health assessment process determine whether vegetation structure, condition and composition are meeting GRSG habitat objectives in sagebrush cover types through implementation of the habitat assessment framework, (Stiver et al. 2010 as amended/replaced) or other BLM or Forest Service approved methodology, in accordance with current policy and guidance. **IHMA:** Same as PHMA. **GHMA:** —.	**E-LG/RM-5: Idaho – Common to All Habitats:** Utilize a variety of information sources, when available, in the allotment assessment process, including: published characteristics of GRSG habitat; Ecological Site Descriptions; existing vegetation; habitat inventories/assessments (Stiver et al. 2010); and state and transition models that describe vegetation and other physical attributes for GRSG. Include discussion of whether the allotment (or any pasture/significant area therein) has the existing vegetation and/or existing ecological condition (seral state) to provide GRSG habitat (Category 1); or whether the allotment (or any pasture/significant area therein) has the ecological potential to provide GRSG habitat (Category 2). When either of these categories applies, incorporate GRSG habitat management objectives as the desired conditions for the applicable allotment and pasture. **Utah Habitat:** —.	**F-LG/RM-5: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-6: Consider range improvements and/or adjust permit terms and conditions on a case-by-case basis as necessary to meet land health standards or habitat objectives identified in individual LUPs. Changes may include, but are not limited to: 1) Rotation systems (e.g., rest rotation, deferred rotation) 2) Season or timing of use 3) Distribution of livestock use 5) Type of livestock 6) Class of livestock 7) Duration of grazing use and rest periods	**B-LG/RM-6: PHMA:** Implement management actions (grazing decisions, Annual Operating Instructions [Forest Service only], AMP/Conservation Plan development, or other agreements) to modify grazing management to meet seasonal GRSG habitat requirements (Connelly et al. 2011). Consider singly, or in combination, changes in: 1) Season or timing of use; 2) Numbers of livestock (includes temporary non-use or livestock removal); 3) Distribution of livestock use; 4) Intensity of use; and 5) Type of livestock (e.g., cattle, sheep, horses, llamas, alpacas and goats) (Briske et al. 2011). **GHMA:** —.	**C-LG/RM-6: PHMA:** —.	**D-LG/RM-6: PHMA:** When livestock management practices determined to not be compatible with meeting or making progress towards habitat objectives, implement changes in grazing management through grazing authorization modifications, or AMP implementation. Potential considerations include, but are not limited to, changes in: 1) Season or timing of use; 2) Numbers of livestock; 3) Distribution of livestock use; 4) Duration and/or level of use; 5) Kind of livestock (e.g., cattle, sheep, horses, or goats) (Briske et al. 2011); 6) Voluntary measures such as temporary non-use; and 7) Grazing schedules (including rest or deferment). **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-LG/RM-6: Idaho – CHZ:** Adjust grazing permits during the renewal process to include measures (including but not limited to measures described in **Appendix Q**) to achieve desired habitat conditions, if through the assessment process, livestock grazing is found to be limiting the achievement of the habitat characteristics (**Appendix Q**). Measures must be tailored to address the specific management issues. Where population and habitat triggers are being maintained within a CA, this provides that the current grazing system is adequate to maintain viable GRSG populations and therefore absent compelling information, no further changes to BLM grazing systems would be required pursuant to Standard 8 of the Idaho Rangeland Health Standards with respect to GRSG. **Idaho – IHZ:** Same as Idaho - CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-LG/RM-6: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-7: —.	**B-LG/RM-7: PHMA:** Maintain retirement of grazing privileges as an option in PHMA when the current permittee is willing to retire grazing on all or part of an allotment. Analyze the adverse impacts of no livestock use on wildfire and invasive species threats (Crawford et al. 2004) in evaluating retirement proposals. **GHMA:** —.	**C-LG/RM-7: PHMA:** —.	**D-LG/RM-7: PHMA:** Consider retiring an allotment if grazing privileges are relinquished or if an allotment becomes vacant. When grazing privileges are relinquished the associated allotment(s) may be retired from grazing, or converted to a forage reserve/buffer to use during fire rehabilitation or restoration efforts elsewhere (Adopted from Idaho State Plan page 4.64, **Appendix Q**), when such actions are determined to result in a net benefit to GRSG habitat and other priority resources. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-LG/RM-7: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LG/RM-7: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.
A-LG/RM-8: —.	**B-LG/RM-8: PHMA:** —. **GHMA:** —.	**C-LG/RM-8: PHMA:** —.	**D-LG/RM-8: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LG/RM-8: Idaho – CHZ:** Establish strategically located forage reserves focusing on areas unsuitable for GRSG habitat restoration or lower priority habitat restoration areas when feasible. **Idaho – IHZ:** Same as Idaho – CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-LG/RM-8: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-9: —.	**B-LG/RM-9: PHMA:** —. **GHMA:** —.	**C-LG/RM-9: PHMA:** —.	**D-LG/RM-9: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LG/RM-9: Idaho – CHZ:** Implement grazing management systems that ensure adequate nesting and early brood rearing habitat within the breeding landscape. Manage allotments only for the primary seasonal habitat that it has the potential to support. BLM will conduct fine and site scale habitat assessments based on these habitat characteristics. **Idaho – IHZ:** Same as Idaho - CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-LG/RM-9: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LG/RM-10: Consider changes in grazing management on a case-by-case basis. Changes may include, but are not limited to: 1) Rotation systems (e.g., rest rotation and deferred rotation) 2) Season or timing of use 3) Distribution of livestock use 5) Type of livestock 6) Class of livestock 7) Duration of grazing use and rest periods.	**B-LG/RM-10: PHMA:** —. **GHMA:** —.	**C-LG/RM-10: PHMA:** —.	**D-LG/RM-10: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LG/RM-10: Idaho – CHZ:** Modify grazing management through appropriate herding, salting, and water-source management (e.g., turning troughs/pipelines on/off, extending pipelines/moving troughs) when use-pattern mapping or monitoring demonstrates an opportunity to adjust livestock distribution to benefit occupied GRSG breeding habitat. **Idaho – IHZ:** Same as Idaho - CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-LG/RM-10: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LG/RM-11: —.	**B-LG/RM-11: PHMA:** —. **GHMA:** —.	**C-LG/RM-11: PHMA:** —.	**D-LG/RM-11: PHMA:** Coordinate with the permittee to schedule grazing use to avoid the GRSG breeding and nesting period when practical. If a lek is located at a water trough, turn off the trough during the breeding and nesting period to minimize potential impacts on GRSG when possible. **IHMA:** —. **GHMA:** —.	**E-LG/RM-11: Idaho – CHZ:** Graze exotic perennial grass seedings and/or annual grasslands to avoid grazing during breeding season in occupied GRSG habitat if available and feasible. **Idaho – IHZ:** Same as Idaho - CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-LG/RM-11: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-12: Consider changes in grazing management on a case-by-case basis. Changes may include, but are not limited to: 1) Rotation systems (e.g., rest rotation and deferred rotation) 2) Season or timing of use 3) Distribution of livestock use 5) Type of livestock 6) Class of livestock 7) Duration of grazing use and rest periods	**B-LG/RM-12: PHMA:** —. **GHMA:** —.	**C-LG/RM-12: PHMA:** —.	**D-LG/RM-12: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LG/RM-12: Idaho – CHZ:** Modify authorized seasons of use within grazing permits to provide greater flexibility in managing livestock for the benefit of GRSG. **Idaho – IHZ:** Same as Idaho - CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-LG/RM-12: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LG/RM-13: —.	**B-LG/RM-13: PHMA:** —. **GHMA:** —.	**C-LG/RM-13: PHMA:** —.	**D-LG/RM-13: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LG/RM-13: Idaho – CHZ:** Maintain residual herbaceous vegetation at the end of the growing/grazing season to contribute to nesting and brood-rearing habitat during the coming nesting season consistent with conditions described in **Appendix Q**). **Idaho – IHZ:** Same as Idaho - CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-LG/RM-13: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LG/RM-14: Consider changes in grazing management on a case-by-case basis. Changes may include, but are not limited to: 1) Rotation systems (e.g., rest rotation and deferred rotation) 2) Season or timing of use 3) Distribution of livestock use 5) Type of livestock 6) Class of livestock 7) Duration of grazing use and rest periods	**B-LG/RM-14: PHMA:** —. **GHMA:** —.	**C-LG/RM-14: PHMA:** —.	**D-LG/RM-14: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LG/RM-14: Idaho – CHZ:** Modify grazing management to meet seasonal GRSG habitat requirements (**Appendix Q**). Provide flexibility in grazing management through scheduling the intensity, timing, duration and frequency of grazing use over time that best promotes management objectives. The Implementation Task Force would provide recommendations throughout the process and would be given the ability to review proposed management changes and the implementation of conservation measures to ensure that the measures are being appropriately applied. **Idaho – IHZ:** Same as Idaho – CHZ.	**F-LG/RM-14: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
				when temperatures are high. Winter Carefully manage levels of browsing or activities in sagebrush areas that constitute GRSG habitat that would reduce GRSG access to these areas for food and cover. The potential impact of livestock grazing on winter habitat can be positive or negative depending on scale and location of use.	
A-LG/RM-16: —.	**B-LG/RM-16: PHMA:** In PHMA, manage for vegetation composition and structure consistent with ecological site potential and within the reference state to achieve GRSG seasonal habitat objectives. **GHMA:** —.	**C-LG/RM-16: PHMA:** —.	**D-LG/RM-16: PHMA:** Manage for vegetation composition (including riparian and lentic areas) and structure consistent with appropriate GRSG seasonal habitat objectives relative to site potential. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-LG/RM-16: Idaho – CHZ:** Maintain existing grazing management absent substantial and compelling information, if, based on the assessment, the current grazing system achieves the habitat characteristics (**Appendix Q**). **Idaho – IHZ:** Same as Idaho – CHZ. **Idaho – GHZ:** —. **Utah Habitat:** Address incompatible grazing strategies through established rangeland management practices consistent with the maintenance or enhancement of habitat. Carefully manage the "time," "timing," and "intensity" of grazing in sagebrush/GRSG habitats to provide for the seasonal needs of GRSG. Specific prescriptions can be applied through more intensive management to address special needs or weak links in the biological year of GRSG production. Where time-controlled grazing is not an option, moderate use of occupied GRSG habitats will usually leave mosaic or patchy areas where some plants are ungrazed. Managing for moderate utilization levels (40%) after the period of rapid vegetation growth may provide enough residual cover for	**F-LG/RM-16: PHMA:** Manage for vegetation composition and structure consistent with ecological site potential and within the reference state to achieve GRSG habitat objectives. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
				GRSG nesting and early brood-rearing the subsequent spring. Evaluation of GRSG nesting and escape cover must be determined on a site-specific basis. Livestock operations with a small amount of nesting habitat should consider special management activities to protect nesting and early brood-rearing areas. Lighter use of areas may be warranted. In areas with large tracts of contiguous habitat, livestock producers should manage the vegetation on a rotational grazing basis, which may leave 10 - 20 % of the area ungrazed periodically in combination with deferring or altering timing of grazing in other areas. In areas where GRSG nesting is common, managing for moderate use of plant growth across the landscape would be appropriate. Well-managed ranches with comprehensive grazing strategies that include short-term or duration grazing, higher levels of use may be acceptable, provided these higher levels of use include rested vegetation in nearby areas.	
A-LG/RM-17: —.	**B-LG/RM-17: PHMA:** —. **GHMA:** —.	**C-LG/RM-17: PHMA:** —.	**D-LG/RM-17: PHMA:** Outside of occupied or potential bighorn sheep habitat, allow temporary or permanent conversion of cattle AUMs to sheep and/or goat grazing to allow for fuels management opportunities using domestic livestock. Sheep and goat grazing areas must be reviewed and modified as bighorn sheep habitat maps are updated or refined. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-LG/RM-17: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LG/RM-17: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LG/RM-18: —.	**B-LG/RM-18: PHMA:** —. **GHMA:** —.	**C-LG/RM-18: PHMA:** —.	**D-LG/RM-18: PHMA:** Incorporate Terms and Conditions in crossing permits to limit disturbance of leks when trailing livestock across BLM-	**E-LG/RM-18: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LG/RM-18: PHMA:** No action. **GHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
			and Forest Service-administered lands in the spring. Appropriate Terms and Conditions include, but are not limited to: required herding practices, permitted routes, timing of livestock movements during lekking season, watering, overnighting, and sheep bedding locations. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.		**RHMA:** —.
A-LG/RM-19: —.	**B-LG/RM-19: PHMA:** —. **GHMA:** —.	**C-LG/RM-19: PHMA:** —.	**D-LG/RM-19: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LG/RM-19: Idaho – Common to All Habitats:** Consider additional options for scheduled grazing based on the three habitat zones in light of unintended consequences of altering grazing use, such as a possible increased risk of wildfire, before adjusting management. **Idaho – CHZ:** Altering grazing schemes in allotments within CHZ, where needed and appropriate, through enhanced grazing opportunities utilizing introduced seedings or areas with lower value to GRSG (e.g., GHZ). **Idaho – IHZ:** Enhance grazing opportunities through utilization of areas with introduced seedings or areas with lower value to GRSG. **Idaho – GHZ:** Same as Idaho – IHZ. **Utah Habitat:** —.	**F-LG/RM-19: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-20: —.	**B-LG/RM-20: PHMA:** —. **GHMA:** —.	**C-LG/RM-20: PHMA:** —.	**D-LG/RM-20: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LG/RM-20: Idaho – Common to All Habitats:** Include measures tailored to address specific management issues (**Appendix Q**), when livestock grazing is limiting achievement of the habitat characteristics (**Appendix Q**), within renewed permits. **Utah Habitat:** —.	**F-LG/RM-20: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LG/RM-21: Consider changes in grazing management on a case-by-case basis. Changes may include, but are not limited to: 1) Rotation systems (e.g., rest rotation and deferred rotation) 2) Season or timing of use 3) Distribution of livestock use 5) Type of livestock 6) Class of livestock 7) Duration of grazing use and rest periods.	**B-LG/RM-21: PHMA:** —. **GHMA:** —.	**C-LG/RM-21: PHMA:** —.	**D-LG/RM-21: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LG/RM-21: Idaho – Common to All Habitats:** Maintain flexibility in grazing management and the opportunity to schedule and adjust intensity, timing, duration, and frequency of grazing use over time in a manner that maintains rangeland health and habitat quality. **Utah Habitat:** —.	**F-LG/RM-21: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LG/RM-22: —.	**B-LG/RM-22: PHMA:** —. **GHMA:** —.	**C-LG/RM-22: PHMA:** —.	**D-LG/RM-22: PHMA:** Utilize existing and appropriate rangeland health assessment and GRSG habitat assessment (currently the Habitat Assessment Framework) processes to quantify GRSG habitat quality. Prioritize assessment completion in PHMA. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-LG/RM-22: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LG/RM-22: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
	strive to attain reference state vegetation relative to the ecological site description. **GHMA:** Same as PHMA.				**RHMA:** —.
A-LG/RM-32: Manage rangeland resources to maintain healthy, sustainable, rangeland ecosystems and to restore degraded rangelands in accordance with Idaho's Standards for Rangeland Health or standards or guidelines established in individual Forest Service LRMPs. Rangeland health standards require that riparian areas be managed for PFC.	**B-LG/RM-32: PHMA:** Reduce hot season grazing on riparian and meadow complexes to promote recovery or maintenance of appropriate vegetation and water quality. Utilize fencing/herding techniques or seasonal use or livestock distribution changes to reduce pressure on riparian or wet meadow vegetation used by GRSG in the hot season (summer) (Aldridge and Brigham 2002; Crawford et al. 2004; Hagen et al. 2007). **GHMA:** —.	**C-LG/RM-32: PHMA:** —.	**D-LG/RM-32: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LG/RM-32: Idaho – Common to All Habitats:** —. **Utah Habitat:** Continue livestock grazing strategies that have proven effective in maintaining and enhancing GRSG habitat, unless compelling and credible cause-and-effect evidence indicates a disturbance exists. Address incompatible grazing strategies through established rangeland management practices consistent with the maintenance or enhancement of habitat. Design water developments to enhance mesic habitat for use by GRSG and maintain adequate vegetation in wet meadows. Within PHMA, GRSG stipulations should take precedence over stipulations for other species if conflicts occur, if otherwise allowable by law.	**F-LG/RM-32: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LG/RM-33: Manage, maintain, protect, and restore riparian and wetland areas to PFC.	**B-LG/RM-33: PHMA:** —. **GHMA:** —.	**C-LG/RM-33: PHMA:** —.	**D-LG/RM-33: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LG/RM-33: Idaho – CHZ:** Manage grazing of riparian areas, meadows, springs, and seeps in a manner that promotes vegetative structure and composition appropriate to the site. **Idaho – IHZ:** Same as Idaho – CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-LG/RM-33: PHMA:** —. **GHMA:** —. **RHMA:** —.
Range Improvements					
A-LG/RM-34: Consider structural range improvements on a case-by-case basis to provide for livestock grazing while maintaining rangeland health.	**B-LG/RM-34: PHMA:** Design any new structural range improvements and location of supplements (salt or protein blocks) to conserve, enhance, or restore GRSG habitat through an improved grazing management system relative to	**C-LG/RM-34: PHMA:** —.	**D-LG/RM-34: PHMA:** Design any new structural range improvements to conserve, enhance, or restore GRSG habitat. Structural range improvements, in this context, include but are not limited to: cattle guards, fences,	**E-LG/RM-34: Idaho – Common to All Habitats:** —. **Utah Habitat:** Locate livestock fences away from leks and employ the NRCS fence standards (NRCS 2012).	**F-LG/RM-34: PHMA:** Avoid all new structural range developments in PHMA unless independent peer-reviewed studies show that the range improvement structure benefits GRSG. Design any new structural range

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
	GRSG objectives. Structural range improvements, in this context, include but are not limited to: cattle guards, fences, exclosures, corrals or other livestock handling structures; pipelines, troughs, storage tanks (including moveable tanks used in livestock water hauling), windmills, ponds/reservoirs, solar panels and spring developments. Potential for invasive species establishment or increase following construction must be considered in the project planning process and monitored and treated post-construction. **GHMA:** —.		exclosures, corrals or other livestock handling structures; pipelines, troughs, storage tanks (including moveable tanks used in livestock water hauling), windmills, ponds/reservoirs, solar panels and spring developments. Potential for an increase in invasive species establishment or increase following construction must be considered in the project planning process and monitored and treated post-construction. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.		improvements and location of supplements (salt or protein blocks) to conserve, enhance, or restore GRSG habitat through an improved grazing management system relative to GRSG objectives. Structural range improvements developments, in this context, include but are not limited to cattle guards, fences, exclosures, corrals or other livestock handling structures; pipelines, troughs, storage tanks (including moveable tanks used in livestock water hauling), windmills, ponds/reservoirs, solar panels and spring developments. Potential for invasive species establishment or increase following construction must be considered in the project planning process and monitored and treated post-construction. Consider the comparative cost of changing grazing management instead of constructing additional range developments. **GHMA:** —. **RHMA:** —.
A-LG/RM-35: Consider modifications to existing structural range improvements on a case-by-case basis taking into consideration impacts on other resources.	**B-LG/RM-35: PHMA:** Evaluate existing structural range improvements and location of supplements (salt or protein blocks) to make sure they conserve, enhance or restore GRSG habitat. **GHMA:** —.	**C-LG/RM-35: PHMA:** —.	**D-LG/RM-35: PHMA:** During project inspections, evaluate the design and location of existing structural range improvements with respect to their effect on GRSG habitat, including, but not limited to: • Potential for GRSG collisions with infrastructure. • Avian predation due to creation of roosting, perching or nesting sites. • Introduction of weeds, West Nile Virus and effects on vegetation structure or composition. • Assess existing livestock management fences within PHMA for risk of GRSG collisions based on proximity to leks, lek size, and	**E-LG/RM-35: Idaho – CHZ:** Place salt or mineral supplements to improve management of livestock in existing disturbed sites (areas with reduced sagebrush cover—e.g., seedings or cheatgrass sites) to reduce impacts on GRSG breeding habitat. **Idaho – IHZ:** Same as Idaho – CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-LG/RM-35: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
			topography (Christiansen 2009; Stevens 2011) or existing collision risk models (Stevens et al. 2012). • Prioritize fence removal, modification or marking in areas of high collision risk to reduce the incidence of GRSG mortality due to fence strikes (Stevens et al. 2012). • Avoid building new permanent fences within 2 km of occupied leks or high density fence areas (Stevens 2011). If this is not feasible, ensure that high risk segments are marked with collision diverter devices or as latest science indicates. • Utilize temporary fencing (e.g., ESR, drop down fencing) where applicable and appropriate to meet management objectives. Evaluate the locations where salt/supplements are placed. In coordination with the permittee, have salt/supplements moved to areas which would conserve or improve habitat for GRSG. **IHMA:** Same as PHMA. **GHMA:** During project inspections, evaluate the design and location of existing structural range improvements and location of supplements (salt or protein blocks) with respect to their effect on GRSG habitat, including, but not limited to: • Potential for GRSG collisions. • Avian predation due to creation of roosting, perching or nesting sites. • Introduction of weeds, West Nile Virus and effects on vegetation structure or composition.		

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-38: —.	**B-LG/RM-38: PHMA:** —. **GHMA:** —.	**C-LG/RM-38: PHMA:** —.	**D-LG/RM-38: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LG/RM-38: Idaho – CHZ:** Reduce the impacts of fences and livestock management facilities on GRSG, to the extent practicable. **Idaho – IHZ:** Same as CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-LG/RM-38: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LG/RM-39: —.	**B-LG/RM-39: PHMA:** —. **GHMA:** —.	**C-LG/RM-39: PHMA:** —.	**D-LG/RM-39: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LG/RM-39: Idaho – CHZ:** Remove unnecessary fences. **Idaho – IHZ:** Same as CHZ. **Idaho – GHZ:** Same as CHZ. **Utah Habitat:** —.	**F-LG/RM-39: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LG/RM-40: —.	**B-LG/RM-40: PHMA:** —. **GHMA:** —.	**C-LG/RM-40: PHMA:** —.	**D-LG/RM-40: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LG/RM-40: Idaho – CHZ:** Consider impacts on GRSG when placing new fences and livestock management facilities, including corrals, loading facilities, water tanks and windmills. **Idaho – IHZ:** Same as CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-LG/RM-40: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LG/RM-41: —.	**B-LG/RM-41: PHMA:** —. **GHMA:** —.	**C-LG/RM-41: PHMA:** —.	**D-LG/RM-41: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LG/RM-41: Idaho – CHZ:** Construct new fences further than one kilometer (0.6 miles) from occupied leks. **Idaho – IHZ:** Same as CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-LG/RM-41: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LG/RM-42: —.	**B-LG/RM-42: PHMA:** —. **GHMA:** —.	**C-LG/RM-42: PHMA:** —.	**D-LG/RM-42: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LG/RM-42: Idaho – CHZ:** Place new, taller structures, including corrals, loading facilities, water storage tanks, windmills, at least one kilometer from occupied leks, to the extent practicable.	**F-LG/RM-42: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
				Idaho – IHZ: Same as CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-44: Consider modifications to existing water developments on a case-by-case basis taking into consideration impacts on other resources.	**B-LG/RM-44: PHMA:** Analyze springs, seeps and associated pipelines to determine if modifications are necessary to maintain the continuity of the predevelopment riparian area within PHMA. Make modifications where necessary, considering impacts on other water uses when such considerations are neutral or beneficial to GRSG. **GHMA:** —.	**C-LG/RM-44: PHMA:** —.	**D-LG/RM-44: PHMA:** During project inspections, evaluate the design and condition of existing water developments (headboxes, exclosures, pipelines, ponds, and troughs) at springs, wetlands, or playas to determine if modification, repair or retrofitting or removal is needed to maintain or restore the integrity and functionality of the riparian/lentic areas to current site potential within priority GRSG habitat. Modifications may include, but are not limited to: • Installing float valves on troughs • Reconfiguring exclosure fencing • Moving troughs out of riparian/lentic areas • Modifying the slope at the edge of ponds to reduce mosquito breeding habitat and West Nile virus. Ensure that troughs are fitted with functional wildlife escape ramps to facilitate use of and escape by animals, including GRSG. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-LG/RM-44: Idaho – Common to All Habitat:** —. **Utah Habitat:** —.	**F-LG/RM-44: PHMA:** Analyze springs, seeps and associated water developments pipelines to determine if modifications are necessary to maintain the continuity of the predevelopment riparian area within PHMA. Make modifications where necessary, including dismantling water developments considering impacts on other water uses when such considerations are neutral or beneficial to GRSG. **GHMA:** —. **RHMA:** —.
A-LG/RM-45: Manage, maintain, protect, and restore riparian and wetland areas to PFC.	**B-LG/RM-45: PHMA:** —. **GHMA:** —.	**C-LG/RM-45: PHMA:** —.	**D-LG/RM-45: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LG/RM-45: Idaho – CHZ:** Design new spring developments in GRSG habitat to maintain or enhance the free-flowing characteristics of springs and wet meadows. Modify developed springs, seeps and associated pipelines to maintain the continuity of the predevelopment riparian area within priority GRSG habitat where necessary. **Idaho – IHZ:** Same as CHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-LG/RM-45: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-RC-3: —.	**B-RC-3: PHMA:** —. **GHMA:** —.	**C-RC-3: PHMA:** —.	**D-RC-3: PHMA:** Incorporate seasonal restrictions for authorized activities to minimize impacts on GRSG and/or their habitat. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-RC-3: Idaho – Common to All Habitat:** —. **Utah Habitat:** —.	**F-RC-3: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-RC-4: —.	**B-RC-4: PHMA:** —. **GHMA:** —.	**C-RC-4: PHMA:** —.	**D-RC-4: PHMA:** Recreation activities and developed recreation sites and facilities within lands not designated as a recreation management area would be managed and designed to minimize adverse effects on GRSG by directing use away from sensitive areas. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-RC-4: Idaho – Common to All Habitat:** —. **Utah Habitat:** —.	**F-RC-4: PHMA:** —. **GHMA:** —. **RHMA:** —.
Travel Management					
A-TM-1: OHV use will be managed as open, closed, or limited to existing roads, primitive roads, and trails as identified in **Table 2-9**. Montana BLM: All OHV travel is restricted to designated routes. There are 920 miles of designated routes in PPH and 400 miles in PGH. No off-road travel allowed by the public. Forest Service-administered lands: Travel planning is complete and all National Forest System lands with a designated route system are considered the same as the limited designation on BLM-administered lands.	**B-TM-1: PHMA:** Limit OHV travel to existing roads, primitive roads, and trails at a minimum, until such time as travel management planning is complete and routes are either designated or closed (see **Table 2-9**). Same as Alternative A for National Forest System lands. **GHMA:** Same as Alternative A.	**C-TM-1: PHMA:** Same as Alternative B (see **Table 2-9**). Same as Alternative A for National Forest System lands.	**D-TM-1: PHMA:** Limit OHV travel to existing roads, primitive roads, and trails at a minimum until such time as travel management planning is complete and routes are either designated or closed. Existing designated OHV open "play" areas would remain open (see Table **2-9**). Same as Alternative A for National Forest System lands. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-TM-1: Idaho – Common to All Habitats:** Same as Alternative B (see Table **2-9**). Same as Alternative A for National Forest System lands. **Montana Habitat:** Same as Alternative A. **Utah Habitat:** PHMA with nesting and winter habitat that do not have designated routes in a Travel Management Plan would be managed at least as limited to existing roads and trails (i.e., could maintain existing OHV closures) until a Travel Management Plan designates routes. PHMA with nesting and winter habitat that have undergone Travel Management Planning with route designation would be managed at least as limited to designated routes (i.e., could maintain existing OHV closures). In these areas,	**F-TM-1: PHMA:** Same as Alternative B (see Table **2-9**). Same as Alternative A for National Forest System lands. **GHMA:** Same as PHMA. **RHMA:** Same as Alternative A.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
				existing route designations would be reviewed and adjusted where impacts on GRSG from route presence or use may exist.	
A-TM-2: All LUPs include management actions that encourage the administrating agency to follow best management practices that reduce or minimize the impacts of development, including use of existing roads where possible.	**B-TM-2: PHMA:** —. **GHMA:** —.	**C-TM-2: PHMA:** Same as Alternative B.	**D-TM-2: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-TM-2: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-TM-2: PHMA:** During travel management planning, prohibit new road construction within 4 miles of active GRSG leks, and avoid new road construction in PHMA. **GHMA:** —. **RHMA:** —.
A-TM-3: —. Under current policy, the need for permanent or seasonal road closures is evaluated during travel management planning.	**B-TM-3: PHMA:** Travel management should evaluate the need for permanent or seasonal road closures. **GHMA:** —.	**C-TM-3: PHMA:** Same as Alternative B.	**D-TM-3: PHMA:** Travel management planning would evaluate the need for permanent or seasonal road closures as per Travel Management Handbook 8342.1. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-TM-3: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-TM-3: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.
A-TM-4: Consider route and trail modifications (new or existing) on a case-by-case basis. Identify travel management areas and prioritize travel management planning in areas where it would provide the most resource benefit.	**B-TM-4: PHMA:** Complete activity level travel plans within five years of the ROD. During activity level planning, where appropriate, designate routes in PHMA with current administrative/agency purpose or need to administrative access only. **GHMA:** —.	**C-TM-4: PHMA:** Same as Alternative B.	**D-TM-4: PHMA:** Prioritize areas for complete transportation management plans as per Travel Management Handbook 8342.1. **IHMA:** Complete Transportation management plans as per Travel Management Handbook 8342.1. **GHMA:** Same as PHMA.	**E-TM-4: Idaho – Common to All Habitats:** —. **Utah Habitat:** Counties should adopt and enforce travel management plans that include consideration for greater GRSG.	**F-TM-4: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.
A-TM-5: Consider route and trail modifications (new or existing) on a case-by-case basis using the designation criteria.	**B-TM-5: PHMA:** Limit route construction to realignments of existing designated routes if that realignment has a minimal impact on GRSG habitat, eliminates the need to construct a new road, or is necessary for motorist safety. **GHMA:** —.	**C-TM-5: PHMA:** Same as Alternative B.	**D-TM-5: PHMA:** Consider GRSG objectives during subsequent travel management planning. Design and designate a travel system to minimize adverse effects on GRSG (i.e., designate or design routes to direct use away from sensitive areas and still provide for high-quality and sustainable travel routes and administrative access, legislatively mandated requirements, and commercial needs). Allow for route upgrade, closure of existing routes, and creation of new routes to help protect	**E-TM-5: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-TM-5: PHMA:** Limit route construction to realignments of existing designated routes if that realignment has a minimal impact on GRSG habitat, eliminates the need to construct a new road, or is necessary for motorist safety. Mitigate any impacts with methods that have been demonstrated to be effective to offset the loss of GRSG habitat. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
			habitat and meet user group needs, thereby reducing the potential for pioneering unauthorized routes. The emphasis of the comprehensive travel and transportation planning within PHMA would be placed on having a neutral or positive effect on GRSG habitat. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.		
A-TM-6: All LUPs include management actions that encourage the administrating agency to follow best management practices that reduce or minimize the impacts of development, including use of existing roads where possible.	**B-TM-6: PHMA:** Use existing roads or realignments as described above to access valid existing rights that are not yet developed. If valid existing rights cannot be accessed via existing roads, then build any new road constructed to the absolute minimum standard necessary, and add the surface disturbance to the total disturbance in PHMA. If that disturbance exceeds 3 % for that area, then evaluate and implement additional, effective mitigation necessary to offset the resulting loss of GRSG habitat (see Objectives, **Table 2-10**). **GHMA:** —.	**C-TM-6: PHMA:** Same as Alternative B.	**D-TM-6: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-TM-6: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-TM-6: PHMA:** Same as Alternative B using a 4-mile buffer from leks to determine road route. **GHMA:** —. **RHMA:** —.
A-TM-7: —. The need for restoration of linear disturbances (unauthorized routes) is identified during the implementation level travel management process or on a case-by-case basis.	**B-TM-7: PHMA:** Conduct restoration of roads, primitive roads and trails not designated in travel management plans. This also includes primitive route/roads that were not designated in Wilderness Study Areas and within lands with wilderness characteristics that have been selected for protection in previous LUPs. **GHMA:** —.	**C-TM-7: PHMA:** Same as Alternative B.	**D-TM-7: PHMA:** During subsequent travel management planning, prioritize restoration of linear disturbances (those routes not designated in a Travel Management Plan) in PHMA. **IHMA:** During subsequent travel management planning, prioritize restoration of linear disturbances (those routes not designated in a Travel Management Plan) after PHMA. **GHMA:** During subsequent travel management planning, prioritize restoration of linear disturbances (those	**E-TM-7: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-TM-7: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
			routes not designated in a Travel Management Plan) after IHMA.		
A-TM-8: —.	**B-TM-8: PHMA:** When reseeding roads, primitive roads and trails in PHMA, use appropriate seed mixes and consider the use of transplanted sagebrush. **GHMA:** —.	**C-TM-8: PHMA:** Same as Alternative B.	**D-TM-8: PHMA:** During subsequent travel management planning, consider using seed mixes or transplant techniques that will maintain or enhance GRSG habitat when rehabilitating linear disturbances. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-TM-8: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-TM-8: PHMA:** When reseeding closed roads, primitive roads and trails, use appropriate native seed mixes and require consider the use of transplanted sagebrush. **GHMA:** —. **RHMA:** —.
A-TM-9: —.	**B-TM-9: PHMA:** —. **GHMA:** —.	**C-TM-9: PHMA:** —.	**D-TM-9: PHMA:** During subsequent travel management planning, schedule road maintenance to avoid disturbance during sensitive periods and times to the extent practicable. Use time of day limits (After 10:00 AM to 7:00 PM) to reduce impacts on GRSG during breeding and nesting. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-TM-9: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-TM-9: PHMA:** No action. **GHMA:** —. **RHMA:** —.
A-TM-10: —.	**B-TM-10: PHMA:** —. **GHMA:** —.	**C-TM-10: PHMA:** —.	**D-TM-10: PHMA:** During subsequent travel management planning, limit snow machine travel to existing routes in GRSG wintering areas from November 1 through March 31. Assess routes during subsequent travel management planning. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-TM-10: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-TM-10: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-TM-11: —.	**B-TM-11: PHMA:** —. **GHMA:** —.	**C-TM-11: PHMA:** —.	**D-TM-11: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-TM-11: Idaho – Common to All Habitats:** —. **Utah Habitat:** Develop an educational process to advise OHV users of the potential for conflict with GRSG.	**F-TM-11: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Lands and Realty					
Wind and Solar Energy					
A-LR-1: ROW grants are issued for wind and solar energy development on a case-by-case basis.	**B-LR-1: PHMA:** —. **GHMA:** —.	**C-LR-1: PHMA:** —.	**D-LR-1: PHMA:** Solar and wind energy development is not allowed. **IHMA:** Wind and solar energy development would be restricted where adverse effects could not be mitigated. Ancillary facilities such as roads, electric lines, etc. could potentially be authorized provided there is no net loss of GRSG habitat through mitigation. **GHMA:** Lands shall be considered avoidance areas for wind and solar development.	**E-LR-1: Idaho – Common to All Habitats:** See Action E-LR-3. **Utah Habitat:** —.	**F-LR-1: PHMA:** Do not site wind energy development in PHMA (Jones 2012). **GHMA:** —. **RHMA:** —.
A-LR-2: —.	**B-LR-2: PHMA:** —. **GHMA:** —.	**C-LR-2: PHMA:** —.	**D-LR-2: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LR-2: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LR-2: PHMA:** Site wind energy development at least five miles from active GRSG leks. **GHMA:** —. **RHMA:** —.
Rights-of-way					
A-LR-3: Continue to manage existing ROW avoidance and exclusion areas (see **Table 2-9**). Montana BLM: Manage designated ROW avoidance areas on 123,300 acres and ROW exclusion areas on 6,470 acres	**B-LR-3: PHMA:** Make PHMA an exclusion area for new BLM ROW or Forest Service SUA permits (see **Table 2-9**). Consider the following exceptions: • Within designated ROW or SUA corridors encumbered by existing ROW or SUA authorizations: new ROWs or SUAs may be co-located only if the entire footprint of the proposed project (including construction and staging), can be completed within the existing disturbance associated with the authorized ROWs or SUAs. • Subject to valid existing rights: where new ROWs or SUAs associated with valid existing rights	**C-LR-3: PHMA:** New corridors/facilities will be sited in non-habitat and bundled with existing corridors to the maximum extent possible (see **Table 2-9**).	**D-LR-3: PHMA:** Designate PHMA as ROW Avoidance areas and exclusion areas for wind and solar development (see **Table 2-9**). New authorizations for the following uses are not allowed: Transmission facilities (greater than 50kV in size), wind energy testing and development, commercial solar development, nuclear development, airports, and ancillary facilities associated with any of the aforementioned development; paved roads and graded gravel roads, landfills, airports, and hydroelectric projects. Communication sites would be allowed. **IHMA:** Designate IHMA as ROW	**E-LR-3: Idaho – CHZ:** Designate CHZ as ROW avoidance areas with limited exceptions permissible and subject to BMPs. Compensatory mitigation would be required (see **Table 2-9**). **Idaho – IHZ:** Designate IHZ as ROW avoidance areas. New ROWs and infrastructure are permissible subject to certain criteria and BMPs similar to those required for habitat in Utah. Mitigate unavoidable impacts. **Idaho – GHZ:** Manage new ROWs consistent with local resource management plans.	**F-LR-3: PHMA:** PHMA shall be an exclusion area for new ROWs permits (see **Table 2-9**). Consider the following exceptions: • Within designated ROW corridors encumbered by existing ROW authorizations: new ROWs may be co-located only if the entire footprint of the proposed project (including construction and staging), can be completed within the existing disturbance associated with the authorized ROWs. • Subject to valid existing rights: where new ROWs associated with valid existing rights are required, co-locate new ROWs within

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
	are required, co-locate new ROWs or SUAs within existing ROWs or SUAs or where it best minimizes GRSG impacts. Use existing roads, or realignments as described above, to access valid existing rights that are not yet developed. If valid existing rights cannot be accessed via existing roads, then build any new road constructed to the absolute minimum standard necessary, and add the surface disturbance to the total disturbance in PHMA. If that disturbance exceeds 3% for that area, then evaluate and implement additional effective mitigation on a case-by-case basis to offset the resulting loss of GRSG habitat. **GHMA:** Make GHMA an avoidance area for new ROWs or SUAs.		Avoidance areas. Access roads or loop roads would be addressed during the ROW authorization processing and on a case-by-case basis. **GHMA:** Same as IHMA.	There are no special conservation measures for GRSG in addition to those measures contained within existing land use plans regarding infrastructure development within GHZ. **Montana Habitat:** Same as Alternative A. **Utah Habitat:** Management stipulations and conditions should focus on mitigating direct disturbance during construction for all ROWs in PHMA. Should new research demonstrate indirect impacts on GRSG production, additional mitigation measures may be required. PHMA would be designated as an avoidance area for new ROWs. Limit or ameliorate impacts from ROW location, including from wind and solar energy development, through the use of the general stipulations identified in the GRSG section, as well as best management practices accepted by industry and state and federal agencies. For electrical transmission lines, and where feasible and consistent with federally required electrical separation standards, site new linear transmission features in existing corridors, or at a minimum, in concert with existing linear features in GRSG habitat. Siting linear features accordingly shall be deemed to be mitigation for the siting of that linear feature. Mitigation for the direct effects of construction is still required. PHMA would be available for wind energy development, though it would be designated as an avoidance area for wind energy development.	existing ROWs or where it best minimizes GRSG impacts. Use existing roads, or realignments as described above, to access valid existing rights that are not yet developed. If valid existing rights cannot be accessed via existing roads, then build any new road constructed to the absolute minimum standard necessary, and add the surface disturbance to the total disturbance in PHMA. If that disturbance exceeds 3% for that area, then make additional effective mitigation necessary that has been demonstrated to be effective to offset the resulting loss of GRSG habitat. **GHMA:** Same as Alternative A. **RHMA:** Same as Alternative A.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LR-4: The presence of sensitive resources, such as sagebrush habitat, is typically examined before a ROW grant is issued.	**B-LR-4: PHMA:** —. **GHMA:** —.	**C-LR-4: PHMA:** ROWs will be amended to require features that enhance GRSG habitat security.	**D-LR-4: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LR-4: Idaho – CHZ:** Maintain and improve GRSG populations within CHZ, while allowing, and mitigating, for new and limited infrastructure development identified by the Implementation Commission as high value and where the proposed action can meet certain criteria. **Idaho – IHZ:** Infrastructure is generally permissible, but requires analysis of whether it can be reasonably accomplished outside IHZ. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-LR-4: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LR-5: —.	**B-LR-5: PHMA:** —. **GHMA:** —.	**C-LR-5: PHMA:** —.	**D-LR-5: PHMA:** New ROW and land use authorizations, unless otherwise excluded, would be avoided whenever possible. Any new ROW and land use authorizations would not result in a net loss of GRSG habitat of the respective PHMA. **IHMA:** Same as PHMA. **GHMA:** New ROW and land use authorizations would be avoided whenever possible.	**E-LR-5: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LR-5: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LR-6: —.	**B-LR-6: PHMA:** —. **GHMA:** —.	**C-LR-6: PHMA:** —.	**D-LR-6: PHMA:** New authorizations and amendments to existing ROW and land use authorizations would be subject to siting prescriptions and design features considered on a case-by-case basis, in subsequent NEPA analysis. This could include amendments to the types of uses that are excluded from consideration as new authorizations. For example upgrade of an existing 50-kV power line to a 115-kV power line, to eliminate the need for an additional line could be considered.	**E-LR-6: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LR-6: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
			IHMA: New authorizations and amendments to existing ROW and land use authorizations would be considered subject to siting prescriptions and design features considered on a case-by-case basis, in subsequent NEPA analysis. **GHMA:** Same as IHMA.		
A-LR-7: —.	**B-LR-7: PHMA:** —. **GHMA:** Where new ROWs or SUAs are necessary in GHMA, co-locate new ROWs or SUAs within existing ROWs or SUAs where possible.	**C-LR-7: PHMA:** —.	**D-LR-7: PHMA:** New authorizations or amendments to existing ROW and land use authorizations should be sited substantially within an existing disturbance or minimum necessary adjacent to the existing footprint, where feasible. **IHMA:** New authorizations or amendments to existing ROW and land use authorizations should be sited substantially within the existing disturbance footprints where feasible. **GHMA:** Same as IHMA.	**E-LR-7: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LR-7: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LR-8: —.	**B-LR-8: PHMA:** —. **GHMA:** —.	**C-LR-8: PHMA:** —.	**D-LR-8: PHMA:** When reauthorizing transmission or authorizing and/or reauthorizing distribution lines, incorporate RDFs into the authorization. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-LR-8: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LR-8: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LR-9: —.	**B-LR-9: PHMA:** —. **GHMA:** —.	**C-LR-9: PHMA:** —.	**D-LR-9: PHMA:** Site new authorizations or facilities, not otherwise excluded, outside the 3 km (1.86 miles) occupied lek avoidance buffer areas unless NEPA analysis suggests that a greater or lesser distance is required, based on topographic features or other mitigating factors. If new distribution lines (50 kV or less) cannot be sited outside the 3 km buffer, they should be buried or designed to minimize use by avian predators.	**E-LR-9: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LR-9: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
			IHMA: Same as PHMA. **GHMA:** Same as PHMA.		
A-LR-10: —.	**B-LR-10: PHMA:** Evaluate and take advantage of opportunities to remove, bury, or modify existing power lines within PHMA. **GHMA:** —.	**C-LR-10: PHMA:** Same as Alternative B.	**D-LR-10: PHMA:** New power and communication lines (50 kV or less), outside of existing ROWs, would be buried, where physically feasible, and associated above-ground disturbance areas would be seeded with perennial vegetation as per vegetation management. **IHMA:** Same as PHMA. **GHMA:** Same as IHMA.	**E-LR-10: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LR-10: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.
A-LR-11: All LUPs include management actions that require reclamation/restoration of disturbed areas that are no longer used in support of authorized actions.	**B-LR-11: PHMA:** Where existing leases or ROWs or SUAs have had some level of development (road, fence, well, etc.) and are no longer in use, reclaim the site by removing these features and restoring the habitat. **GHMA:** —.	**C-LR-11: PHMA:** Same as Alternative B.	**D-LR-11: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LR-11: Idaho – CHZ:** Prohibit the development of infrastructure, except if developed pursuant to valid existing rights or incremental upgrade and/or capacity increase of existing development (authorized prior to the ROD) subject to best management practices in **Appendix Q**. a. Limit impacts of proposed actions to the existing authorized footprint with no more than a fifty percent (50%), depending on industry practice, increase in footprint size and associated impacts; and b. Include compensatory mitigation if new significant and unavoidable impacts are demonstrated to be associated with the project. c. Any exceptions to ROW development in CHZ would conform to the standards set forth for IHZ within the same CA. **Idaho – IHZ:** Authorize new infrastructure development where the following circumstances exist. a. The project cannot reasonably be achieved, technically or economically,	**F-LR-11: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
				outside of this management zone; and b. The project is co-located within the footprint for existing infrastructure, to the extent practicable. In the event co-location is not practicable, the siting should best reduce cumulative impacts and/or impacts on other high value natural, cultural, or societal resources; and c. The project does not result in unnecessary and undue habitat fragmentation or other impacts causing a decline in the population of the species within the relevant CA; and d. The project design mitigates unavoidable impacts through an appropriate compensatory mitigation plan; and e. The project complies with the applicable best management practices in **Appendix Q**. **Idaho – GHZ:** Authorize infrastructure construction consistent with the relevant land management components as provided for in **Appendix Q**. **Utah Habitat:** —.	
A-LR-12: —.	**B-LR-12: PHMA:** Planning Direction Note: Relocate existing designated ROW corridors crossing PHMA void of any authorized ROWs, outside of PHMA. If relocation is not possible, undesignate that entire corridor during the planning process. **GHMA:** —.	**C-LR-12: PHMA:** Same as Alternative B.	**D-LR-12: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LR-12: Idaho – CHZ:** Prohibit the development of infrastructure with limited exceptions analyzed by the Implementation Task Force as part of the site-specific NEPA analysis. The following criteria would be used in those assessments: a. The project is developed pursuant to a valid existing authorization; b. The project is an incremental upgrade/capacity increase of existing development; c. Cannot be reasonably accomplished outside of CHZ; d. Can be co-located within the existing infrastructure;	**F-LR-12: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
				e. Demonstrates the population trend for the species within the relevant CA is stable or increasing over a three-year period; f. Project would benefit the state of Idaho g. Shall mitigate unavoidable impacts according to Idaho's Mitigation Framework (**Appendix Q**). The Governor would consult with the BLM and Forest Service on the Implementation Task Force's recommendation, which the BLM and Forest Service must consider during the project's permit application. **Idaho – IHZ:** —. **Idaho – GHZ:** —. **Utah Habitat:** —.	
A-LR-13: —.	**B-LR-13: PHMA:** —. **GHMA:** —.	**C-LR-13: PHMA:** —.	**D-LR-13: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LR-13: Idaho – CHZ:** Allow for exemptions to new infrastructure development where a project proponent can satisfy all of the stringent criteria identified in the regulatory language and provide compensatory mitigation.	**F-LR-13: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LR-14: —.	**B-LR-14: PHMA:** —. **GHMA:** —.	**C-LR-14: PHMA:** —.	**D-LR-14: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LR-14: Idaho – CHZ:** In allowing for new infrastructure development exemptions, the project proponent must demonstrate that the project would provide a high-value benefit to meet critical existing needs or important societal objectives to the State of Idaho. Coordinate exemptions with the State Implementation Commission.	**F-LR-14: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LR-15: —.	**B-LR-15: PHMA:** —. **GHMA:** —.	**C-LR-15: PHMA:** —.	**D-LR-15: PHMA:** Process unauthorized use. If the unauthorized use does not serve the best interest of the public, reclaim the site by removing	**E-LR-15: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LR-15: PHMA:** —. **GHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
			these features and restoring the habitat. If the use needs to be authorized, management actions for new authorizations would need to be consistent with objectives for conserving GRSG. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.		**RHMA:** —.
A-LR-16: —.	**B-LR-16: PHMA:** —. **GHMA:** —.	**C-LR-16: PHMA:** —.	**D-LR-16: PHMA:** Land authorizations that are temporary in nature (e.g., film permits, apiaries), that do not result in loss of GRSG habitat would be subject to seasonal or timing restrictions and are otherwise exempt from mitigation requirements regarding habitat loss. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-LR-16: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LR-16: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LR-17: —.	**B-LR-17: PHMA:** —. **GHMA:** —.	**C-LR-17: PHMA:** —.	**D-LR-17: PHMA:** Guy wires will be avoided were feasible. Where guy wires are necessary and appropriate without causing a human safety risk, bird collision diverters will be required. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-LR-17: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LR-17: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LR-18: —.	**B-LR-18: PHMA:** —. **GHMA:** —.	**C-LR-18: PHMA:** —.	**D-LR-18: PHMA:** Design structures and facilities to reduce perching and nesting opportunities for avian predators. Follow APLIC guidelines to minimize electrocution and collision risks. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-LR-18: Idaho – Common to All Habitats:** —. **Utah Habitat:** Predation control and management should be managed by Wildlife Services, Department of Agriculture and Food, in coordination with the Division of Wildlife Resources. Eliminate or minimize external food sources for corvids, particularly dumps, waste transfer facilities, and road kill. Apply habitat management practices (e.g., grazing management, vegetation treatments) that decrease the effectiveness of predators.	**F-LR-18: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Land Tenure					
A-LR-19: In order to be considered for any form of land tenure adjustment, all lands not specifically identified for disposal must meet criteria included in FLPMA and in each LUP. Montana BLM: Retention Lands identified on 31,600 acres of PPH; 25,400 acres of PGH. Disposal Lands identified on 426 acres of PPH and 2,191 acres of PGH.	**B-LR-19: PHMA:** Retain public ownership of PHMA. Consider exceptions where: There is mixed ownership, and land exchanges would allow for additional or more contiguous federal ownership patterns within PHMA. In PHMA with minority federal ownership, include an additional, effective mitigation agreement for any disposal of federal land. As a final preservation measure, consideration should be given to pursuing a permanent conservation easement. **GHMA:** —.	**C-LR-19: PHMA:** All BLM-administered lands in ACECs, occupied habitats, and identified restoration and rehab land areas will be retained in public ownership.	**D-LR-19: PHMA:** Acquire habitat when possible and retain ownership of habitat, including lands identified for disposal in current land use plans, except if a disposal would allow for additional or more contiguous federal ownership patterns within PHMA. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-LR-19: Idaho – Common to All Habitats:** —. **Montana Habitat:** Same as Alternative A. **Utah Habitat:** —.	**F-LR-19: PHMA:** Same as Alternative B, without exceptions for disposal to consolidate ownership that would be beneficial to GRSG. **GHMA:** —. **RHMA:** —.
A-LR-20: —.	**B-LR-20: PHMA:** —. **GHMA:** —.	**C-LR-20: PHMA:** —.	**D-LR-20: PHMA:** Lands currently identified for retention within PHMA would be retained unless disposal of those lands would increase the extent or provide for connectivity of PHMA. **IHMA:** —. **GHMA:** —.	**E-LR-20: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LR-20: PHMA:** No action. **GHMA:** —. **RHMA:** —.
A-LR-21: —.	**B-LR-21: PHMA:** —. **GHMA:** —.	**C-LR-21: PHMA:** —.	**D-LR-21: PHMA:** Evaluate potential land exchanges containing historically low-quality GRSG habitat that may be too costly to restore in exchange for lands of higher quality habitat, lands that connect seasonal GRSG habitats or lands providing for threatened and endangered species. These potential exchanges should lead to an increase in the extent or continuity of or provide for improved connectivity of PHMA. Higher priority will be given to exchanges for those in-tact areas of sagebrush that will contribute to the expansion of PHMA sagebrush areas currently in public ownership. Lower priority will be given to those lands that will promote enhancement the other	**E-LR-21: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LR-21: PHMA:** No action. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
			PHMA and GHMA areas. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.		
A-LR-22: Most LUPs include a management action that allows for acquisition of lands that have important resource values including crucial wildlife habitat and land tenure adjustments to improve the manageability of BLM- and Forest Service-administered lands. In order to be considered for any form of land tenure adjustment, all lands not specifically identified for disposal must meet criteria included in the LUPs.	**B-LR-22: PHMA:** Where suitable conservation actions cannot be achieved in PHMA, seek to acquire state and private lands with intact subsurface mineral estate by donation, purchase or exchange in order to best conserve, enhance or restore GRSG habitat. **GHMA:** —.	**C-LR-22: PHMA:** Acquisition will be prioritized over easements.	**D-LR-22: PHMA:** —. **IHMA:** Identify lands for acquisition that increase the extent of or provide for connectivity of PHMA. Acquisition of GRSG PHMA will have priority over the acquisition of land for other program purposes subject to the approval of the Authorized officer. **GHMA:** —.	**E-LR-22: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LR-22: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-LR-23: Most LUPs include a management action that allows for acquisition of lands that have important resource values including crucial wildlife habitat and land tenure adjustments to improve the manageability of BLM- and Forest Service-administered lands. In order to be considered for any form of land tenure adjustment, all lands not specifically identified for disposal must meet criteria included in the LUPs.	**B-LR-23: PHMA:** Conservation Measure: Identify areas where acquisitions (including subsurface mineral rights) or conservation easements, would benefit GRSG habitat. **GHMA:** —.	**C-LR-23: PHMA:** Conservation Measure: Same as Alternative B.	**D-LR-23: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LR-23: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-LR-23: PHMA:** Conservation Measure: Same as Alternative B. **GHMA:** —. **RHMA:** —.
Withdrawal					
A-LR-24: —.	**B-LR-24: PHMA:** Recommend lands within PHMA for mineral withdrawal. **GHMA:** —.	**C-LR-24: PHMA:** Same as Alternative B.	**D-LR-24: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LR-24: Idaho – CHZ:** —. **Idaho – IHZ:** —. **Idaho – GHZ:** —. **Utah Habitat:** Do not propose additional federal lands or non-federal lands with federal mineral interests within PHMA for locatable mineral withdrawal. PHMA that is not already withdrawn or recommended for withdrawal would be available for	**F-LR-24: PHMA:** Same as Alternative B. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
				locatable mineral entry. To the extent allowable by laws and regulations and to the extent the claimant would be willing to apply the standards, limit or ameliorate impacts through the use of the general stipulations identified in the GRSG section. Recognize that surface vents associated with underground mining are essential for human safety, and must be permitted under the provisions of this alternative.	
A-LR-25: —.	**B-LR-25: PHMA:** In PHMA, do not recommend withdrawal proposals not associated with mineral activity unless the land management is consistent with GRSG conservation measures (e.g., in a recommended withdrawal for a military training range buffer area, manage the buffer area with GRSG conservation measures). **GHMA:** —.	**C-LR-25: PHMA:** Same as Alternative B.	**D-LR-25: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-LR-25: Idaho – CHZ:** —. **Idaho – IHZ:** —. **Idaho – GHZ:** —. **Utah Habitat:** —.	**F-LR-25: PHMA:** Do not approve withdrawal proposals not associated with mineral activity unless the land management is consistent with GRSG conservation measures (e.g., in a recommended withdrawal for a military training range buffer area, manage the buffer area with GRSG conservation measures that have been demonstrated to be effective). **GHMA:** —. **RHMA:** —.
Utility Corridors					
A-LR-26: Continue to manage 85,600 acres of utility corridors, including 64,200 acres of West-Wide Energy Corridors.	**B-LR-26: PHMA:** Same as Alternative A. **GHMA:** Manage 39,200 acres of utility corridors.	**C-LR-26: PHMA:** Manage 83,800 acres of utility corridors.	**D-LR-26: PHMA:** Manage 39,800 acres of utility corridors. **IHMA:** Manage 4,750 acres of utility corridors. **GHMA:** Same as Alternative A.	**E-LR-26: Idaho – CHZ:** Manage 31,000 acres of utility corridors. **Idaho – IHZ:** Manage 12,800 acres of utility corridors. **Idaho – GHZ:** Manage 40,000 acres of utility corridors. **Utah Habitat:** Same as Alternative A.	**F-LR-26: PHMA:** Same as Alternative A. **GHMA:** Manage 39,200 acres of utility corridors. **RHMA:** Manage 6,450 acres of utility corridors.
Fluid Minerals - Leased Federal Fluid Mineral Estate					
A-MLS-1: No similar action for sub-region. Montana BLM: When leases expire, apply oil and gas stipulations listed in Table 5 pg. 44 of Dillon Field Office ROD/RMP also refer to Appendix K	**B-MLS-1: PHMA:** Apply the following nine conservation measures through LUP implementation decisions (e.g., approval of an Application for Permit to Drill, Sundry Notice, etc.) and upon completion of the environmental record of review (43	**C-MLS-1: PHMA:** Same as Alternative B.	**D-MLS-1: PHMA:** Use RDFs as COAs for post-leasing actions, such as surface use plan of operations, application for permit to drill, or master development plan. **IHMA:** Same as PHMA.	**E-MLS-1: Idaho – CHZ:** All valid existing rights are protected. In CHZ and IHZ, projects to develop an existing fluid mineral lease (i.e., implementation decisions) would be subject to the following BMPs: i. Utilize existing roads, or realignments	**F-MLS-1: PHMA:** Apply the following conservation measures as COAs at the project and well permitting stages, and through LUP implementation decisions and upon completion of the environmental record of review (43 CFR § 3162.5), including appropriate

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Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
and M of the Dillon ROD/RMP.	CFR 3162.5), including appropriate documentation of compliance with NEPA. In this process evaluate, among other things: • Whether the conservation measure is "reasonable" (43 CFR 3101.1-2) with the valid existing rights; and • Whether the action is in conformance with the approved LUP. **GHMA:** —.		**GHMA:** Same as PHMA.	of existing routes to the extent possible. ii. Construct new roads to minimum design standards needed for production activities. iii. To the extent possible, micro-site linear facilities to reduce impacts on GRSG habitats. iv. Locate staging areas outside CHZ to the extent possible. v. To the extent possible, co-locate linear facilities within one kilometer of existing linear facilities. vi. New transmission lines, excluding those lines under (viii), will be deemed co-located and/or permissible if construction occurs between July 1 and March 14 (or between July 1 and November 30 in winter concentration areas) and within one kilometer either side of existing 115-kilovolt (kV) or larger transmission lines to create a corridor no wider than two kilometers. vii. New transmission lines, excluding those lines under (viii), outside of this two kilometer corridor can only be constructed where it can be demonstrated that the activity will not cause declines in GRSG populations or if the activity reduces cumulative impacts and/or avoids other important natural, cultural or societal resources. viii. Locate essential public services, including but not limited to, distribution lines, domestic water lines and gas lines, at least one kilometer from active GRSG leks. If one kilometer avoidance is not possible, construct lines outside of March 15 to June 30. **Idaho – IHZ:** Same as Idaho – CHZ. **Idaho – GHZ:** —.	documentation of compliance with NEPA. In this process evaluate, among other things: • Whether the conservation measure is "reasonable" (43 CFR § 3101.1-2) with the valid existing rights; and • Whether the action is in conformance with the approved LUP. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

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

Table 2-11
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Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-MLS-6: —. Current policy allows unitization to occur on a case-by-case basis.	**B-MLS-6: PHMA:** Conservation Measure: Require unitization when deemed necessary for proper development and operation of an area (with strong oversight and monitoring) to minimize adverse impacts on GRSG according to the Federal Lease Form, 3100-11, Sections 4 and 6. **GHMA:** —.	**C-MLS-6: PHMA:** Conservation Measure: Same as Alternative B.	**D-MLS-6: PHMA:** Conservation Measure: Require unitization when deemed necessary for proper development and operation of an area (with strong oversight and monitoring). The unitization must be designed in a manner to minimize adverse impacts on GRSG according to the Federal Lease Form, 3100-11, Sections 4 and 6. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-MLS-6: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-MLS-6: PHMA:** Conservation Measure: Same as Alternative B. **GHMA:** —. **RHMA:** —.
A-MLS-7: —. Reclamation bonds are currently required under 43 CFR 3104 for all fluid mineral leases.	**B-MLS-7: PHMA:** Conservation Measure: For future actions, require a full reclamation bond specific to the site in accordance with 43 CFR 3104.2, 3104.3, and 3104.5. Insure bonds are sufficient for costs relative to reclamation (Connelly et al. 2000, Hagen et al. 2007) that would result in full restoration of the lands to the condition it was found prior to disturbance. Base the reclamation costs on the assumption that contractors for the BLM or Forest Service will perform the work. **GHMA:** —.	**C-MLS-7: PHMA:** Conservation Measure: Same as Alternative B.	**D-MLS-7: PHMA:** Conservation Measure: If surface disturbing activities are proposed on a future lease, require a full reclamation bond specific to the site. Ensure reclamation bonds are sufficient to cover costs that would result in full rehabilitation. Base the reclamation costs on the assumption that contractors for the BLM will perform the work. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-MLS-7: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-MLS-7: PHMA:** Conservation Measure: Same as Alternative B. **GHMA:** —. **RHMA:** —.
A-MLS-8: —. Individual land use plans may contain an appendix that outlines BMPs that are applied on a case-by-case basis.	**B-MLS-8: PHMA:** Conservation Measure: Make applicable BMPs (**Appendix B**) mandatory as COAs within PHMA. **GHMA:** —.	**C-MLS-8: PHMA:** Conservation Measure: Same as Alternative B.	**D-MLS-8: PHMA:** Conservation Measure: When an APD is submitted for approval on a lease, make applicable BMPs (**Appendix B**) mandatory as COAs. **IHMA:** Same as PHMA. **GHMA:** Conservation Measure: When an APD is submitted for approval on a lease, consider making applicable BMPs mandatory as COAs.	**E-MLS-8: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-MLS-8: PHMA:** Conservation Measure: Same as Alternative B. **GHMA:** —. **RHMA:** —.

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Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-MLS-9: —.	**B-MLS-9: PHMA:** —. **GHMA:** —.	**C-MLS-9: PHMA:** Include conditions that require relinquishment of leases/authorizations if doing so will: 1) mitigate the impact of a proposed development, or 2) mitigate the unanticipated impacts of an approved development.	**D-MLS-9: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-MLS-9: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-MLS-9: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-MLS-10: —.	**B-MLS-10: PHMA:** —. **GHMA:** —.	**C-MLS-10: PHMA:** No waivers will be issued.	**D-MLS-10: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-MLS-10: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-MLS-10: PHMA:** —. **GHMA:** —. **RHMA:** —.
A-MLS-11: —.	**B-MLS-11: PHMA:** —. **GHMA:** —.	**C-MLS-11: PHMA:** Any oil, gas, geothermal activity will be conducted to maximize avoidance of impacts, based on evolving scientific knowledge of impacts.	**D-MLS-11: PHMA:** —. **IHMA:** —. **GHMA:** —.	**E-MLS-11: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-MLS-11: PHMA:** —. **GHMA:** —. **RHMA:** —.
Unleased Federal Fluid Mineral Estate					
A-MLS-12: Fluid mineral leasing in GRSG habitat will be managed as shown in **Table 2-9**. Additional stipulations, such as CSU, TL, or NSO, may be attached to a lease if the standard lease stipulations do not adequately protect a sensitive resource. If a resource cannot be adequately protected through the use of stipulations, the BLM may close that area to leasing. The Forest Service may choose not to consent to leasing on the lands it administers. Most LUPs include a management action that prohibits surface disturbing or other disruptive within GRSG breeding and nesting habitat within a certain distance and between certain dates. The protect buffers around leks vary. Montana BLM: Current oil and gas stipulations listed in Table 5 pg. 44 of Dillon Field Office ROD/RMP.	**B-MLS-12: PHMA:** Close PHMA to fluid mineral leasing (see **Table 2-9**). Upon expiration or termination of existing leases, do not accept nominations/expressions of interest for parcels within PHMA. **GHMA:** Same as Alternative A.	**C-MLS-12: PHMA:** No new leases or permits will be issued (see **Table 2-9**).	**D-MLS-12: PHMA:** Areas of no and low potential for the discovery of fluid minerals are closed to leasing (see **Table 2-9**). Areas of moderate and high potential for the discovery of fluid minerals are open to leasing subject to CSU, timing restrictions in breeding and winter habitat, disturbance density not to exceed 1/640 acres, maximum 3% disturbance/section, NSO within 0.6 mile of occupied or undetermined status leks. Consider use of low profile structures/facilities. **IHMA:** Same as PHMA. **GHMA:** GHMA is open to leasing subject to timing limitations in breeding and winter habitat, 0.6 mile NSO near occupied and undetermined status leks, and implementation of appropriate BMPs.	**E-MLS-12: Idaho – CHZ:** Fluid mineral leases in CHZ and IHZ shall be subject to an NSO stipulation. The BLM State Director may waive the stipulation only in situations where the development will not accelerate and/or cause declines in GRSG populations within the relevant CA, based on the application of the following criteria-: a. The development cannot be reasonably accomplished outside of the management zone. b. Demonstrates the population trend for the species within the relevant Conservation Area is stable or increasing over a 3-year period. c. Demonstrates the individual or cumulative exceptions under this provision will not result in habitat fragmentation or other impacts causing a decline of the species within the relevant Conservation Area. d. Can be co-located with existing infrastructure to the maximum extent practicable. e. Shall mitigate unavoidable impacts	**F-MLS-12: PHMA:** Upon expiration or termination of existing leases, do not accept nominations/expressions of interest for parcels within PHMA (see **Table 2-9**). **GHMA:** Same as Alternative A. **RHMA:** Same as Alternative A.

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Conservation actions also in Appendix X of Dillon ROD/RMP.				through an appropriate compensatory mitigation plan. f. If the NSO stipulation is waived, any proposed development would be subject to the following BMPs: 1. Evaluate the affected area in accordance with the process outlined in the State of Wyoming's Executive Order 2011-5. 2. In PHMA, surface disturbance will be limited to three percent of suitable habitat per an average of 640 acres. Development within IHZ will be limited to five percent of suitable habitat per an average of 640 acres. 3. NSO within one kilometer of the perimeter of occupied GRSG leks. This distance may be modified, provided it is supported by the best available science at the time the development undergoes site-specific environmental analysis. 4. Activity (production and maintenance activity exempted) will be allowed from July 1 to March 14 outside of the one kilometer perimeter of a lek where brood-rearing, nesting, and early brood-rearing habitat is present. 5. In areas solely used as winter concentration areas, exploration and development activity will be allowed March 14 to December 1. 6. Locate main roads used to transport production and/or waste products over 1.5 kilometers from the perimeter of occupied GRSG leks.	

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
				Locate other roads used to provide facility site access and maintenance over 1.5 kilometers from the perimeter of occupied GRSG leks. Construct roads to minimum design standards needed for production activities. 7. New noise levels, at the perimeter of a lek, should not exceed 10dBA above ambient noise (existing activity included) from 6:00 PM to 8:00 AM during the initiation of breeding (March 1-May 15). Ambient noise level should be determined by measurements taken at the perimeter of a lek at sunrise. 8. Absent some demonstration to the contrary, the proposed sagebrush treatment associated with this activity will not reduce canopy cover to less than 15 percent. **Idaho – IHZ:** Same as Idaho – CHZ. **Idaho – GHZ:** —. **Montana Habitat:** Same as Alternative A. **Utah Habitat:** Unleased Areas within PHMA: PHMA would be designated as open to oil and gas leasing subject to controlled surface use stipulations (see list below) and the timing stipulations (see **Table 2-9**). Avoid activities (construction, vehicle noise, etc.) in the following seasons and habitats (specific time and distance determinations for seasonal stipulations would be based on site-specific conditions, in coordination with the local UDWR biologist):	

Table 2-11
Management Actions by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
				• Winter habitat from Nov 15 – Mar 15 • Nesting and brood-rearing areas from Apr 1 – Aug 15 • On leks from Feb 15 – May 15 Where leasing/development is allowed within PHMA, Within PHMA, limit or ameliorate impacts from development through the use of the general stipulations identified in the GRSG section.	
A-MLS-13: Allow geophysical exploration in areas that are not closed to fluid mineral leasing.	**B-MLS-13: PHMA:** Allow geophysical exploration within PHMA to obtain exploratory information for areas outside of and adjacent to PHMA. Allow geophysical operations only by helicopter-portable drilling methods and in accordance with seasonal timing restrictions and/or other restrictions that may apply. **GHMA:** —.	**C-MLS-13: PHMA:** Same as Alternative B.	**D-MLS-13: PHMA:** Allow geophysical exploration subject to seasonal timing restrictions. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-MLS-13: Idaho – Common to All Habitats:** —. **Utah Habitat:** Allow geophysical exploration within PHMA to obtain exploratory information. Geophysical exploration would be subject to the same seasonal and controlled surface use stipulations as would be applied to leases within PHMA.	**F-MLS-13: PHMA:** Allow geophysical exploration within PHMA to obtain exploratory information for areas outside of and adjacent to PHMA. Only allow geophysical operations by helicopter-portable drilling methods and in accordance with seasonal timing restrictions and/or other restrictions that may apply. Geophysical exploration shall be subject to seasonal restrictions that preclude activities in breeding, nesting, brood rearing and winter habitats during their season of use by GRSG. **GHMA:** —. **RHMA:** —.
A-MLS-14: —.	**B-MLS-14: PHMA:** —. **GHMA:** —.	**C-MLS-14: PHMA:** —.	**D-MLS-14: PHMA:** When a surface disturbing activity is proposed on a future fluid mineral lease, include in the NEPA analysis an alternative that sites the activity at the most distal part of the lease from any lek, or in an area that is less harmful to GRSG habitat. **IHMA:** Same as PHMA. **GHMA:** Same as PHMA.	**E-MLS-14: Idaho – Common to All Habitats:** —. **Utah Habitat:** —.	**F-MLS-14: PHMA:** —. **GHMA:** —. **RHMA:** —.

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

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

Table 2-11
Management Actions by Alternative

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

2.11 Issues and/or Alternatives Eliminated from Detailed Analysis

The following alternatives were considered but were not carried forward for detailed analysis because (1) they would not fulfill the requirements of FLPMA, NFMA or other existing laws or regulations, (2) they did not meet the purpose and need, (3) they were already part of an existing plan, policy, or administrative function, or (4) they did not fall within the limits of the planning criteria. FLPMA requires the BLM and Forest Service to manage the public lands and resources in accordance with the principles of multiple use and sustained yield.

2.11.1 USFWS-Listing Alternative

Comments provided through scoping requested analysis of an alternative based on the assumption that GRSG become listed under the ESA. This is outside the scope; the purpose and need of this plan amendment is to address inadequacy of regulatory mechanisms that were identified as one of the listing factors for GRSG in the USFWS finding on the petition to list GRSG. The USFWS identified the principal regulatory mechanism for the BLM and Forest Service as conservation measures in LUPs. In response to the USFWS findings, as well as the BLM and Forest Service's requirement to manage sensitive species, the BLM and Forest Service are preparing plan amendments with associated EISs to evaluate the incorporation of conservation measures in LUPs for GRSG. Because the purpose of the LUP amendments is to identify and potentially incorporate appropriate conservation measures in LUPs to conserve, enhance and/or restore GRSG habitat by reducing, eliminating, or minimizing threats to that habitat, the alternatives in this EIS, therefore, focus on those conservation measures that can be incorporated into the LUPs. Although the potential listing of GRSG would also include conservation measures identified by the USFWS, those conservation measures are not known at this time. Therefore, an alternative that includes USFWS-listing with associated conservation measures for GRSG is not being analyzed in detail.

2.11.2 Elimination of Recreational Hunting

Neither the BLM nor the Forest Service regulate hunting activities on federal lands; this responsibility resides with IDFG, MFWP, and Utah Division of Wildlife Resources. IDFG, MFWP, and the Utah Division of Wildlife Resources manage wildlife within Idaho, Montana, and Utah, respectively, while the BLM and Forest Service manage wildlife habitat. Recreational hunting of GRSG, including hunting seasons, is directed by the relevant state conservation plans for GRSG and criteria therein.

2.11.3 Predation

Commenters stated that predator control was needed to protect GRSG from predation. IDFG and MFWP possess primary responsibility for managing the wildlife within Idaho and Montana, respectively, while the BLM and Forest Service are responsible for managing habitat. Consistent with an MOU between the BLM and the USDA, APHIS-Wildlife Services, the BLM and Forest Service would continue to work with IDFG and MFWP to meet state wildlife population objectives. Predator control is allowed on BLM-administered lands and is regulated by IDFG and MFWP. Avian predators such as ravens and birds of prey are protected under the Migratory Bird Treaty Act; eagles are protected under the Bald

and Golden Eagle Act. Control of these avian predators is under the jurisdiction of the USFWS. Therefore, these comments relate to state- and federal-regulated actions that are outside of BLM or Forest Service authority and are outside the scope of the LUPA/EIS. The BLM and Forest Service will continue to work with agencies to address current predation of GRSG. The BLM and Forest Service-administered lands in the planning area will remain open to predator control under state laws.

2.11.4 Close All or Portions of PHMA or GHMA to Off-Highway Vehicle Use

Through this LUPA/EIS, the BLM has identified, but has not studied in detail, an alternative to designate new area closures for OHV use within PHMA and GHMA. The BLM has analyzed alternatives to designate all areas within PHMAs and GHMAs as "limited" to existing roads and trails for OHV use, if not already closed by existing planning efforts. Subsequent Travel Management Plans will be developed to identify specific routes within limited areas that will be closed in order to protect and conserve GRSG and its habitat. The BLM and Forest Service have analyzed existing OHV area closures within PHMAs and GHMAs as part of the No Action alternative and as a decision common to all alternatives. The following provides the BLM and Forest Service's rationale:

1. There are areas within PHMAs and GHMAs that are currently closed to OHV use (e.g., Wilderness Areas). While these areas were closed to OHV use for purposes other than GRSG conservation, the BLM and Forest Service will analyze the impacts that these closures have on protection of GRSG and GRSG habitat. These closures are analyzed in the No Action alternative and will be carried forward across all alternatives in this EIS/Amendment.
2. This GRSG Amendment is considering eliminating cross-country travel by analyzing limiting travel to existing roads and trails, as no new areas will be designated as open to OHV use. In at least one alternative, all existing areas that are designated as open will become limited to existing roads and trails.
3. Route inventories in PPH and PGH are currently underway based on coordinated efforts between the BLM, Forest Service, and USFWS staff. Once the inventories are complete, the BLM and Forest Service will initiate travel and transportation planning, which will undergo a NEPA analysis and will include public involvement. Through subsequent Travel and Transportation planning, the BLM will identify and consider closing specific existing routes that may be affecting GRSG habitat. Any decision to close routes to OHV use in the Travel and Transportation plans would be based on consideration of the habitat objectives and the overall goal of conserving, enhancing, or restoring sagebrush ecosystems upon which GRSG populations depend.

   In addition, during the District or Field Office plan revision/amendment process, travel and transportation area decisions (open, limited or closed) would be revisited at the local level based on existing inventory information associated with a myriad of resources and resource uses.

4. During the public scoping period for this LUPA, there were no specific areas identified for closure to carry forward for detailed analysis.

2.11.5 Consideration of Coal Mining

According to 43 CFR 3420.1-4(e), the BLM can only lease coal in areas identified as having development potential. While there are several historic coal developments, including Teton Basin and Goose Creek, to date, no areas have been identified with economic reserves to support future leasing analysis. Site-specific environmental analysis and a plan amendment would be required to lease for coal or oil shale. There are currently no regulations governing the leasing of oil shale. Any leases would be issued under the authority of 30 USC 241, which authorizes the Secretary of the Interior to lease deposits of oil shale. For these reasons, coal leasing and oil shale development are not addressed in this planning effort.

2.12 Incorporated in Whole or In Part

2.12.1 Custer County and Owyhee County Sage-Grouse Plans

Both Custer and Owyhee Counties prepared and submitted county approved GRSG Management Plans to the BLM and Forest Service for consideration and inclusion in the Sub-Regional EIS Amendment effort. These plans were developed and approved in 2013. Custer County consulted several sage-grouse plans during the development of the Custer County Sage-Grouse Comprehensive Plan, including the Challis Local Working Group Plan (2007). During the initial development of the range of alternatives considered in detail the BLM and Forest Service considered the Challis (2007) and Owyhee (2004; revised 2013) Local Working Group Plans. Both Counties' Plans are limited in scope to the specific county areas they address and do not represent a complete management scenario for all of the BLM-administered and National Forest System areas within the sub-region. The plans, their objectives, GRSG habitat mapping and management actions were each evaluated to determine whether the components included in those plans augmented or provided direction outside of the range of detailed alternatives. The results of this analysis showed the Custer County plan objectives and management actions to be consistent with Alternative A. The Custer County mapping is similar to the mapping of Alternative C, with only one habitat category. The extent of identified habitat, based on the LWG Key Habitat map, is most similar to Alternative E and, while within the range of alternatives, it is not exactly reflected within any of the alternatives. The Owyhee County Plan is consistent with Alternative A for mapping, objectives and most management actions. Several management actions identified in the Owyhee County plan are included as parts of Alternatives B, C, D, E and F. Since the direction in these plans is already included within the existing range of alternatives these county plans were not included as additional unique alternatives for detailed analysis. **Appendix R** contains an evaluation of each of these plans and the management actions within those plans in relation to the existing Custer and Owyhee land use plans and the alternatives analyzed in detail.

2.12.2 Greater Yellowstone Coalition ACECs and Audubon Suggested Management Actions

During the scoping period the Greater Yellowstone Coalition and Audubon Society provided management actions that were considered for analysis. The Greater Yellowstone

Coalition proposed several new areas of critical environmental concern that overlap other, broader ACEC proposals that are included for analysis within Alternative F. The Audubon Society also provided management actions that were similar or effectively the same as proposals and management actions included in Alternative B, C or F. These submissions are contained within the existing range of alternatives and will be considered in detail.

2.12.3 Broad-scale Increased Grazing

During scoping and the alternatives development process, a number of individuals and cooperating agencies requested that the BLM and Forest Service consider an alternative that would increase the amount of livestock grazing across all GRSG habitat. This recommendation was based on the supposition that there is a correlation between declines in GRSG and declines in the amount of livestock grazing on public BLM-administered and National Forest System lands. While this alternative was considered but eliminated from detailed analysis for the following reasons, site specific, targeted grazing opportunities are included as parts of Alternatives D and E:

- Alternatives being considered in this LUPA/EIS are science-based conservation measures that would meet the purpose and need for the project, which is to identify and incorporate appropriate conservation measures in LUPs to conserve, enhance, and restore GRSG habitat by reducing, eliminating, or minimizing threats to that habitat. There are currently no science-based studies that demonstrate that increased livestock grazing on public lands would enhance or restore GRSG habitat or maintain or increase GRSG abundance and distribution.
- Actual livestock use within GRSG habitat on BLM-administered lands in the Idaho and Southwestern Montana Sub-region is generally less than permitted use. Actual livestock use in many areas is below permitted use due to restrictions placed on permittees and annual fluctuations in permittee operations. Although no alternative specifically considers an increase in livestock grazing, under all alternatives except Alternative C, the BLM and Forest Service would retain flexibility to consider increases in livestock grazing on a case-by-case basis. Increases would be dependent on permittee interest and rangeland conditions. Increases in livestock grazing may be facilitated in GRSG habitat if there are changes in management, such as changes to existing grazing management systems, that optimize range conditions.

2.13 Summary Comparison of Environmental Consequences

Table 2-12, Comparison of Alleviated Threats to GRSG in the Idaho and Southwest Montana Sub-Region and Table 2-13, Summary of Environmental Consequences, present a comparison summary of impacts from management actions proposed for the management alternatives. **Chapter 4** provides a more detailed impact analysis.

Table 2-12
Comparison of Alleviated Threats to GRSG in the Idaho and Southwest Montana Sub-Region

	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E[1]	Alternative F	Proposed Plan
Fire, Fuels Treatments including Prescribed Fire							
	Varied treatment options – no standard.	In PHMA, there would be no treatments in winter habitat, no prescribed fire in areas with less than 12 inches precipitation, and all projects would use native seeds. GRSG habitat would be a high priority for wildfire suppression efforts and BMPs in IM 2013-128 would be followed. Use of native seed would be required and fuels treatments would be designed for long-term success. Development of a wildfire suppression strategy with regard to GRSG habitat would occur post-decision.	Some actions similar to Alternative B, though provides less guidance on fire suppression and fuels management. Relies on passive restoration efforts to indirectly reduce the risk of wildfires. Restores areas affected by anthropogenic disturbance outside the historic range of viability, such as nonnative seeding, fences, livestock grazing.	Similar to Alternative B with additional fuels management and suppression guidance.	Idaho – Provides guidance to reduce wildfire effects through development of a response time and water availability analysis, along with a consistent wildfire suppression plan and a fuels break strategy. Utah - Prescribed fire would only be considered at high elevations. Statewide fire agency agreements would be implemented. Loss of winter habitat would be limited to approximately 20 percent.	Same as Alternative B.	Similar to Alternatives B and D. In addition, recommendations from the Wildfire, Invasive Annual Grasses and Conifer Expansion Assessment (Appendix D) will direct field offices to prioritize landscapes for fire prevention and fuels management within GRSG habitat to minimize the risk of wildfire in PHMA and IHMA. Prescribed fire in GRSG habitat could be permitted if analysis showed a net benefit to GRSG. Adaptive management would be used to improve management in GRSG habitat.
Summary	All action alternatives will decrease habitat loss from prescribed fire and wildfire by limiting prescribed fire and prioritizing wildfire suppression efforts in the sub-region, which respond to the Conservation Objectives Team report objectives. Alternatives B, D, E, F and the Proposed Plan would also try to lessen the future probability of large fires in GRSG by putting in fire breaks which would further benefit GRSG. Alternatives B, C, D, F and the Proposed Plan all move to lessen habitat loss from treatments within winter habitat to varying degrees, which is consistent with the objective to retain sagebrush. Alternative C is passive toward fire and fuels management emphasizing natural restorative processes following a reduction in anthropogenic disturbance. In Alternative C, reduction in the threat of wildfire would occur over the long term from overall improvement of habitat. The Proposed Plan would allow prescribed fire if net benefit for GRSG, and would use an adaptive management approach.						
Invasive Species							
	Various control measures – no standard. Emergency Stabilization and Rehabilitation plans and strategic wildland fire suppression would be implemented. Invasive annuals would continue to be introduced and spread as a result of ongoing	Invasive weeds would be controlled, suppressed, and eradicated. Limits anthropogenic disturbance to 3 percent. This alternative would also require native seed for restoration efforts, the use of BMPs for fire and fuels treatments, and invasive species prevention measures.	Relies on passive restoration efforts to indirectly reduce the risk of invasive annuals. Minimizes use of herbicides and emphasizes mechanical treatment methods. Reduces spread of invasive annuals by eliminating livestock grazing.	Similar to Alternative B with the additional requirement that noxious weeds and invasive species would be treated and monitored for at least 3 years after project construction.	Idaho - Similar to Alternative D with the additional requirement to treat and monitor invasive species associated with existing range improvements. Utah – Guidance to aggressively respond to new infestations and prevent invasive spread after wildfire.	Similar to Alternative B. Would also prioritize restoring sagebrush steppe invaded by nonnative plants. Limits anthropogenic disturbance to one instance per section and a cumulative 3 percent disturbance cap.	Similar to Alternative D with an adaptive management approach, enhanced monitoring and mitigation.

Table 2-12
Comparison of Alleviated Threats to GRSG in the Idaho and Southwest Montana Sub-Region

	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E[1]	Alternative F	Proposed Plan
	vehicle traffic in and out of the planning area, recreational activities, wildlife, improper livestock grazing, fire, and surface-disturbing activities (energy and infrastructure).						
Summary	All action alternatives respond to the COT report objectives by implementing actions to maintain and restore healthy sagebrush communities. Alternative D provides the lowest surface disturbance threshold (no unmitigated loss of habitat), which would reduce opportunities for incursion of nonnative species. Alternatives B, C, F and the Proposed Plan propose 3 percent thresholds in PHMA. Alternatives B, D, E, F and the Proposed Plan prioritize restoration of areas with invasive weed infestations and emphasize restoration, which would further reduce habitat degradation. Alternative C prioritizes restoration of invasive infestations but limits restoration to natural processes following a reduction in anthropogenic uses (livestock removal, fencing and roads infrastructure removal).						
Pinyon-Juniper Encroachment							
	Varying degrees of habitat objectives identified for maintenance, improvement, and restoration of sagebrush communities – no standard.	Does not provide specific guidance regarding pinyon-juniper encroachment. Would prioritize restoration in seasonal habitats.	Alternative C prioritizes restoration in seasonal habitats as in Alternative B; however, local native plant ecotype seeds and seedlings would be used to restore treated habitats. It could take longer for these habitats to recover and could be a loss of habitat for a certain amount of time. In addition, passive restoration is preferred for restoring these areas over active restoration methods.	Would prioritize projects that address conifer encroachment into important GRSG habitats. Conifer encroachment areas would be considered as areas to manage wildfire for resource benefit.	Idaho - Would prioritize conifer removal in CHZ and IHZ. Utah – Would aggressively remove encroaching conifers and other plant species to expand GRSG habitat where possible.	Same as Alternative B.	Similar to Alternative D with an adaptive management approach, enhanced monitoring and mitigation.
Summary	All action alternatives except Alternative C would respond to the pinyon-juniper objective in the Conservation Objectives Team report. The objective is to remove pinyon-juniper from areas of sagebrush that are most likely to support GRSG at a rate that is at least equal to rate of pinyon-juniper incursion. Alternatives D and E directly address juniper removal and prioritization and the Proposed Plan includes enhanced monitoring and mitigation. Alternatives B, C, and F talk more generally about restoration and thus may not provide the greatest assurance for improvement of GRSG habitat.						
Livestock Grazing, Structure Range Improvements and Wild Horses							
	There is no set direction to specifically consider GRSG in grazing decisions. Structural range improvements are considered on a case-by-case basis while maintaining rangeland	Same open/closed acreages as Alternative A. Rangeland would be managed for vegetation composition and structure consistent with ecological site potential and within the reference state to achieve GRSG	Alternative C would make public lands unavailable to livestock grazing. This could benefit GSRG by improving ground cover, leaving more grass and forbs. However, there could be possible increases in wildfire and invasive species risks.	Same open/closed acreages as Alternative A. PHMA would be the highest priority for BLM land health assessments. Desired cover percentages and heights for sagebrush, grasses, and forbs in seasonal	Idaho - Same open/closed acreages as Alternative A. Similar to Alternative D with emphasis on adaptive management. Wild horse and burro management would be the same as Alternative A. Utah - Livestock grazing would	Alternative F requires a 25% reduction in livestock grazing. Other management would be similar to Alternative B. Wild horse and burro management would be the same as Alternative B.	Similar to Alternative D with enhanced monitoring and mitigation. In SFAs, grazing permit review, rangeland health assessment and HMA review would be prioritized in GRSG habitat.

Table 2-12
Comparison of Alleviated Threats to GRSG in the Idaho and Southwest Montana Sub-Region

	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E[1]	Alternative F	Proposed Plan
	health. Wild horses would be managed within appropriate management levels.	seasonal habitat objectives in Connelly et al. 2000 and Hagen et al. 2007. GRSG would benefit by having the structural components needed for all of their life cycle needs. Structural range improvements must conserve, maintain, enhance or restore GRSG habitat through improved grazing management system. Water development would need to be neutral or beneficial to GRSG. Wild horses would be managed within appropriate management levels and the evaluation of AMLs would be prioritized in PHMA. Herd Management Area Plans would be developed for all HMAs.	Wild horse and burro management would be the same as Alternative A.	habitats will follow habitat guidelines in the habitat assessment framework (Stiver et al. 2010). Any new structural range improvements would be designed to maintain, enhance, or restore GRSG habitat through an improved grazing management system relative to GRSG objectives. Existing structural range improvements and supplements would be reevaluated in PHMA and IHMA. New water developments within PHMA would be limited and need have a neutral effect or be beneficial to PHMA. Wild horse and burro management would be the same as Alternative B with the additional requirement that HMAs would not be expanded in PHMA.	continue using BMPs. Repeated, annual heavy use during critical growing seasons and of season-long grazing on wet meadows and riparian areas would be avoided. Water developments would enhance or maintain GRSG mesic habitat. Range improvement structures would avoid leks. Wild horse and burro management would be the same as Alternative A.		
Summary	All action alternatives would manage grazing to better meet the ecological conditions that maintain or restore healthy sagebrush shrub and native perennial grass and forb communities and conserve the essential habitat components for GRSG (e.g., shrub cover, nesting cover), which responds to the Conservation Objectives Team report objective. All action alternatives emphasize GRSG in decision making for livestock grazing; however, Alternative C would remove grazing from PHMA and Alternative F would reduce grazing. Grazing management would be similar between Alternatives B, D, E, and the Proposed Plan with slightly different guidance or priorities. For wild horses there would be a focus on GRSG habitat and priority for gathers in GRSG habitat for Alternatives B, D, F and the Proposed Plan. These alternatives include evaluation of HMAs and Wild Horse Territories to consider adjustments in AML to meet GRSG habitat standards. Alternatives C and E do not directly address WHB.						
Infrastructure - Right-of-way							
	Various areas managed as ROW avoidance and exclusion, but most are not specific to protect GRSG and GRSG habitat.	In addition to exclusion and avoidance in Alternative A, all PHMA would be managed as ROW exclusion and all GHMA as ROW avoidance. Emphasizes opportunities for co-location within	All GRSG habitat would be managed as ROW exclusion. Provides for review of all existing transmission lines to amend ROWs to require features that enhance GRSG habitat security.	In addition to exclusion and avoidance in Alternative A, all GRSG habitat would be managed as ROW avoidance. New authorizations would not be allowed in PHMA for transmission facilities greater than 50 kV, mineral and energy development, roads,	CHZ (Idaho) and PHMA (Utah) would be ROW avoidance with limited exceptions.	Same as Alternative B.	Similar to Alternative D, with PHMA and IHMA managed as avoidance areas for ROWs, and GHMA open (avoidance for high-voltage ROWs in Montana).

Table 2-12
Comparison of Alleviated Threats to GRSG in the Idaho and Southwest Montana Sub-Region

	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E[1]	Alternative F	Proposed Plan
		designated corridors and within the footprint of existing disturbance. Recommends removing, burying, or modifying existing power lines within priority habitat		airports, and associated ancillary facilities.			
Summary	All alternatives respond to the conservation objective for infrastructure identified in the Conservation Objectives Team report, which is to avoid development within priority areas for conservation. Alternatives B, C, D, and F all close certain areas to new ROWs. The difference between these alternatives is the amount of GRSG habitat that would be closed and the type of ROWs that would be prohibited or restricted. Alternative C closes all occupied GRSG habitat to new ROWs and is the most restrictive. Alternatives B and F include the same restrictions as Alternative C; however, these restrictions would be applied to a smaller geographic area. Alternative D and the Proposed Plan would provide fewer restrictions, as all GRSG habitat would be ROW avoidance with exclusions for certain ROWs in PHMA. Also under Alternative E, some GRSG habitat would be managed as ROW avoidance. This may eliminate habitat loss, degradation, and fragmentation in important seasonal habitats. However, because there are few if any exclusions under this alternative, there is less assurance of protection for GRSG on federal land. All alternatives seek to avoid conflict with GRSG habitat, to utilize existing corridors, and to co-locate within existing development footprints.						
Infrastructure – Roads							
	Some GRSG habitat on BLM-administered land is open to cross-country OHV travel. All Forest Service-administered lands are limited to designated routes. Road ROWs would be issued on a case-by-case basis.	In addition to current limited and closed designations in the No Action alternative, all PHMA would be designated as limited to existing routes pending travel management planning and roads designation. PHMA would be ROW exclusion areas for road ROWs and GHMA would be ROW exclusion areas for road ROWs. Provides guidance for restricting new road construction and mitigation where roads are allowed under prior existing rights. Provides for road closure and rehabilitation. Provides for seasonal road closures. GHMA would be designated as per the	Same as Alternative B. PHMA would be ROW exclusion areas for road ROWs.	All GRSG habitat would be limited to existing routes pending travel management planning and roads designation. PHMA would be ROW exclusion areas for road ROWs. All other GRSG management areas would be ROW avoidance areas for road ROWs. The emphasis of the comprehensive travel and transportation planning would be placed on having a neutral or positive effect on GRSG habitat. Would prioritize restoration of linear disturbances.	Idaho - All GRSG habitat would be limited to existing routes pending travel management planning and roads designation. CHZ (Idaho) and PHMA (Utah) would be ROW avoidance with limited exceptions for road ROWs. Utah: PHMA with nesting and winter habitat that do not have designated routes in a Travel Management Plan would be managed at least as limited to existing routes.	Same as Alternative B, except decisions would be applied to all occupied GRSG habitat. Also no new routes would be allowed within 4 miles of a lek.	Similar to Alternative E, and would prioritize travel planning to designate open and closed routes, similar to Alternative D.

Table 2-12
Comparison of Alleviated Threats to GRSG in the Idaho and Southwest Montana Sub-Region

	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E[1]	Alternative F	Proposed Plan
		travel management plan in the current planning document.					
Summary	All alternatives respond to the Conservation Objectives Team report objective to varying degrees. All alternatives would limit OHV travel to existing or designated routes in certain areas, which would eliminate unauthorized route creation. The difference between alternatives is the amount of GRSG habitat that would be changed from an open to a limited category. Alternative A would have the fewest acres limited to existing roads and trails, followed by Alternatives B and F. Under Alternatives C, D, E, and the Proposed Plan all GRSG habitat would be limited to existing roads and trails.						
Infrastructure - Fences							
	No decisions	Fences would be removed, modified, or marked in high risk areas within PHMA.	No decisions	Fences would be designed and located to minimize the potential for GRSG strikes. Fences would be priorities for removal, modification, or marking in PHMA and IHMA in areas of moderate or high collision risk.	Idaho – Fences would be marked in areas of moderate to high fence densities. Utah – Fences would not be located on or adjacent to leks where bird collisions would be expected to occur.	Same as Alternative B.	Same as Alternative D.
Summary	Some of the alternatives respond to the intent of the Conservation Objectives Team report objectives, which is to minimize impacts from fences on GRSG. Alternatives B, D, and F would consider more of the conservation options identified in the Conservation Objectives Team report. For example, marking fences would decrease bird/fence collisions, and removal of unneeded fences would decrease collisions and opportunities for avian predation. Alternative E in Idaho would only include marking fences.						
Energy Development (Non-renewable)							
	Most areas would be open to energy development. Various stipulations apply, with a range of protective buffers around leks. In general, recently completed plans include a larger protective buffer. Recently completed plans also include a management action that prohibits surface disturbing activities or disruptive activities during certain dates in seasonal habitats.	PHMA would be closed to new leasing, though development of existing leases in PHMA would still cause fragmentation, direct and indirect habitat loss, disruption of GRSG, and degradation of habitat. Required design features would reduce the effects of development. Disturbance would be clustered on the landscape and would be limited to 3 percent per section on average. Seasonal restrictions would decrease seasonal disruption to GRSG populations.	Same as Alternative B, except a larger geographic area would be closed to leasing.	Low potential and no known potential areas would be closed to leasing in PHMA and IHMA. Moderate and high potential areas in PHMA and IHMA would be open to leasing subject to CSU, timing restrictions in breeding and winter habitat, disturbance density not to exceed 1/640 acres, maximum 3% disturbance/section, NSO within 0.6 mile of occupied or undetermined status leks. GHMA would be open to leasing subject to timing limitations in breeding and winter habitat, 0.6 mile NSO near occupied and undetermined status leks, and implementation of	Idaho – Same as Alternative A. Utah – PHMA would be open to leasing subject to CSU and TL stipulations.	Same as Alternative B.	Similar to Alternative D, but BMPS/RDFs would be required on new leases. In SFAs, habitat would be NSO without waiver, modification, or exception. A three percent disturbance cap would apply in PHMA to minimize harm to GRSG populations.

Table 2-12
Comparison of Alleviated Threats to GRSG in the Idaho and Southwest Montana Sub-Region

	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E[1]	Alternative F	Proposed Plan
				appropriate BMPs.			
Summary	To varying degrees all action alternatives respond to the Conservation Objectives Team report objective for energy, which is that energy development should be designed to ensure that it will not impinge on stable or increasing GRSG population trends. Alternatives B, C, and F close areas to new leasing. The difference between these alternatives is the amount of GRSG habitat that would be closed. Alternative C closes all occupied GRSG habitat to new leasing and is the most restrictive. Alternatives B and F include the same restrictions as Alternative C; however, these restrictions would be applied to a smaller geographic area. Management under Alternative D and the Proposed Plan would be less restrictive than Alternatives B, C, and F. Stipulations such as NSO, CSU, and TL would restrict the amount, location, and timing of development. These restrictions would reduce habitat loss, degradation, and fragmentation in seasonal habitats. Alternative E would provide the fewest restrictions on fluid mineral leasing and development. Under Alternatives B, C, F and the Proposed Plan RDFs would be attached to new and existing leases. Applying required design features to existing leases may eliminate habitat loss, degradation, and fragmentation. However, the effectiveness of these measures would be limited in areas where there is already extensive development. Under Alternative D, design features would not be required, but would be discretionary. There would be no restrictions on existing leases under Alternative E.						
Mining – Solid Minerals, Non-energy Leasables, Locatables, and Mineral Materials							
	Various areas recommended for withdrawal/currently withdrawn and closed to mineral material disposal and non-energy mineral leasing. There is no surface disturbance limitation recommendation included in this alternative.	PHMA would be withdrawn from locatable mineral entry, closed to mineral material disposal, and closed to non-energy mineral leasing. Development of existing leases would result in habitat loss and fragmentation. A 3 percent surface disturbance threshold and RDFs would be applied.	Same as Alternative B except decisions would be applied to a larger geographic area (all occupied habitat).	Same as Alternative A for locatable minerals. No new salable mineral authorizations would be approved within 3 km of an occupied lek in all GRSG habitat. Seasonal timing restrictions would be applied in all GRSG habitat. BMPs would be applied in PHMA and IHMA. Future leasing and prospecting of non-energy minerals in PHMA and IHMA is closed	Idaho - Same as Alternative A for locatable, salable, and non-energy leasable minerals. Utah - Same as Alternative A for locatable minerals. PHMA would be open to salable and non-energy leasable minerals; impacts would be reduced through the application of stipulations.	Same as Alternative B.	Similar to Alternative D but would require BMPs and RDFs on new leases. In SFAs, habitat would be recommended for withdrawal.
Summary	To varying degrees all action alternative respond to the COT report objectives, which is to maintain GRSG population and no net loss of GRSG habitat in in areas affected by mining. Alternatives B, C and F would be closed or withdrawn to other minerals. Therefore, future impacts on GRSG would not occur, which address the objectives in the COT report. Under Alternative D and the Proposed Plan, surface use restrictions would be placed on development to protect breeding, and some nesting and early brood-rearing habitat, which would provide opportunities for nest success and chick survival. Additional stipulations (CSU and TL) would restrict the type, amount, location, and timing of development. These restrictions would reduce habitat loss, degradation and fragmentation. Under Alternative E in Idaho, impacts would continue, as management would be the same as Alternative A. Some impacts would be reduced in Utah through the application of stipulations. As such, there is less assurance of protection for nesting GRSG. Alternatives B, C, F and the Proposed Plan would require RDFs along with other conservation measures to reduce habitat loss, fragmentation, degradation, and disturbance to the extent possible on valid rights. Under Alternative D, design features would not be required, but would be discretionary. There would be no restrictions on existing leases under Alternative E.						
Renewable Energy Sources – Wind Energy							
	Most GRSG habitat is open to wind development. There is no surface disturbance limitation	Wind development would be excluded in PHMA under this alternative. There are no restrictions for GHMA under this	Same as Alternative B; however, under this alternative, all GRSG habitat would be excluded from wind development.	PHMA would be excluded from wind development. Other GRSG habitat would be avoidance areas.	Idaho – CHZ would be avoidance areas for wind development. Utah – PHMA would be avoidance areas for wind development.	Same as Alternative B	Similar to Alternative D, PHMA would be excluded from wind development while IHMA would be avoidance and GHMA open (avoidance in Montana).

Table 2-12
Comparison of Alleviated Threats to GRSG in the Idaho and Southwest Montana Sub-Region

	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E[1]	Alternative F	Proposed Plan
	recommendation included in this alternative.	alternative.					
Summary	To varying degrees all alternatives respond to the conservation objective for energy, which is to ensure that development will not impinge upon stable or increasing population trends. Alternatives B, C, D, F and the Proposed Plan provide protection from wind development to GSRG and their habitat since all four stipulate that wind development is excluded from PHMA. Population declines could occur under Alternatives A and E, as wind development would be allowed. Stipulations on development would reduce habitat loss, fragmentation, degradation, and disturbance.						
Recreation/Travel Management							
	Cross-country OHV travel is generally allowed on BLM-administered lands. Forest Service-administered lands are limited to designated routes.	In addition to current limited and closed designations in the No Action alternative, all PHMA would be designated as limited to existing routes pending travel management planning and roads designation. Provides guidance for restricting new road construction and mitigation where roads are allowed under prior existing rights. Provides for road closure and rehabilitation. Provides for seasonal road closures. Recreational permits would only be issued in GRSG priority habitats that have neutral or beneficial effects.	Alternative lacks specificity regarding travel management but states that all lands will be closed to cross-country travel and some roads that intrude into lek or winter habitats will be removed or seasonally closed.	All GRSG habitat would be limited to existing routes pending travel management planning and roads designation. The emphasis of the comprehensive travel and transportation planning would be placed on having a neutral or positive effect on GRSG habitat. Would prioritize restoration of linear disturbances. Recreation would be managed to minimize impacts on GRSG or their habitat.	Idaho - All GRSG habitat would be limited to existing routes pending travel management planning and roads designation. No guidance is provided regarding recreation management. Utah: PHMA with nesting and winter habitat that do not have designated routes in a Travel Management Plan would be managed at least as limited to existing routes. Stipulations would be used to reduce impacts from recreation.	Management would be similar to Alternative B except specifies in priority habitat camping and other non-motorized recreation would be prohibited during certain seasons within 4 miles of a lek. In addition, there would be no new route construction within 4 miles of a lek.	Same as Alternative D.
Summary	To varying degrees, all action alternatives respond to the COT report objective, which is that areas subject to recreation activities should maintain healthy native sagebrush communities based on local ecological conditions and with consideration of drought conditions, and managed direct and indirect human disturbance (including noise) to avoid interruption of normal GRSG behavior. PHMA would be limited to existing roads under Alternatives B and F. Under Alternatives C, D, E, and the Proposed Plan all GRSG habitat would be limited to existing roads. Once travel management planning is completed, this would be changed to a limited to designated routes category. These alternatives would prevent proliferation of new routes, and would include direction for seasonal closures, route realignment, and provisions for valid existing rights. Recreation management under all action alternatives would aim to reduce impacts on GRSG and habitat.						
Agriculture/Urbanization							
	Most LUPs include a management action that allows for	Retains public ownership of PHMA with exceptions for	Same as Alternative B.	Land tenure actions would be similar to Alternative B.	Idaho and Utah – Same as Alternative A.	Same as Alternative B.	Same as Alternative D.

Table 2-12
Comparison of Alleviated Threats to GRSG in the Idaho and Southwest Montana Sub-Region

	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E[1]	Alternative F	Proposed Plan
	acquisition of lands that have important resource values including GRSG. Land tenure adjustments could result in consistent management across the landscape.	considering which improve ownership patterns in a manner which enhances GRSG habitat management. Takes advantage of opportunities to remove or bury existing infrastructure associated with urban/ex-urban development and to collocate infrastructure to consolidate impacts. (See Infrastructure)					
Summary	To varying degrees, all action alternatives respond to the COT report objective to limit urban and exurban development in GRSG habitats and maintain intact native sagebrush communities by managing land tenure, consolidating and otherwise minimizing the impacts of infrastructure supporting adjacent development, and burial/removal of infrastructure. Alternatives B, C, D, F and the Proposed Plan favor land acquisition as a tool for conserving important habitat on private lands. All alternatives prescribe ROW exclusion or avoidance (see Infrastructure) and colocation of infrastructure to minimize footprint. Alternatives B, D, and F contain specific actions directed at burial or removal of existing infrastructure such as power lines. Alternatives B, C, D, F and the Proposed Plan call for retention of all GRSG habitats in public ownership. Impacts would continue to occur under Alternative E, which is the same as Alternative A.						

Table 2-13
Summary of Environmental Consequences

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

Table 2-13
Summary of Environmental Consequences

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

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a high risk of human-caused ignitions associated with human uses. Vegetation management and weed treatments would continue to decrease fuels across the planning area, which would decrease the intensity of wildland fires and allow fires to be more easily controlled. Similarly, treatments for habitat improvement and forage would reduce fuels and reduce the likelihood for stand-replacing fire. The wildland fire management program would continue to be impacted by the spread of invasive annuals, which results in a longer fire season and the need for more resources to respond to wildfire. There would also be a continued decrease in the capability of the proactive hazardous fuels reduction program to maintain reactive suppression and rehabilitation efforts in the wildland-urban interface (WUI).	would be similar to historic conditions because post fuel and restoration management would be designed to ensure long-term persistence of seeded or pre-burn native plants. GRSG management in PHMA would focus on fire suppression and limitations on fuels treatments, resulting in higher level of protection from wildland fire, but reduced wildland fire and fuels management options. Managing PHMA so that discrete anthropogenic disturbances cover less than 3 percent of the total PHMA regardless of ownership would decrease the chance of human-caused ignition in PHMA. In addition, managing or restoring PHMA so that at least 70 percent of the land cover provides adequate sagebrush habitat to meet GRSG needs would promote a shift towards historic fire regimes in sagebrush ecosystems. Limiting OHV travel in PHMA to existing roads and trails until travel management planning is complete, as well as limiting road upgrades or new roads in this area, would reduce the risk of human-caused ignition in PHMA on BLM-administered and Forest Service-administered lands.	permitted within occupied GRSG habitat. As a result, fine fuels would increase throughout occupied habitat and size, intensity, and occurrence of fire would potentially increase. However, because the prohibition on grazing could reduce weed spread, some areas may experience a shorter fire season and less frequent and/or intense wildfires.	fire management. Alternative D would allow for management flexibility in designing fuels treatments and response to wildland fire. Strategic wildfire suppression planning would help return PHMA to natural fire intensities and intervals. Impacts from limiting OHV travel to existing roads would be the same as those described for Alternative B.	analysis and water availability analysis would help focus suppression activities in areas with the greatest likelihood of reducing wildfire spread. Use of native vegetation for restoration and controlling invasive species for three years after wildfire treatments would reduce the likelihood for weed invasion in burned or treated areas, thus reducing the frequency and intensity of wildland fires. This alternative promotes active and aggressive control of invasive species, which would likely result in a reduced likelihood of large-scale wildland fires. Targeted grazing would be allowed to reduce fine fuels, resulting less need for mechanical or chemical fuels treatments.	same as those described under Alternative B.	Alternatives B and D. Because anthropogenic disturbance excludes habitat disturbance from wildfire and fuels management activities, the wildland fire and fuels program will retain management flexibility and a greater chance to meet goals and objectives over the life of the plan. The 3 percent anthropogenic disturbance cap should limit human-caused ignitions in GRSG habitat over the long-term and decrease the probability of wildfire occurrence and the need for fire-suppression activities. Coordination with other land management agencies and landowners may promote improved habitat conditions across land management boundaries, thus improving the efficiency and effectiveness of fire and fuels treatments across the landscape. Additionally, implementation of the Wildfire, Invasive Annual Grasses and Conifer Expansion Assessment will improve wildland fire management across the landscape via improved coordination across agencies.

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

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	AMPs or permit renewals or BLM and Forest Service NEPA processes. As a result, impacts would occur over time at a site- specific level as measures are incorporated into individual allotments. Land Health assessment and permit renewals would be prioritized in PHMA, but there is potential for further degradation of lands outside of PHMA that are not meeting land health standards or desired conditions.	and intensity because of the elimination of grazing in all allotments intersecting occupied habitat.	seasonal habitats would be emphasized in both priority and medial habitats. Should treatments in this habitat not match with vegetation objectives for livestock grazing, forage quality would decrease. However, in most cases, treatment (e.g., conifer removal) would improve forage conditions in the long term.	requirements, and impacts on range management would be limited.		outside the SFAs. Changes in management would follow this priority order. The Proposed Plan would also include additional vegetation treatment measures such as conifer removal, and annual grass treatment, with specific vegetation objectives in PHMA. FIAT assessments will also be used at implementation to determine site specific fire management measures. Where vegetation and fire management objectives do not meet forage objectives for livestock grazing, this would result in the need to modify grazing practices However, in most cases, treatments (e.g., conifer removal) would improve forage conditions in the long term. Disturbance of livestock grazing and livestock forage from development activities would be minimized in the Proposed Plan due to the inclusion of a cap on anthropogenic disturbance, mitigation for conservation gain to GRSG, and conservation measures such as adaptive management and defined monitoring, RDFs, and lek buffers.
Travel Management						
Areas currently designated as open to cross-country OHV use would continue to be managed as such. There would be no new restrictions related to GRSG habitat management and no change in current levels of access under Alternative A. All Forest Service-administered lands would be limited to	The BLM and Forest Service would limit OHV travel to existing roads and trails in PHMA. This would reduce cross-country access in those portions of PHMA that were previously managed as open for cross-country travel. Applications for the upgrading or	The BLM and Forest Service would limit OHV travel to existing roads and trails in PHMA. Additionally, in PHMA, new road construction within 4 miles of active leks would be prohibited. Upgrading of existing routes in occupied habitat where such action would damage GRSG habitat would	All BLM lands in Field Offices containing GRSG habitat would be limited to existing routes and off-road OHV travel prohibited with the exception of specific areas managed as open for recreation purposes. Impacts on Forest Service-administered lands would be the	Impacts under Alternative E would be similar to Alternative D, with fewer acres identified as limited to existing routes in GRSG habitat.	Impacts under Alternative F on BLM-administered lands would be the same as Alternative B. Impacts on Forest Service-administered lands would be the same as for Alternative A.	Impacts under the Proposed Plan would be the same as Alternative D

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designated routes.	realignment of existing routes would be required to meet certain design, location, and mitigation criteria intended to protect GRSG habitat. These requirements may preclude the construction of some new routes, but would be unlikely to reduce access across the decision area. Impacts on Forest Service-administered lands would be the same as for Alternative A.	also be precluded. Together, these actions would result in site-specific losses of opportunity for motorized travel and future route construction and improved access. Impacts on Forest Service-administered lands would be the same as for Alternative A.	same as for Alternative A.			
Lands and Realty						
ROW avoidance and exclusion restrictions would not be applied in GRSG habitat, thus, not preventing the BLM or Forest Service from accommodating future demand for ROW development within the planning area. Existing transportation routes would continue to provide motorized access to ROW infrastructure and communication sites for construction and maintenance with no additional impacts on lands and realty from travel and transportation management. GRSG habitat would remain available for withdrawal or disposal as needed to serve BLM or other agency objectives.	Managing PHMA as ROW exclusion would prevent the BLM and Forest Service from accommodating new ROW development in those areas. With a continuing demand for new ROWs in the planning area, including major inter- and intra-state electrical transmission and pipeline ROW developments would be prevented or diverted to adjacent non-federal lands. Development on adjacent lands could result in more extensive direct and indirect impacts on GRSG populations and habitat (e.g., vehicle traffic on roads crossing public lands), especially if the development is within close proximity to GRSG habitat on BLM-administered or Forest Service-administered lands, or the ROW route is longer to avoid federal lands.	The BLM would not authorize new ROWs in exclusion areas unless the infrastructure could be located in an existing ROW authorization footprint. Impacts under Alternative C would be similar to Alternative B, but over a greater area. Alternative C would further limit opportunities for communication facilities, pipelines, fiber optic cables, electrical transmission lines, and similar ROW development in response to ongoing needs. Impacts on land tenure would be the same as Alternative B but cover a wider area (all occupied habitat).	Lands and Realty management under Alternative D would establish avoidance areas in GRSG habitat, impacting the BLM- and Forest Service-administered lands and realty programs by reducing the BLM and Forest Service's ability to authorize above-ground linear ROWs, such as electrical transmission lines in PHMA. Within avoidance areas, additional stipulations for the development of electrical transmission lines could result in the denial of projects that cannot meet ROW grant requirements for the protection of GRSG habitat. Limitations on electrical transmission line development, renewable energy development, and new roadways under Alternative D would be less than Alternative C which creates exclusion areas, Impacts from travel management would be the same	Stipulations associated with ROW avoidance areas under Alternative E would limit the BLM's ability to accommodate the demand for new infrastructure development in GRSG habitat, but less than establishing exclusion areas. With demand for new ROWs in the planning area, including major inter- and intra-state electrical transmission and pipeline ROW developments, expected to continue and increase over time, new ROW development would be diverted to adjacent non-federal lands or blocked. If new ROW development could not be feasibly developed, the result would be reduced energy and communication opportunities to meet growing needs. Impacts from travel	With establishment of ROW exclusion areas, neither the BLM nor Forest Service would authorize new ROW development in occupied habitat. Therefore, Alternative F would further reduce opportunities for renewable energy, communication facilities, pipelines, fiber optic cables, electrical transmission lines, and similar ROW development from occurring in the planning area, to meet growing energy and communication needs, similar to Alternative B. Impacts from Travel and Transportation Management under Alternative F would be the same as Alternative A. Impacts on land tenure would be the same as Alternative B.	Similar to Alternative D, the Proposed Plan would reduce the amount of land within GRSG habitat available to ROW/SUA development without restrictions, compared to Alternative A. Within avoidance areas, additional stipulations for the development of electrical transmission lines could result in the denial of projects that cannot meet ROW/SUA grant requirements for the protection of GRSG habitat. Limitations on electrical transmission line development, renewable energy development, and new roadways under the Proposed Plan would be less than other alternatives, such as Alternative C, which creates exclusion areas. GRSG conservation measures under the Proposed Plan, such as the requirement for activities to promote net conservation gain for GRSG, RDFs, buffers, and tall structure limitations, would likely discourage limit future

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	Within exclusion areas, BLM and Forest Service would only consider new ROW authorizations where the proposed infrastructure could be co-located entirely within the footprint of an existing ROW. BLM and Forest Service would require co-location in GHMAs where possible. Impacts on the lands and realty program under Alternative B would include the need to locate proposed facilities outside exclusion areas or within existing ROWs, which limits the BLM's ability to accommodate the demand for new infrastructure development, including wind energy development. PHMA lands would not be available for disposal or withdrawal, limiting BLM's ability to accommodate other management objectives with land tenure changes.		as those described above under Alternative B. Impacts on land tenure would be the same as Alternative B.	management would be the same as those described under Alternative A. Impacts on land tenure would be the same as Alternative A.		development PHMA and IHMA. Projects that are proposed in PHMA or IHMA would incur added costs and more complex and lengthy review periods. Restrictions on surface activities for fluid minerals, closure of PHMA to mineral materials, and the proposed withdrawal of SFAs for locatable minerals would reduce the short- and long-term demand for ROWs/SUAs to support mineral development. By allowing land tenure actions that result in the net conservation gain of GRSG habitat, the BLM and Forest Service could carry out actions that consolidate land ownership or acquire lands with higher quality GRSG habitat.
Minerals						
Fluid Minerals (Oil and Gas)						
Under Alternative A, 289,500 unleased medium potential acres would continue to be closed to fluid mineral leasing. New leases in most BLM field offices and Forest Service districts within the decision area would continue to be subject to TLs, and NSO buffers would be applied for varying distances around leks. Acres closed have the greatest impact on the fluid minerals	All federal mineral estate within PHMA, including 496,300 unleased medium potential acres, would be closed to oil and gas leasing. Closure of these acres would directly impact the fluid minerals program as described under Alternative A. However, because the acreage closed would increase under Alternative B, the magnitude of these	All federal mineral estate in the decision area, including 601,000 unleased medium potential acres, would be closed to oil and gas leasing. Closure of these acres would directly impact the fluid minerals program as described under Alternative A; however, because Alternative C would close the most acres out of any alternative, the magnitude of these impacts would also increase.	Fluid mineral allocations in PHMA and IHMA would vary depending on oil and gas development potential. 289,500 unleased medium potential acres would be closed to oil and gas leasing. An NSO stipulation would apply within 0.6 mile of leks to 176,900 acres. New leases within PHMA and IHMA would be subject to density limitations and a 3-percent disturbance cap for	Within the planning area, 289,500 unleased medium potential acres would be closed to fluid mineral leasing under this alternative. Management existing leases in the decision area would be similar to that under Alternative A. Unleased areas in CHZ and IHZ would be open to leasing subject to an NSO	Impacts of closures under Alternative F would be the same as under Alternative B. Management actions applicable to existing leases under Alternative F would be similar to those under Alternative C. However, under Alternative F, TLs would prohibit human presence as well as surface-disturbing activities during the nesting and brood-rearing	Within the planning area, 257,400 unleased medium potential acres would be closed to oil and gas leasing. Closure of these acres would directly impact the fluid minerals program as described under Alternative A; however, because more acres would be closed under the proposed plan, the magnitude of these impacts would increase. The same RDFs would be applied to the same acreage as under

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program by prohibiting oil and gas development on portions of federal mineral estate with high potential for such development. In areas closed to leasing, oil and gas operations would be restricted in their choice of project locations and may be forced to develop in areas that are challenging to access or have less economic resources because more ideal areas could be closed to leasing. This could raise the cost of fluid mineral development in the planning area and could result in operators moving to nearby private or state minerals that are open to leasing.	impacts would also increase. Existing leases would remain valid through their term but could not be renewed, resulting in further long-term restrictions on the development of fluid mineral resources. Conservation measures in addition to RDFs would be applied as COAs to existing leases on PHMA overlying federal mineral estate. Application of these requirements would impact fluid mineral operations by increasing costs if it resulted in the application of additional requirements and/or use of more expensive technology. To avoid these costs, operators may move to nearby state or private minerals, resulting in lost royalties for the BLM and Forest Service.	Management actions applicable to existing leases under Alternative C would be similar to those under Alternative B, but they would apply to all existing leases in the decision area. Alternative C would also call for COAs implementing seasonal restrictions on vehicle traffic and human presence associated with exploratory drilling. This alternative also would limit new surface disturbance on existing leases to 3 percent per section, with some exceptions. Impacts of these operating and siting restrictions would be the same type as those described under Alternative B, although the magnitude of the impacts would increase.	each section. Management of existing fluid mineral leases under Alternative D would be the same as that under Alternative B except that all management actions other than RDFs would apply to all 101 existing leases within GRSG habitat.	stipulation.	season. This management would be the most restrictive management out of all the alternatives.	Alternative B. However, the only conservation measures applied would relate to master development plans and unitization. Application of the three percent disturbance cap and NSO with limited exception in PHMA and IHMA, and lek buffers in GHMA could impact both new and existing fluid mineral activities by preventing or restricting new surface development. Management of existing fluid mineral leases under the Proposed Plan would be the same as that under Alternative B with the same impacts.
Fluid Minerals (Geothermal)						
Under Alternative A, 12,513,900 acres of the planning area would be closed to geothermal leasing. This includes 2,939,400 acres of available moderate to high potential areas and 9,574,600 acres of available low to no potential areas. New leases in most BLM field offices and Forest Service districts within the decision area would continue to be subject to TLs, CSUs, and NSO buffers would be applied for varying distances around leks.	Under Alternative B, 19,598,800 acres of the planning area would be closed to geothermal leasing. This includes 5,287,800 acres of available moderate to high potential areas and 14,311,000 of available low to no potential areas. Existing leases would remain valid through their term but could not be renewed, resulting in further long-term restrictions on the development of fluid	Under Alternative C, 21,901,100 acres of the planning area would be closed to geothermal leasing. This includes 6,137,200 acres of available moderate to high potential areas and 15,763,900 acres of available low to no potential areas. Management actions applicable to existing leases under Alternative C would be similar to those under Alternative B, but they would apply to all existing leases in the decision area. Alternative C would also call for COAs implementing	Under Alternative D, 17,526,500 acres of the planning area would be closed to geothermal leasing. This includes 3,215,600 acres of available moderate to high potential areas and 14,311,000 acres of available low to no potential areas. New leases within PHMA and IHMA would be subject to density limitations and a 3-percent disturbance cap for each section. Management of existing fluid	Acres of moderate to high and low to no potential areas closed to geothermal leasing would be the same as Alternative A. Acres subject to types of stipulations would differ; more acres would be open subject to NSO stipulations, less acres would be open subject to CSU/TL stipulations, and less acres would be open subject to standard terms and conditions. Unleased areas in CHZ and IHZ would be open to	Under Alternative F, 12,513,900 acres of the planning area would be closed to geothermal leasing. This includes 2,939,400 acres of available moderate to high potential areas and 9,574,600 acres of available low to no potential areas. Management actions applicable to existing leases under Alternative F would be similar to those under Alternative C. However, under Alternative F, TLs would prohibit human	Under the Proposed Plan 11,296,800 acres of the planning area would be closed to geothermal leasing. This includes 2,832,800 acres of available moderate to high potential areas and 8,464,000 acres of available low to no potential areas. Under the proposed plan, RDFs and BMPs would be applied as COAs when a geothermal drilling permit or other post-lease activity is approved. In addition to affecting new leases, the COAs would be applied to the 25,571 acres of existing leases within

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	mineral resources. Conservation measures in addition to RDFs would be applied as COAs to existing leases on PHMA overlying federal mineral estate. Application of these requirements would impact fluid mineral operations by increasing costs if it resulted in the application of additional requirements and/or use of more expensive technology. To avoid these costs, operators may move to nearby state or private minerals, resulting in lost royalties for the BLM and Forest Service.	seasonal restrictions on vehicle traffic and human presence associated with exploratory drilling. This alternative also would limit new surface disturbance on existing leases to 3 percent per section, with some exceptions. Impacts of these operating and siting restrictions would be the same type as those described under Alternative B, although the magnitude of the impacts would increase.	mineral leases under Alternative D would be the same as that under Alternative B except that all management actions other than RDFs would apply to all 101 existing leases within GRSG habitat.	leasing subject to an NSO stipulation.	presence as well as surface-disturbing activities during the nesting and brood-rearing season.	GRSG habitat, consistent with existing lease terms and special stipulations. These RDFs and conservation measures would include such requirements as noise restrictions, structure height limitations, design requirements, water development standards, remote monitoring requirements, and reclamation standards as described in Appendix A. This alternative also would limit new surface disturbance on existing leases to 3 percent per section, with some exceptions.
Nonenergy Leasables						
Under Alternative A, no changes would be made to the acres open and closed to leasing consideration. Currently, 11,799,500 acres are closed to non-energy mineral leasing. Existing federal non-energy leasable mineral leases in the decision area would continue to be subject to any stipulations or BMPs contained in those leases. Application of BMPs could alter how mineral resources are accessed and extracted and result in the use of different technology than would otherwise have been used. Non-energy leasable mineral development operations may also move to nearby private or state minerals containing non-energy leasable mineral resources within GRSG habitat. This change would result in lost	Under Alternative B, PHMA would be closed to prospecting and leasing (19,167,400 acres). Management under this alternative would close more federal mineral estate to non-energy leasable mineral prospecting and leasing than management under Alternative A. Closing areas to non-energy mineral prospecting and leasing would result in the same type of impacts as under Alternative A, but over a larger area. However, the majority of acres in unleased KPLAs, where interest in non-energy leasable mineral development is most likely, would remain open to leasing. Therefore, impacts	Impacts under Alternative C would be the same as those described under Alternative B except that more acres would be closed (21,629,700 acres). As a result, the magnitude of impacts under this alternative would increase. However, similar to Alternative B, the majority of unleased acres in KPLAs would remain open to leasing. Therefore, impacts would be mitigated.	Under Alternative D, PHMA and IHMA would be closed to prospecting and leasing. Management under this alternative would close more federal mineral estate (8,308,600 acres) to non-energy leasable mineral prospecting and leasing than management under Alternative A. Impacts in unleased KPLAs would be similar to those under Alternative A except that CSUs and seasonal and daily TLs would be applied to all lands available for leasing in GHMA. Additionally, TLs would be applied to the ten federal phosphate leases within GRSG habitat. Applying BMPs as Conditions of Approval on any new mine plan and requiring restoration of habitat or off-site mitigation	Non-energy leasable mineral allocations under Alternative E would be the same as those under Alternative A and would result in the same impacts. Impacts in unleased KPLAs would be similar to those under Alternative A except that lands open to leasing would be subject to several stipulations that include prohibiting permanent structures within occupied leks, prohibiting tall structures within one mile of leks, restrictions on noise disturbances, and various TLs specific to protecting leks. Stipulations would restrict the ability of mineral resources to be developed or extracted.	Impacts under Alternative F would be the same as those described under Alternative C, but would impact a smaller area (19,167,400 acres). However, similar to Alternative B, the majority of unleased acres in KPLAs would remain open to leasing. Therefore, impacts would be mitigated.	Impacts under the Proposed Plan would be similar to those described under Alternative B except that fewer acres would be closed (16,270,500 acres) and the disturbance cap and lek buffers would apply. Because more acres would be closed compared to Alternative A and additional restrictions would be added, impacts would increase under the Proposed Plan. Because KPLAs would remain open to nonenergy solid mineral leasing, impacts on federal nonenergy solid leasable mineral development would be mitigated. Application of RDFs and TLs to existing phosphate leases in GRSG habitat would result in the same impacts described under Alternative D.

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royalties for the BLM and Forest Service.	would be mitigated. Existing federal non-energy leasable mineral leases in PHMA would be subject to RDFs. Application of RDFs would increase costs of non-energy leasable development if it delayed resource development or resulted in the use of more expensive technology or less efficient development than would otherwise have been used.		could alter how mineral resources are accessed and extracted and result in the use of different (potentially more expensive) technology than would otherwise have been used.			
Locatable Minerals						
Under Alternative A, no change would be made to the acres of federal mineral estate with high potential that are withdrawn or petitioned for withdrawal (currently 5,380,200 acres). Withdrawal or closure of an area to mining development eliminates the ability to access and extract the mineral resources in that area under new claims. This represents an impact on the potential discovery, development, and use of those resources by decreasing the availability of mineral resources. In addition, validity exams must be completed on all existing claims in withdrawn areas. The need for these exams adds costs and delays for the BLM, Forest Service, and claimant. This alternative would be the least restrictive to locatable minerals because a larger percentage of the decision area would be open to locatable mineral entry and no additional restrictions would be applied to	Under Alternative B, PHMA (7,928,700 acres) would be recommended for withdrawal in addition to the 5,380,200 acres currently withdrawn. The large increase in areas petitioned for withdrawal under this alternative compared with Alternative A would increase the development delays and costs of validity exams on the BLM, Forest Service, or claimant. Accessing and extracting locatable minerals of federal mineral estate would not be impacted by applying BMPs; however, mining operations and practices could be affected and costs increased if an operator agrees to apply any of the BMPs on a project-specific basis.	Impacts under Alternative C would be the same as those described under Alternative B except that more acres (11,555,000 acres) would be recommended for withdrawal. The magnitude of impacts under this alternative would increase since more acreage would be affected. Impacts from applying BMPs would be the same as those described under Alternative B.	Impacts under Alternative D would be the same as those described under Alternative A, except that additional measures to avoid or minimize adverse effects on GRSG and their habitat would be required for 3809 notices and plans of operations in all habitat types. A total of 11,555,000 acres would be recommended for withdrawal under this alternative. Impacts from these additional measures would be highly variable depending on the extent of the additional requirements. If these measures resulted in the mineral resource not being able to be accessed or extracted, an impact on the potential discovery, development, and use of those resources would occur because the availability of mineral resource would decrease. Impacts from applying BMPs would be the same as those described under Alternative B.	Impacts under Alternative E would be the same as those described under Alternative A.	Impacts under Alternative F would be the same as those described under Alternative B.	Under the Proposed Plan 2,968,200 acres would be recommended for withdrawal. The increase in areas petitioned for withdrawal compared with Alternative A would result in the types of impacts described under Alternative B. Impacts from applying BMPs would be the same as those described under Alternative B.

Table 2-13
Summary of Environmental Consequences

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
mining operations.						
Salable Minerals (Mineral Materials)						
Under Alternative A, no change would be made to the acres that would open or closed (currently 10,707,600 acres closed) to mineral material disposal.	Under Alternative B, all PHMA would be closed to mineral material disposal (18,589,300 acres). Closing these acres would prevent access to the mineral resources underlying them and reduce mineral material development in the decision area. Management of mineral materials on federal mineral estate outside of PHMA would be the same as that under Alternative A.	Under Alternative C, all GRSG habitat would be closed to mineral material disposal (21,174,000 acres). This alternative would close the most acres to mineral material disposal of all the alternatives. Therefore, impacts on mineral materials would be the highest under Alternative C.	Under Alternative D, areas within 3 km of occupied leks would be closed to mineral materials disposal (13,211,100 acres). All other areas in GRSG habitat would be subject to TLs.	Alternative E would close the same acres as under Alternative A (10,707,600 acres). Under Alternative E, mineral materials management would differ between portions of the decision area in Idaho and Montana and portions in Utah. Within Idaho and southwest Montana, CHZ would be closed to mineral material disposal. Closure of the 114 existing community pits in CHZ (23 percent of existing community pits in GRSG habitat) would also be recommended. Within Utah, mineral material operations within PHMA would be subject to TLs and other restrictions.	Under Alternative F, 18,589,300 acres would be closed to mineral materials disposal. Impacts of these closures would be the same type as those described under Alternative B. Because more acres would be closed under Alternative F than under Alternative A, impacts on the mineral materials programs would increase.	Under the Proposed Plan, all PHMA would be closed to mineral material disposal (15,529,000 acres). The impacts described under Alternative B would be mitigated in the Montana portion of the decision area because new free use permits would still be allowed and existing pits would be able to expand. Because 45 percent more acres of federal mineral estate would be closed under the Proposed Plan compared with Alternative A, the magnitude of these impacts would increase. Application of the disturbance threshold in IHMA and RDFs, buffers, and timing restrictions in IHMA and GHMA would increase restrictions on mineral material activities compared with Alternative A, thereby increasing impacts.
Special Designations						
Areas of Critical Environmental Concern						
The BLM would continue managing the 53 existing ACECs containing 325,000 acres of occupied GRSG habitat to protect the identified relevant and important values. Sagebrush habitat is not identified as a relevant and important value in any of these existing ACECs.	No new ACECs would be designated. Impacts would be similar to those described under Alternative A, however existing ACECs and the identified relevant and important values for which they were designated could experience indirect, beneficial impacts from restrictions placed on GRSG habitat within or adjacent to ACECs.	Under Alternative C, 39 new BLM ACECs encompassing approximately 4,200,000 acres of occupied GRSG habitat would be designated as sagebrush reserves, for the relevant and important value of conserving GRSG.	No new ACECs would be designated. Impacts would be the same as those described under Alternative B.	No new ACECs would be designated. Impacts would be the same as those described under Alternative B.	Under Alternative F, up to 18 new BLM ACECs and Forest Service GRSG Zoological Areas encompassing up to 8.3 million acres of occupied GRSG habitat would be designated as sagebrush reserves for the relevant and important value of conserving GRSG.	No new ACECs would be designated. Impacts would be the same as those described under Alternative B.

Table 2-13
Summary of Environmental Consequences

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan
Socioeconomic Impacts						
Under Alternative A, current management would continue for grazing, mineral leasing and development, and other activities in GRSG habitat areas. The economic benefits of these activities would be maintained, and communities would not suffer losses in income or jobs associated with GRSG conservation efforts.	Under Alternative B, grazing would not be restricted on GRSG habitat, so permittees would not suffer economic losses. Under Alternative B, mineral leasing for fluid minerals, salable minerals and mineral materials would be closed or restricted in PHMA. These restrictions would reduce the opportunity to develop minerals on federal land and reduce the revenue and jobs to local communities.	Alternative C would eliminate grazing from all allotments in occupied habitat. The elimination of permitted grazing in PHMA under Alternative C may result in permittees' going out of business, with impacts on both individual permittees as well as local communities as a whole. Socioeconomic impacts from reduced mineral leasing and development would be similar to Alternative B but would cover a wider area, all occupied habitat.	Under Alternative D, grazing would be maintained at current levels, maintaining the economic benefits of grazing to permittees and communities. Mineral leasing acreage would not be reduced under Alternative D, but would be subject to stipulations regarding timing and proximity to GRSG lek sites. Maintaining current acreage open to leasing would minimize economic harm to workers and communities from GRSG conservation measures.	Under Alternative E, grazing would be maintained at current levels, maintaining the economic benefits of grazing to permittees and communities. Mineral leasing acreage would not be reduced under Alternative E, but limited areas would be subject to stipulations regarding timing and proximity to GRSG lek sites. Maintaining current acreage open to leasing would minimize economic harm to workers and communities from GRSG conservation measures.	Alternative F restrictions on grazing could also harm permittees' economic well-being and may drive some out of business, causing harm to individuals and communities in GRSG habitat areas. Socioeconomic impacts from reduced mineral leasing and development would be similar to Alternative B.	Under the Proposed Plan, grazing would be maintained at current levels, maintaining the economic benefits of grazing to permittees and communities. Mineral leasing acreage would not be reduced under the Proposed Plan, but would be subject to stipulations regarding timing and proximity to GRSG lek sites. Maintaining current acreage open to leasing would minimize economic harm to workers and communities from GRSG conservation measures.

Chapter 3

Affected Environment

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Changes to Chapter 3 between Draft LUPA/EIS and Proposed LUPA/Final EIS

- General corrections (e.g., typographical errors), clarifications, and acreage recalculations were included. No update was available for the tables from "Summary of Science, Activities, Programs and Policies that Influence the Range-Wide Conservation of Greater Sage-Grouse (*Centrocercus urophasianus*)" (Manier et al. 2013).
- The special status species list in Section 3.5.1 was updated.

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Chapter 3. Affected Environment

3.1 Introduction

This chapter documents the existing conditions and trends of resources in the planning area that may be affected by implementing any of the proposed alternatives described in **Chapter 2**, Alternatives. The affected environment provides the context for assessing potential impacts, which are described in **Chapter 4**, Environmental Consequences.

For this LUPA/EIS, the planning area is the entire sub-region within Idaho, southwestern Montana, and the portion of the Sawtooth National Forest within Utah. Specifically, the planning area is the sum of the GRSG population areas within this sub-region, regardless of landownership. **Table 3-1** provides a detailed breakdown of landownership status in the planning area. A map of the planning area is provided in **Chapter 1**, **Figure 1-3**, Planning Area.

The decision area includes the portions of the planning area that are composed of BLM, Forest Service, and Bankhead Jones surface estates, as well as the mineral estates administered by the BLM or Forest Service. Though the planning area includes private lands, direction provided in this LUPA only applies to BLM and Forest Service surface and minerals. Management direction and actions outlined in this EIS apply only to these BLM-administered and National Forest System lands in the planning area and to federal mineral estate under BLM jurisdiction that may lie beneath other surface ownership. The federal government does not always own every type of mineral in a given acre of federal mineral estate. For example, in some areas, the federal government will only own the coal rights, while a private or state entity might own the oil and gas rights. For this reason, the federal mineral estate for any specific mineral type in the decision area is different than that for all other mineral types in the decision area.

While not a part of the planning area in the Idaho and Southwestern Montana GRSG Sub-Region, the Jarbidge and Bruneau Field Offices in Idaho will implement GRSG decisions on 77,800 acres of BLM-administered lands in Elko County, Nevada, located north of the Humboldt-Toiyabe National Forest and south of the Idaho-Nevada state line adjacent to the Bruneau and Jarbidge Field Offices in Idaho. For purposes of the GRSG plan amendments in Idaho and in Nevada, planning for these lands will occur through the Nevada and Northeastern California GRSG LUPA, and the regulatory measures and decisions that are put in place for the GRSG through the ROD will be implemented and administered by the Jarbidge and Bruneau Field Offices in Idaho. Due to their remoteness from other BLM-administered lands in Nevada, and because they are contiguous with major blocks of BLM-administered lands in Idaho, a Memorandum of Understanding (MOU) between BLM Nevada and BLM Idaho transfers administration of those lands to BLM Idaho.

To augment this planning document at a biologically meaningful scale for GRSG, the BER was produced by the USGS for the BLM and Forest Service (Manier et al. 2013). The BER is a science support document that provides information to put planning units and issues

Table 3-1
Acres of GRSG Habitat by Surface Management

Surface Land Management	Acres PPH	Acres PGH	Acres Outside Habitat	Total Acres
BLM Total	**7,272,100**	**1,971,800**	**3,205,100**	**12,449,000**
BLM – Idaho	6,811,400	1,749,900	2,982,900	11,544,200
Bruneau Field Office	1,001,000	184,700	262,900	1,448,600
Burley Field Office	422,000	206,200	206,700	834,900
Challis Field Office	635,600	84,400	72,900	792,900
Four Rivers Field Office	162,200	190,800	901,400	1,254,400
Jarbidge Field Office	765,100	251,900	305,100	1,322,200
Owyhee Field Office	794,600	242,700	222,500	1,259,900
Pocatello Field Office	233,700	87,500	278,800	599,900
Salmon Field Office	311,100	51,600	131,200	493,900
Shoshone Field Office	1,092,500	262,000	368,700	1,723,200
Upper Snake Field Office	1,393,800	187,900	232,600	1,814,300
BLM – Montana	460,600	222,000	222,200	904,800
Dillon Field Office	460,600	222,000	222,200	904,800
Forest Service Total	**962,400**	**898,100**	**11,391,900**	**13,252,400**
Forest Service - Idaho	728,200	664,100	9,718,800	11,111,100
Beaverhead-Deerlodge National Forest	110	30	980	1,120
Sawtooth National Forest	210,100	212,400	1,612,300	2,034,800
Boise National Forest	21,200	56,900	2,182,800	2,260,900
Caribou-Targhee National Forest	148,300	186,400	2,251,300	2,586,000
Salmon-Challis National Forest	348,700	208,300	3,672,400	4,229,400
Forest Service - Montana	162,300	234,000	1,673,100	2,069,400
Beaverhead-Deerlodge National Forest	162,300	234,000	1,673,100	2,069,400
Forest Service - Utah	71,900	0	0	71,900
Sawtooth National Forest	71,900	0	0	71,900
US Fish and Wildlife Service	39,700	11,700	30,000	81,400
National Park Service	27,200	222,700	261,800	511,700
Department of Energy	378,000	182,500	1,670	562,200
Department of Defense	11,100	37,700	78,500	127,400
Bureau of Reclamation	3,250	3,260	109,800	116,300
Indian Tribe	143,900	10,700	189,000	343,600
Idaho State	642,400	377,500	804,500	1,824,400
Montana State	221,665	167,455	431,995	821,115
Utah State	630	0	0	630
Private	2,127,600	1,857,200	9,652,900	13,637,700
Other	87,800	32,200	294,400	414,400
Total Acres:	**11,921,200**	**5,756,600**	**26,164,500**	**43,842,300**

Source: BLM GIS 2015

into the context of the larger WAFWA management zones. The BER examines each threat identified in USFWS' listing decision published on March 15, 2010. For each threat, the report summarizes the current scientific understanding of various impacts on GRSG populations and habitats. When available, patterns, thresholds, indicators, metrics, and measured responses that quantify the impacts of each specific threat are reported. Data from the BER are presented throughout this chapter to illuminate the location (e.g., PPH and PGH), magnitude, and extent of the threats within each WAFWA management zone that comprises the planning area.

Because the BER focuses on threats to GRSG at the WAFWA management zone (or range-wide) scale, it provides biologically meaningful data for larger-scale analyses, such as the cumulative effects analysis for GRSG in **Chapter 5**.

Chapter 3 also presents data that are available at a finer scale than used in the BER's larger-scale, WAFWA management zone focus. These fine-scale, local data are incorporated into the affected environment discussion to complement the BER's biologically meaningful data, characterize the relative contributions of threats in the planning area versus the WAFWA management zones, and to set the stage for the cumulative effects analysis for GRSG (**Chapter 4**). However, it should be noted that the tables presented in the Regional Context discussions of each Chapter 3 resource and resource use discussion are from the BER (Manier et al. 2013) and extend outside of the planning area to WAFWA management zone boundaries. Those tables present information for the WAFWA management zones that would be affected by the direction provided in this sub-regional EIS.

3.1.1 Organization of Chapter 3

Certain types of resources that may be present in the LUPA planning area, such as cave and karst resources, are not addressed in this LUPA because issues relating to the management of these resources were not identified during scoping by the public, or by the BLM or Forest Service as relevant to GRSG, or they are not included in the planning area (e.g., coal). Information from broad-scale assessments was used to help set the context for the planning area. The information and direction for BLM and Forest Service resources and resource uses has been further broken down into fine-scale assessments and information. The level of information presented in this chapter is commensurate with and sufficient to assess potential effects discussed in **Chapter 4**, based on the alternatives presented in **Chapter 2**.

The following resources and resource uses are specifically addressed in **Chapter 3** and **Chapter 4**, of the Idaho and Southwestern Montana Greater Sage-Grouse LUPA/EIS.

- Greater Sage-Grouse
- Vegetation (including noxious weeds; riparian and wetlands)
- Fish and wildlife
- Other special status species
- Wild horse and burro management

- Wildland fire ecology and management
- Livestock grazing
- Recreation
- Travel management
- Lands and realty
- Minerals
    - Leasable minerals
    - Locatable minerals
    - Salable minerals
    - Nonenergy leasable minerals
- Special Designations
    - Designated Wilderness/Wilderness Study Areas
    - Areas of Critical Environmental Concern
    - Research Natural Areas
    - Other special designations
- Soil resources
- Water resources
- Cultural resources and tribal interests
- Visual resources
- Lands with wilderness characteristics
- Air quality and climate change
- Social and economic conditions (including environmental justice)

Each resource section in this chapter contains a discussion of existing conditions, including trends.

- Existing conditions describe the location, extent, and current condition of the resource in the planning area in general, on BLM-administered and National Forest System lands. Conditions for a resource can vary, depending on the resource. The Idaho and Southwestern Montana Sub-Region planning area contains 18,147,500 acres, regardless of land status. Within the Idaho and Southwestern Montana Sub-Region planning area, there are 15,260,200 acres of BLM-administered lands and 1,861,100 acres of National Forest System lands that are managed according to the BLM and Forest Service plans being amended

by this LUPA/EIS. For each resource, a general description of the existing conditions is provided for the Idaho and Southwestern Montana Sub-Region planning area, regardless of land status. This is done to provide a regional context for the resource. More detailed discussion of the existing conditions on various scales may be provided depending on the resource topic. This is done to provide an area-specific description of the existing conditions for the resource. When possible, greater emphasis is placed on describing the existing conditions of the resource as it pertains to GRSG and their habitat.

- Trends identify the degree and direction of resource change between the present and some point in the past. Not all resource topics will have trends. For example, soil resources may not undergo notable resource change. If there is change, the degree and direction of resource change is characterized as moving toward or away from the current desired conditions, and the reasons for the change are identified. Trends can also be described in quantitative or qualitative terms. Identifying the trends is done to provide an understanding of how BLM and Forest Service management influences the desired condition of the resource over time. It can be difficult to analyze trends for certain resources, because changes to the resource often occur due to factors beyond the control of the BLM and Forest Service. For those resource topics that can be affected by climate change, a discussion of the effects from climate change on the resource is provided.

The BLM and Forest Service reviewed the LUPs being amended under this LUPA/EIS and other relevant information sources (such as other LUPAs, maps, and state GRSG conservation assessments) for existing conditions and trends for the resources listed above with respect to GRSG and their habitat. This affected environment information is summarized below and, where appropriate, noted when the information is incorporated by reference.

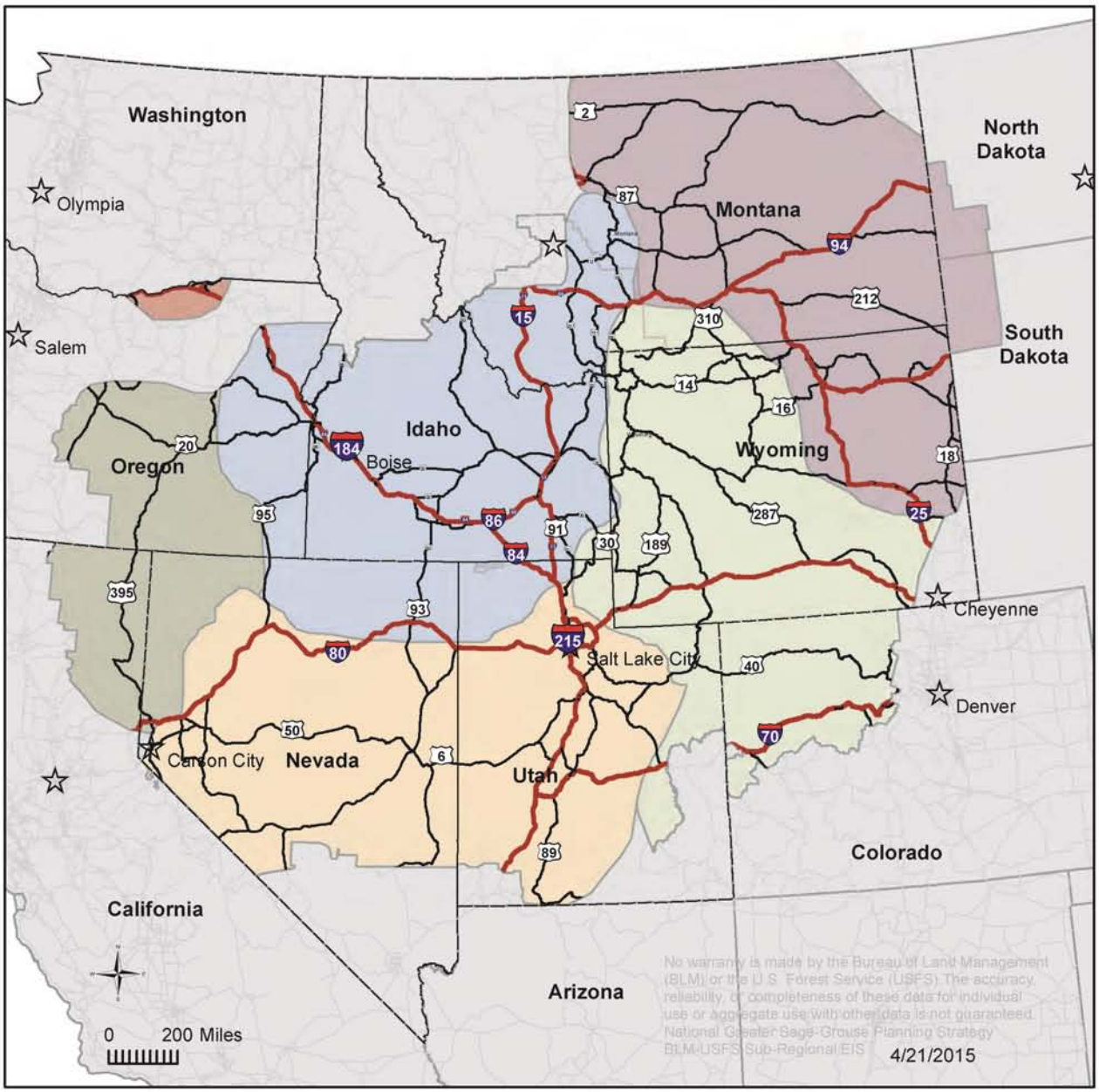
Acreage figures and other numbers used are approximate projections; readers should not infer that they reflect exact measurements or precise calculations. Acreages were calculated using Geographic Information Systems (GIS) technology, and there may be slight variations in total acres between resources.

3.2 Special Status Species – Greater Sage-Grouse

3.2.1 Conditions within the Planning Area

In 2006, the WAFWA used floristic characteristics to organize the diverse sagebrush habitat areas into seven GRSG management zones within the species' distribution (Stiver et al. 2006). The Idaho and Southwestern Montana Sub-Region contains portions of 2 of the 7 zones (MZs II and IV; **Figure 3-1**). The vast majority of the Idaho and Southwestern Montana Sub-Region lies within WAFWA's GRSG MZ IV (Stiver et al. 2006); a small portion of southeastern Idaho occurs within MZ II and is associated with the Wyoming Basin population. Populations of GRSG in MZ IV are projected to decline by 55 percent from 2007 to 2037 and by 66 percent in MZ II if current trends in populations and habitat activities continue (USFWS 2010a; Garton et al. 2011).

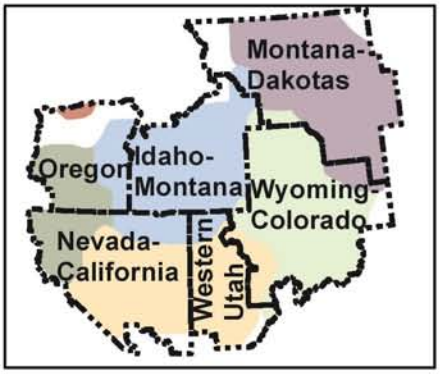
Figure 3-1
Western United States WAFWA Zones



Sub-Regional EIS Boundary

WAFWA Zone

- MZ I
- MZ II and VII
- MZ III
- MZ IV
- MZ V
- MZ VI



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

Within the sub-region, GRSG occupy all or portions of ten populations and eight subpopulations described in Connelly et al. (2004). Two large populations (Great Basin Core and Wyoming Basin) encompass portions of Oregon, Nevada, Utah, and Wyoming that extend beyond the sub-regional boundary.

Population estimates are not available for all GRSG populations due to limited data in some areas; however, Garton et al. (2011) estimated a minimum male GRSG population in 2007 of 9,114 for the Northern Great Basin population (analogous to the Great Basin Core population and inclusive of habitats in Idaho and associated portions of Nevada, Oregon, and Utah), and 5,457 for the Snake-Salmon-Beaverhead population. Estimates for the Bannack and Red Rocks Montana populations were 304 and 448 males, respectively. GRSG in southwestern Montana are migratory, moving between separate summer and winter areas. Migratory movements of GRSG also have been documented between eastern Idaho and southwestern Montana from the Bannack and Red Rock populations. Telemetry data from 1999 to 2012 show that seasonal movements (including both distance and duration) vary significantly between groups of GRSG.

Availability of Sagebrush Habitat (Mid-Scale Indicator)

The distribution of GRSG is closely aligned with the distribution of sagebrush-dominated landscapes (Schroeder et al. 2004). Occupancy by GRSG is strongly associated with measures of sagebrush abundance and distribution. Sagebrush area was the single best discriminator between occupied and extirpated ranges among 22 variables evaluated by Wisdom et al. (2011). In the sub-region, large expanses of sagebrush still occur in portions of southwestern and south-central Idaho, in association with the Northern Great Basin population shared with Nevada, Oregon, and Utah, as well as in portions of the Snake-Salmon-Beaverhead population north of the Snake River.

In 2012, the BLM completed the range-wide delineation of PPH and PGH in cooperation with respective state wildlife agencies (see **Figure 1-4**). The BLM national office Instruction Memorandum 2012-043 defined PPH as GRSG habitat having the highest conservation value to maintaining sustainable GRSG populations. PGH includes areas of occupied seasonal or year-round habitat outside of priority habitat.

At finer scales, PPH and PGH encompass areas of intact sagebrush suitable for GRSG habitat needs as well as areas of conifer encroachment and perennial grass-dominated areas, generally occupied by GRSG or potentially suitable for future restoration.

In Idaho, PPH and PGH were identified by the BLM and Forest Service based on a model incorporating GRSG breeding bird density and lek connectivity models, informed with additional ancillary broad-scale habitat data, seasonal habitat maps, connectivity

information/expert opinion, population persistence model, local priority areas, and agriculture/conifer filters (Makela and Major 2012).

In general, GRSG habitats in Idaho and the portion of the Sawtooth National Forest in northern Utah are composed of a variety of species and subspecies of sagebrush, including mountain big sagebrush, Wyoming big sagebrush, Great Basin big sagebrush, low sagebrush, black sagebrush, three-tip sagebrush, and early sagebrush. Conifer encroachment into GRSG habitats, mainly from Utah juniper and western juniper, occurs primarily in south-central and southwestern Idaho and in northern Utah, although encroachment of Douglas-fir and other conifers also occurs at higher elevations. Large areas of native, introduced, or mixed native/introduced perennial grasslands as well as annual grasslands are also present in portions of the Snake River Plain in southern Idaho as a result of recent wildfires and associated rehabilitative efforts or from other rangeland seeding efforts during the 20th century.

In Montana, PPH was delineated based on MFWP prior modeling of GRSG Core Areas using a lek-centric model based on male lek attendance and refined with seasonal habitat, telemetry, connectivity information, and field review. Documentation for the Montana Core area analysis is summarized at:

http://www.mt.nrcs.usda.gov/technical/ecs/biology/sagegrouse/sagegrouse_strategy_attachments/appendix1.html.

Montana PGH was mapped based on the Schroeder et al. (2004) GRSG distribution map.

Sagebrush steppe habitat across southwest Montana consists of diverse species and multiple successional stages, providing for all life stages. Species or subspecies composition consists primarily of mountain big sagebrush, Wyoming big sagebrush, three-tip sagebrush, basin big sagebrush, and low sagebrush, as well as multiple other species at lower densities. These occur in mixed as well as pure stands throughout southwestern Montana. Tilling and aerial spraying over 12,000 acres in the 1960s and early 1970s (about 1 percent of BLM-administered lands in the Dillon Field Office) reduced sagebrush canopy on large areas of BLM-administered, mostly in the area inhabited by the Bannack Population. These areas were reseeded with nonnative herbaceous species that further altered natural communities. Sagebrush canopy has recovered, but the herbaceous understory composition is a mix of native species and nonnative wheat grasses. Large areas of sagebrush in the Dillon Field Office appear to provide suitable habitat for GRSG but are unoccupied.

To facilitate analysis for the Idaho and Southwestern Montana LUPA/EIS, the GRSG population areas were clipped to the Idaho and Southwestern Montana Sub-regional boundary to eliminate portions occurring outside the sub-region. Boundaries were then adjusted to encompass associated PPH and PGH. Small populations within southwestern Montana were combined into a single analysis area and, in portions of Idaho, some subpopulations were delineated separately or grouped due to similarities in threats or geography. The resulting population areas, used in the analysis below, reflect discrete geographic portions of the sub-region.

Based on GIS analysis, there are approximately 18,114,000 acres of PPH and PGH, inclusive of all landownerships, in the sub-regional analysis area (**Table 3-2**). This is inclusive of habitats in Idaho, southwestern Montana, and a small portion of northern Utah administered by the Sawtooth National Forest. The BLM administers approximately 61 percent of PPH

Table 3-2
Acres of GRSG Habitat by Population Area within the Idaho and Southwestern Montana Planning Area

GRSG Population Area and Landownership	Acres of Habitat		
	PPH Acres	PGH Acres	Total Acres
East-Central Idaho	**141,500**	**475,800**	**617,300**
All other	129,200	381,000	510,200
BLM	12,300	23,500	35,800
Forest Service	0	71,300	71,300
Mountain Valleys	**3,182,500**	**856,900**	**4,039,500**
All other	845,600	315,400	1,161,000
BLM	1,880,500	198,700	2,079,200
Forest Service	456,400	342,900	799,300
Southwest Montana	**1,356,900**	**1,633,900**	**2,990,800**
All other	733,400	995,800	1,729,200
BLM	460,600	268,200	728,800
Forest Service	162,900	369,900	532,800
North Side Snake	**2,494,700**	**1,315,300**	**3,810,000**
All other	788,000	735,500	1,523,500
BLM	1,678,100	493889	2,171,600
Forest Service	28,600	85,900	114,500
Southwest Idaho	**2,294,500**	**550,100**	**2,844,600**
All other	498,400	122,500	620,900
BLM	1,796,100	427,700	2,223,700
Forest Service	0	0	0
South Side Snake	**2,081,000**	**921,400**	**3,002,500**
All other	442,900	285,200	728,800
BLM	1,323,700	466,500	1,790,200
Forest Service	314,400	169,700	484,100
Sawtooth	**0**	**37,600**	**37,600**
All other	0	16,100	16,100
Forest Service	0	21,500	21,500
Bear Lake	**118,700**	**63,900**	**182,600**
All other	73,500	36,000	109,500
BLM	43,500	4,690	48,200
Forest Service	1,620	23,100	24,800
Weiser	**262,200**	**346,200**	**608,400**
All other	184,900	211,200	396,200
BLM	77,200	134,900	212,200
Forest Service	0	0	0
Total Acres	**11,932,000**	**6,201,300**	**18,133,300**

Table 3-2
Acres of GRSG Habitat by Population Area within the Idaho and Southwestern Montana Planning Area

Acres of Habitat by Ownership Totals	Habitat		
	Priority	General	Total Acres of Habitat
All other	**3,671,100**	**3,288,300**	**6,959,400**
BLM	**7,266,500**	**1,993,600**	**9,260,100**
Forest Service	**994,400**	**904,500**	**1,898,900**
Total Acres of Habitat	**11,931,900**	**6,186,400**	**18,118,300**

Source: BLM GIS 2015

and 32 percent of PGH within the decision area. The Forest Service administers approximately 8 percent of PPH and 15 percent of PGH.

In addition, the USFWS has identified PACs in their 2013 COT report (USFWS 2013). The overlap between the USFWS PACs and the GRSG Population Areas presented in **Table 3-2** is shown in **Table 3-3**.

Table 3-3
Acres of GRSG Population Areas within PACs

GRSG Population Area	Within PAC (acres)[1]	Outside PAC (acres)[1]
East-Central Idaho	**0**	**115,600**
BLM	0	35,800
Forest Service	0	79,700
Mountain Valleys	**2347,800**	**696,100**
BLM	1,914,900	251,900
Forest Service	432,900	444,200
Southwest Montana	**623,500**	**638,300**
BLM	460,600	268,200
Forest Service	162,900	370,100
North Side Snake	**1,297,500**	**1,391,900**
BLM	1,269,500	89,100
Forest Service	28,000	89,100
Southwest Idaho	**1,870,900**	**717,100**
BLM	1.870.900	717100
Forest Service	0	0
South Side Snake	**1,491,800**	**881,800**
BLM	1,195,700	658,800
Forest Service	296,700	223,000
Sawtooth	**0**	**21,500**
BLM	0	0
Forest Service	0	21,500
Bear Lake	**42,900**	**33,100**
BLM	41,600	9,700

Table 3-3
Acres of GRSG Population Areas within PACs

GRSG Population Area	Within PAC (acres)[1]	Outside PAC (acres)[1]
Forest Service	1,300	23,400
Weiser	**0**	**287,500**
BLM	0	287,300
Forest Service	0	100
Outside Population Area	**0**	**13,254,600**
BLM	0	2,164,100
Forest Service	0	11,090,500
Total	**7,674,400**	**18,037,400**
BLM	6,753,200	5,695,800
Forest Service	921,200	12,341,600

Source: BLM GIS 2015
[1]Totals may not add up exactly due to rounding.

Predation

The GRSG is potential prey to a variety of predator species, such as the golden eagle (*Aquila chrysaetos*), ferruginous hawk (*Buteo regalis*), common raven (*Corvus corax*), American badger (*Taxidea taxus*), coyote (*Canis latrans*), red fox (*Vulpes vulpes*), weasels (*Mustela* spp.), and others (Schroeder et al. 1999; Coates 2007), but none of these species prey especially upon GRSG (Hagen 2011). Adults are susceptible to predation while on leks or nests, and eggs are vulnerable as well (Schroeder et al. 1999; Coates 2007; Hagen 2011). Predation is the most commonly identified cause of direct mortality for GRSG during all life stages (Connelly et al. 2011; USFWS 2010a citing others), but studies suggest that predation is not limiting populations (Hagen 2011). As a result, there is little scientific support for predator management over broad geographic or temporal scales (Hagen 2011).

Information on the numbers of GRSG taken by specific predators is not readily available; however, some studies report overall predation rates on age-classes, sex, and nests. Connelly et al. (2000), in a review of long-term data, reported 83 percent of male GRSG deaths and 52 percent of female deaths were attributed to predation. Gregg et al. (2007), cited in USFWS (2010a), reported mortality of GRSG chicks from predation during the first few weeks after hatching was 82 percent. Coates and Delehanty (2010) monitored 87 GRSG nests, and 42.5 percent were preyed upon. Of these nests, an increase of 1 raven per 10 km (3.86 mi) of survey transect monitored was associated with a 7.5 percent increase in the odds of nest failure. Coates (2007) documented predation at 17 GRSG nests; ravens accounted for 10 nests (59 percent) and badgers 7 nests (41 percent).

In areas where habitat is not limited and of good quality, predation is not a threat to the persistence of the species (USFWS 2010a). However, predation may limit population growth in fragmented habitats or areas where predator populations have supplemental food sources, such as where landfills or other human factors attract and concentrate scavengers (Coates 2007), or where electrical transmission or other human-made structures facilitate nesting and perching by avian predators such as ravens (Howe 2012; Hagen 2011).

As land-management agencies, the primary role of the BLM and Forest Service is the management of habitats, land uses, and associated authorizations. Therefore, the reduction of predator effects on GRSG in this conservation strategy is best accomplished through the appropriate management, improvement, or restoration of sagebrush habitats and the siting and design of human-made structures in a way that eliminates or reduces risk from predators that may utilize them to their advantage. Direct predator control would occur under the purview of the states of Idaho and Montana and the USDA APHIS Wildlife Services, in cooperation with the USFWS.

3.2.2 Habitat Conditions and Trends

The general condition and trend of habitats on BLM-administered and National Forest System lands varies by geographic area within the sub-region and is a result of various threats that are currently occurring or that have occurred historically.

In Idaho, threats to GRSG were ranked by an independent science panel and addressed in the *Conservation Plan for the Greater Sage-grouse in Idaho* (Idaho Sage-grouse Advisory Committee 2006). Highest ranking threats, in order of relative score, included wildfire, infrastructure, annual grasslands, livestock impacts, human disturbance, and West Nile virus.

West Nile virus has been a major cause of death for GRSG. It was a major new source of death in low and mid-elevation GRSG populations range-wide from 2003 to 2007 (Walker and Naugle 2011). The highest confirmed elevation at which GRSG have been infected with West Nile virus is approximately 7,500 feet (2,300 meters) in the Lyon-Mono population of eastern California (Naugle et al. 2005). Individual GRSG in populations exposed to the virus from July to August 2003 were 3.3 times more likely to die than birds in uninfected populations (Naugle et al. 2004). West Nile virus deaths of GRSG has ranged from 5 to 44 percent, mostly in July and August (Walker and Naugle 2011; Kaczor 2008). West Nile virus has been documented in GRSG in Idaho; in 2006, the GRSG hunting season was closed in western Owyhee County due to concerns of West Nile virus (Idaho Sage-grouse Advisory Committee 2008).

Additional habitat-associated threats of concern in portions of southern Idaho included conifer encroachment, seeded perennial grasslands, sagebrush control, urban and exurban development, and mines, landfills and gravel pits. In 2012, the Idaho Governor's Sage-Grouse Task force reiterated concerns about wildfire, invasive species and infrastructure, as well as recreation, improper livestock grazing and West Nile virus (Idaho Governor's Sage-grouse Task Force 2012). Landscape conditions and trend of BLM-administered and National Forest System lands in the sub-region are summarized in **Table 3-4**.

3.2.3 Regional Context

As stated above, most of the Idaho and Southwestern Montana planning area is within Management Zone IV; a small portion in the southeast is within MZ II.

Table 3-4
Habitat Conditions, Trends and Primary Threats to GRSG Habitat in the Idaho and Southwestern Montana Planning Area

Population Area	Existing Condition Based on Modeled Vegetation[a]	Landscape Conditions and Trends on BLM-Administered Lands	Landscape Conditions and Trends on National Forest System Lands	Primary Threats[a]
East-Central Idaho	96% of habitat overall is 10 to 30% sagebrush cover. Habitat proportion in the 10 to 30% cover range by species or subspecies is a follows: Low Sagebrush 0% Mountain Big Sagebrush 97% Wyoming Big Sagebrush 92%	The BLM administers a small portion of the lands, which are isolated/patchy areas of sagebrush associated with mountain sides or valleys.	Primarily dominated by Wyoming sagebrush with mountain sagebrush in some of the higher elevations; bulbous bluegrass and crested wheatgrass present in understory at many of the lower elevation sites; many of the higher elevation sites have more native understory. Disturbance to the sagebrush canopy varies by site, with some sites having mature sagebrush and others having been burned in the last 10 years. In these burned areas, there is little sagebrush cover present.	Conversion of Conservation Reserve Program lands on private lands Human disturbance Infrastructure Isolated populations Lack of (or limited) information and data on GRSG Urban expansion and development.
Mountain Valleys (Idaho)	Northern valleys portion (e.g., Big Lost/, Little Lost/Pahsimeroi, Birch/Lemhi): 99% of habitat overall is 10 to 30% sagebrush cover, of mixed species or subspecies. Sand Creek portion:	Sagebrush habitats at both lower and higher elevations are generally intact and at lower risk of invasive species and wildfire. In the northern portion (e.g., Challis, Salmon Field Offices), understories of Wyoming big sagebrush	Higher elevation lands are typically more resilient, and generally intact. Sagebrush habitats are generally composed of mountain big sagebrush and low sagebrush. Understories are generally intact and	Infrastructure development, mainly transmission, poses as risk. Habitats in the Challis/Salmon portion also tend to be more linear in configuration due to the orientation of associated mountain ranges and valleys. Impacts from

Table 3-4
Habitat Conditions, Trends and Primary Threats to GRSG Habitat in the Idaho and Southwestern Montana Planning Area

Population Area	Existing Condition Based on Modeled Vegetation[a]	Landscape Conditions and Trends on BLM-Administered Lands	Landscape Conditions and Trends on National Forest System Lands	Primary Threats[a]
	93% of habitat overall is 10 to 30% sagebrush cover, of mixed species or subspecies.	habitats have shifted in some areas to predominance by Sandberg's bluegrass in past decades. Population growth is static in the absence of restoration seeding efforts. Higher elevation areas are generally intact, though these areas may be at risk of encroachment by Douglas-fir. In the eastern portion (Upper Snake area), mountain big sagebrush may be exceeding desired densities in some areas, although there is also concern to retain sagebrush due to losses elsewhere. In the western portion (Weiser area), there is a relatively isolated GRSG population facing threats from rapid exurban expansion, interest in gas and geothermal development, and wildfire.	include native grasses and forbs. These areas are resilient following to disturbance and resistant to annual grass invasion. Fire is less frequent than southern Idaho and is not a significant threat at this time.	infrastructure development, roads, and other surface disturbing activities could be more concentrated as a result.

Table 3-4
Habitat Conditions, Trends and Primary Threats to GRSG Habitat in the Idaho and Southwestern Montana Planning Area

Population Area	Existing Condition Based on Modeled Vegetation[a]	Landscape Conditions and Trends on BLM-Administered Lands	Landscape Conditions and Trends on National Forest System Lands	Primary Threats[a]
SW Montana (BLM Dillon Field Office and Beaverhead National Forest)	98% of habitat overall is 10 to 30% sagebrush cover of mixed species or subspecies.	High and low elevation sagebrush habitats are largely intact and at low risk of wildfire and invasive species. Diverse habitat conditions are present and are widely interspersed across various ownerships. In the southwest portion of the field office, Wyoming big and mountain big sagebrush habitats were tilled, sprayed, and or seeded with nonnative wheat grasses in the 1960s and 1970s. Sagebrush canopy has recovered but the herbaceous understory composition is a mix of native species and nonnative wheat grasses. There has been little disturbance in sagebrush canopy cover in the last 40 years within the field office. Some loss of high elevation mountain big sagebrush habitat due to Douglas-fir	High and low elevation sagebrush habitats are largely intact and at low risk of wildfire and invasive species. Some habitat conversion has occurred on National Forest System lands but on a smaller scale. Likewise sagebrush canopy cover has recovered but the herbaceous understory composition is a mix of native species and nonnative wheat grasses. There has been little disturbance in sagebrush canopy cover in the last 40 years. Some loss of high elevation mountain big sagebrush habitat due to Douglas-Fir colonization occurring across all federal ownerships in southwestern Montana. Reduction in livestock over the last 10 to 15 years has also improved habitat	Wildfire (Acres lost to wildfire in the past 50 years has been minimal, but the threat is ever present.) Invasive plant species such as spotted knapweed, leafy spurge, hounds tongue, and some cheatgrass present a risk primarily along travel corridors. Conifer colonization in to sagebrush steppe habitat (primarily Douglas-fir) is a threat. Infrastructure/human disturbances (fences, roads, power lines, pipelines) as well as improper grazing, habitat conversion for agricultural needs on private lands, and energy/mineral exploration and development also pose a threat to habitat.

Table 3-4
Habitat Conditions, Trends and Primary Threats to GRSG Habitat in the Idaho and Southwestern Montana Planning Area

Population Area	Existing Condition Based on Modeled Vegetation[a]	Landscape Conditions and Trends on BLM-Administered Lands	Landscape Conditions and Trends on National Forest System Lands	Primary Threats[a]
		colonization. Prescribed fire treatments in the past ten years have targeted Douglas-fir colonization to restore high elevation mountain big sagebrush habitats and create a mosaic of seral conditions. Overall riparian and upland habitat conditions are improving due to changes in livestock management in the past ten years.	conditions.	
North Side Snake	74% of habitat overall is 10-30% sagebrush cover. Habitat proportion in the 10-30% cover range by species or subspecies is a follows: Low Sagebrush 100% Mountain Big Sagebrush 86% Wyoming Big Sagebrush	Substantial portions of the Big Desert and Minidoka Desert areas have burned in the past two decades due to large scale, fast-moving wildfires. Some large areas of sagebrush still exist in the western and northern portions but are at risk of wildfire. Most Wyoming big sagebrush habitats are at	N/A. Minimal National Forest System lands involved.	Wildfire poses a significant risk to all habitats in the area. Cheatgrass in lower elevation habitats is at risk of advancing or proliferating following wildfire. Infrastructure development, mainly from proposed transmission lines poses a

Table 3-4
Habitat Conditions, Trends and Primary Threats to GRSG Habitat in the Idaho and Southwestern Montana Planning Area

Population Area	Existing Condition Based on Modeled Vegetation[a]	Landscape Conditions and Trends on BLM-Administered Lands	Landscape Conditions and Trends on National Forest System Lands	Primary Threats[a]
	59%	risk of cheatgrass expansion. The trend is for continued rapid loss of large acreages of sagebrush and recent restoration efforts due to continuing wildfires.		risk, generally near the fringe of PPH and PGH. There is some potential for geothermal development in portions of the Shoshone Field Office.
Southwest Idaho	56% of habitat overall is 10-30% sagebrush cover. Habitat proportion in the 10-30% cover range by species or subspecies is a follows: Low Sagebrush 84% Mountain Big Sagebrush 64% Wyoming Big Sagebrush 44%	Large, intact areas of native sagebrush are present, and contiguous with Nevada and Oregon Relatively low level of infrastructure development constitutes the largest remaining intact sagebrush area in the sub-region. Trend is that wildfires continue to impact sagebrush acreage but at a smaller scale and frequency than other areas. Juniper control efforts by BLM and others likely are not keeping pace with expansion.	N/A	Wildfire Juniper encroachment in the western portion Invasive species (cheatgrass, mainly) Infrastructure associated with proposed new transmission lines. Potential for wind energy development in higher elevations such as the Owyhee Mountains. Potential for geothermal energy development in the Bruneau Field Office.

Table 3-4
Habitat Conditions, Trends and Primary Threats to GRSG Habitat in the Idaho and Southwestern Montana Planning Area

Population Area	Existing Condition Based on Modeled Vegetation[a]	Landscape Conditions and Trends on BLM-Administered Lands	Landscape Conditions and Trends on National Forest System Lands	Primary Threats[a]
South Side Snake (Includes the Sawtooth National Forest portion in Utah)	55% habitat overall is 10 to 30% sagebrush cover. Habitat proportion in the 10 to 30% cover range by species/subspecies is a follows: Low Sagebrush 64% Mountain Big Sagebrush 55% Wyoming Big Sagebrush 55%	Lower elevation, drier Wyoming big sagebrush habitats are fragmented heavily in many areas due to frequent large wildfires. Cheatgrass poses a risk in the lowest elevations. Higher elevation, mountain big sagebrush sites are generally in good condition. Portions contain large perennial grasslands pending recovery of sagebrush. Trend is toward continuing, rapid loss of sagebrush at relatively large scales in the western portion due to wildfire. Conifer encroachment (primarily Utah juniper) into sagebrush communities is of concern in the southern portion.	Habitats are higher elevation mountain big sagebrush, in relatively good condition; however, they are smaller, fragmented fringes of sagebrush with steeper slopes interspersed between other habitat types. High to moderate risk of near term infrastructure development due to interest in wind energy. Trend in habitat condition (sagebrush) is relatively stable due to lower frequency and smaller scales of wildfires. Conifer encroachment (Utah juniper, mainly) in portions of southern Idaho and northern Utah.	Wildfire poses a substantial threat. Significant acreages within the Jarbidge Field Office, in particular, have burned in the past two decades. High interest in wind development on higher elevation BLM-administered and National Forest System lands (e.g., Cotterel, South Hills, S. Twin Falls County, and Pocatello/American Falls). Urban expansion; potential for oil/gas development in the Bear Lake Plateau. Conifer encroachment, mainly Utah juniper, in the Burley Field Office and Utah portion of Sawtooth National Forest. Cheatgrass expansion in lower elevations (i.e., Wyoming big sagebrush).

Table 3-4
Habitat Conditions, Trends and Primary Threats to GRSG Habitat in the Idaho and Southwestern Montana Planning Area

Population Area	Existing Condition Based on Modeled Vegetation[a]	Landscape Conditions and Trends on BLM-Administered Lands	Landscape Conditions and Trends on National Forest System Lands	Primary Threats[a]
Sawtooth	98% of habitat overall is 10 to 30% sagebrush cover of mixed species or subspecies.	N/A	Habitat is primarily higher elevation mountain big sagebrush, generally relatively good condition in the Sawtooth Valley/headwaters of the Salmon River. Includes smaller areas of noxious weeds and/or low diversity of native forbs diversity. Long term trend in areas is downward due to encroachment by Douglas-fir and lodgepole pine. Sawtooth National Forest personnel occasionally observe GRSG. Last documented observation in fall 2010.	Little recent information available on the population, which is apparently isolated from other populations. Last documentation of lek attendance was of 2 male GRSG in 1993 at 1 of the 3 known leks. Conifer encroachment (Douglas-fir, lodgepole pine). Potential concerns with domestic sheep grazing and native forb diversity. Noxious and invasive weeds.
Bear Lake (Idaho portion)	99% of habitat overall is 10 to 30% sagebrush cover, of mixed species or subspecies.	Relatively small area of southeastern Idaho; Sagebrush is largely intact in many areas. Patchy landownership.	The Forest Service administers a limited amount of sagebrush habitat in the Idaho portion of the Bear Lake population area, totaling about 1,391 acres. The majority (1,037 acres) is over 30% canopy cover; the remainder is 10	Some potential for oil/gas development; urban expansion, infrastructure

Table 3-4
Habitat Conditions, Trends and Primary Threats to GRSG Habitat in the Idaho and Southwestern Montana Planning Area

Population Area	Existing Condition Based on Modeled Vegetation[a]	Landscape Conditions and Trends on BLM-Administered Lands	Landscape Conditions and Trends on National Forest System Lands	Primary Threats[a]
			to 30%. Wyoming sagebrush transitions to mountain big sagebrush at higher elevations. Sagebrush communities are largely intact with little to moderate amounts of cheatgrass in understory.	
Weiser	72% of habitat overall is 10 to 30% sagebrush cover. Habitat proportion in the 10 to 30% cover range by species or subspecies is a follows: Low Sagebrush 78% Mountain Big Sagebrush 71% Wyoming Big Sagebrush 71%	Sagebrush is largely intact in portions. There are some annual and perennial grasslands in the periphery due to wildfires. Landownership is patchy.	N/A	Exurban development, infrastructure, wildfire; invasive annual grasses
Butte Field Office This area of BLM-administered land is within the sub-regional boundary	Not modeled	Historically, the species was present but breeding has not been documented since 1992. Habitat (sagebrush	Timber harvest has occurred throughout this area, particularly on the north end. There are high	Habitat fragmentation from urban development and roads.

Table 3-4
Habitat Conditions, Trends and Primary Threats to GRSG Habitat in the Idaho and Southwestern Montana Planning Area

Population Area	Existing Condition Based on Modeled Vegetation[a]	Landscape Conditions and Trends on BLM-Administered Lands	Landscape Conditions and Trends on National Forest System Lands	Primary Threats[a]
but Land Use Plans are not being amended.		stands) is widely dispersed and separated, lacking the expansiveness or landscape extent needed for GRSG. The Big Belts are an isolated mountain range on the east side of the Missouri River adjacent to Canyon Ferry reservoir. Foothills are drier with scattered Rocky Mountain juniper and limber pine and a variety of shrubs on some sites. At the lowest elevations the habitat is dominated by grasslands and scattered big sagebrush. Many of these habitats have been converted to dry land grain production and irrigated cropland	road densities in some locations. Fire suppression has led to an increase in forest density and high insect populations as well as colonization of shrublands by juniper and Douglas-fir. The area is dominated by livestock grazing. Many private ranches have sold and subdivided their land.	Wildfire Douglas-fir and juniper colonization of sagebrush stands. Invasive species (mainly Dalmatian toadflax, spotted knapweed, and leafy spurge) Livestock grazing Fences Potential oil and gas development from Birch Creek to Deep Creek, in the Mount Baldy area and the Horseshoe Hills.

Source: BLM 2013j
[a]See **Appendix X**

Management Zone IV (Snake River Plain Management Zone)

Management Zone IV covers nearly all of Idaho's GRSG habitat, with the majority of occupied habitat within the Northern Great Basin (South Side Snake) and Snake River Plain population areas (Mountain Valleys, North Side Snake, and Southwest Idaho), as well as southwestern Montana, on both BLM-administered and National Forest System lands. MZ IV also includes eastern Oregon and northern Nevada, and the Box Elder population in Utah, outside the planning area. This area supports the largest population of GRSG outside of the Wyoming Basin and has high connectivity between populations, though small populations such as Weiser and East-Central Idaho are at risk of fragmentation (USFWS 2013). This MZ population is moderately vulnerable, with a 10.5 percent chance of falling below 200 males by 2037 (Garton et al. 2011). The area has a long history of agricultural land use, which has left the residual sagebrush ecosystem drier than the historical condition (Manier et al. 2013). Across this MZ, 63 percent of land is federally managed. Primary threats include wildfire, infrastructure development, and invasive weeds (USFWS 2013). Fire risk is high across 81 percent of the region, and cheatgrass high risk areas are widespread (Manier et al. 2013). Though oil and gas development potential is low, geothermal energy potential is high along with development of utility infrastructure in designated corridors, such as Gateway West (Manier et al. 2013).

Management Zone II (Wyoming Basin Management Zone)

Management Zone II in Idaho is located in the southeastern part of the state. It covers the portion of the Wyoming Basin (Bear Lake) population area within Idaho. The Wyoming Basin population area stretches into Colorado and Utah and has the highest abundance of GRSG relative to other management zones across GRSG range (more than 20,000 males), one of the largest areas of habitat, and the most highly connected GRSG lek network (USFWS 2013). Although long-term trends are slightly downward, populations in the Wyoming Basin are considered stable, with a 0.3 percent chance of declining below 200 males by 2037 (Garton et al. 2011). The northern portion of this MZ, including the Idaho portion, has high connectivity between habitats across the Wyoming Basin (Knick and Hanser 2011). Federal land comprises 54 percent of sagebrush habitat. The major threat to GRSG in this MZ is energy development, primarily oil and gas, in Wyoming (USFWS 2013). Impacts from infrastructure development, fire, cheatgrass spread, and improper grazing also pose threats in this region (Manier et al. 2013).

Population Metrics

GRSG population estimates for the sub-region or individual population areas are not currently available; however, the Idaho Department of Fish and Game, Montana Department of Fish, Wildlife, and Parks, and Utah Division of Wildlife Resources compile monitoring data annually for hundreds of leks in the sub-region. Not all leks or geographic areas are monitored or surveyed annually or with the same intensity, due to logistical, financial, meteorological, or staffing constraints; however, the leks that are surveyed do provide useful information that can help provide additional context for the description of the affected environment. **Table 3-5** shows the total number of occupied leks and proportion by population area.

Table 3-5
Occupied[a] Leks by GRSG Population Area in the Idaho and Southwestern Montana Sub-Region

Population Area	Number of Occupied Leks[b]	Proportion of Occupied Leks in the Sub-region
East-Central Idaho	15	1.31%
Mountain Valleys	278	24.28%
Southwest Montana	82	7.16%
North Side Snake	344	30.04%
Southwest Idaho	169	14.76%
South Side Snake (Includes the Sawtooth National Forest in Utah)	229	20.0%
Sawtooth	0	0%
Bear Lake	15	1.31%
Weiser	13	1.14%
TOTAL	1,145	100%

[a]Definitions for lek attributes vary by state wildlife agency protocols. For analysis, an "occupied" lek is defined using the respective Idaho, Montana, and Utah definitions to retain the integrity of the state wildlife agency data to the extent possible. In all cases, data shown are inclusive of all landownerships.

Idaho (IDFG): "Occupied" is defined as a lek that has been active during at least one of the past five years. An active lek is one attended by more than one male GRSG during the breeding season (for a particular year). For this analysis, occupied leks encompass the timeframe 2010 to 2014.

Montana (MFWP): "Confirmed Active" is a lek that has been attended during the past 10 years. An active lek is one where there have been two or more males on the site, followed by evidence of lek occupation within 10 years of that observation. For consistency, the term "occupied" is used in this analysis as a synonym for the term "confirmed active." Data shown encompass the time frame 2005 to 2014.

Utah: "Occupied" is defined as a lek that has been active at least once within the last 10 years. An active lek is one that has been attended by two or more males during the annual strutting season. For this analysis, occupied leks encompass the time frame of 2004 to 2013.

[b]Source: Latest IDFG (2014), MFWP (2014) and UDWR (2013) lek datasets

In comparing lek occupancy information between population areas, it is important to recognize that population areas vary greatly in size, with some, such as the Southwest Idaho, South Snake, and North Snake leks, being quite large, while others, such as the Sawtooth, and Bear Lake areas, are considerably smaller. Large areas may inherently harbor a larger number of leks by virtue of their scale, and smaller areas may have fewer leks.

Within the sub-region's population areas, there are 1,145 occupied GRSG leks, inclusive of all landownerships. Of the nine population areas in the sub-region, the North Side Snake, South Side Snake and Mountain Valleys population areas encompass the largest number of occupied leks, collectively harboring approximately 74 percent of the occupied leks in the subregion.

3.3 Vegetation

The composition and distribution of plant communities in the planning area are influenced by many factors, including climate, elevation, topography, soils, drought, insects, fire,

cultivation, invasive plants, and livestock grazing. As a result, a wide variety of plant communities occur, many of which play a role in providing seasonal or year-round habitat for GRSG. The major plant communities providing GRSG habitat are further detailed below. These plant communities vary greatly in their relative ecological health as a result of stressors that influence the distribution and abundance of the plant components within the general community. GRSG are a sagebrush obligate species and rely on a variety of sagebrush dominated communities to meet various needs throughout their lifecycle (Miller et al. 2011). In winter, GRSG feed almost exclusively on sagebrush leaves (Patterson 1952; Wallestad et al. 1975). A healthy vegetative understory complete with perennial grasses and a variety of forbs provide important components of nesting and brood rearing habitat (Barnett and Crawford 1994; Gregg et al. 1994). These vegetative communities also support a wide variety of insects which provide additional food sources for rearing habitat. Some plant communities play a role in seasonal habitat such as riparian areas, or in the case of annual grasses, or conifer stands, may influence the quality and abundance of habitat over time.

3.3.1 Conditions within the Planning Area

Northern Sagebrush-Steppe

Two major sagebrush communities that provide GRSG habitat occur within the planning area: the Snake River Plain and Wyoming Basin. The Snake River Plain sagebrush community makes up the vast majority of the habitat with a small portion of the Wyoming Basin community on the eastern side of the planning area. These communities are considered part of the northern sagebrush-steppe where sagebrush typically co-dominates with perennial bunchgrasses (Miller et al. 2011). Human alterations, uses, and impacts coupled with natural stressors (e.g., drought and fire) have changed the extent, condition, and distribution of sagebrush-steppe and the ecosystem services these communities provide (Meinke et al. 2009); current GRSG range is estimated to be 56 percent of distribution prior to Euro-American contact (Schroeder et al. 2004). Three of the fundamental characteristics of the sagebrush community that have been altered from prior to European contact conditions include: (1) the total area of sagebrush shrublands has been reduced; (2) the composition and structure of sagebrush communities has been changed, with increased abundance and vigor of invasive species and decreased abundance and vigor of native species; and (3) fragmentation created by roads, power-lines, fences, energy developments, urbanization, and other anthropogenic features (Connelly et al. 2004). Much of the sagebrush-steppe occurring on private lands with deeper soils has been converted to agricultural croplands (Connelly et al. 2004). Intense, historic land use in the late 19th and early 20th centuries reduced the dominance of native grasses, trampled microbiotic crusts, and encouraged expansion of Eurasian grasses (Anderson and Inouye 2001; Ponzetti et al. 2007; Root and McCune 2012). These changes are most intense at low elevations near valley floors and may have disproportionate effects on GRSG populations reliant on these habitats during critical portions of the year (Leu and Hanser 2011).

Some portions of the planning area contain relatively intact sagebrush-steppe communities. Plant communities such as these are in good to excellent ecological condition and maintain adequate forb and perennial grass in the understory to supply habitat requirements for GRSG.

Data available for analysis in this effort are limited to general overstory vegetation classes of tall shrub (e.g., basin big sagebrush, Wyoming big sagebrush, and mountain big sagebrush) and low shrub (e.g., black sagebrush and low sagebrush). This information can be further stratified based upon landscape characteristics to approximate the relative proportion of the various types of sagebrush plant communities. Data are not widely available concerning the relative ecological health of the plant communities within the project area.

Riparian and Wetlands

Riparian vegetation includes plants that require higher amounts of available water supply then those found in adjacent upland areas and are generally associated with water courses and wet meadow areas. Riparian areas, wetlands, and wet meadows provide valuable GRSG late summer brood rearing habitat because these areas provide succulent forbs and insects later in the summer when most forbs in upland habitats have dried out and are senescent. These communities make up a small percentage of the vegetation in relation to other types but are quite important in providing the seasonal habitat mentioned.

Forest and Woodland

The conversion of sagebrush-steppe communities into conifer woodlands is a factor contributing to GRSG habitat decline in portions of the planning area. Trees increase raptor perch and nest sites, potentially making GRSG more vulnerable to predation. Conifer expansion is generally attributed to fire suppression reducing fire frequency and allowing conifers to expand into riparian areas, shrublands, and grasslands. This conversion is mostly an issue in the mountain big sagebrush types where reduced fire frequency has allowed the invasion of juniper (Utah, Rocky Mountain, or Western) and in some areas Douglas-fir and pine may be expanding into shrub habitats.

Noxious Weeds and Invasive Species

Noxious weeds and invasive species include plants listed as "noxious" by state laws and also those plants known to be altering the dynamics of native plant communities by replacing native plants through competition or altering some ecological process to the detriment of the native plant community such as in the case of annual bromes increasing fire frequency.

Specific noxious weeds causing localized impacts within the planning area include rush skeletonweed, leafy spurge, diffuse knapweed, and spotted knapweed. Although not yet well established in the planning area, yellow starthistle is known to have a similar range as cheatgrass, and many of the areas currently supporting annual grass communities could support this noxious weed. Other weeds listed as noxious occur within the planning area but are not as widespread or detrimental as those listed.

Invasion by exotic annual grass species has resulted in dramatic increases in number and frequency of fires with widespread, detrimental effects on habitat conditions (Young and Evans 1978; West and Young 2000; West and Yorks 2002; Connelly et al. 2004). Increased fire frequency typically results in removal of the sagebrush canopy in affected areas with replacement by annual species that provide little to no habitat value (Knapp 1996; Epanchin-Niell et al. 2009; Rowland et al. 2010; Baker 2011; Condon et al. 2011). Invasive annuals include numerous species of annual bromes, most notably cheatgrass (*Bromus tectorum*) as well

as medusahead rye (*Taeniatherum caput-medusae*). An annual species that may be a threat in higher elevation communities providing GRSG habitat is ventenata (*Ventenata dubia*). Wyoming sagebrush plant communities are particularly susceptible to conversion to annual grasslands after fire when the understory contains higher densities of annual grass.

Once converted to exotic annual grasses, these plant communities have crossed a threshold that precludes their returning to traditional plant community composition through normal plant succession processes. These areas are essentially lost in their ability to provide GRSG habitat unless significant investment in restoration inputs are undertaken. Even then, these projects may fail if conditions do not exist for successful establishment of desired species. The potential for cheatgrass occurrence has been modeled, which can help discern locations and habitats that have the greatest risk of cheatgrass dominance after disturbance events such as fire.

Modified Grasslands

Some portions of the planning area formerly composed of sagebrush plant communities currently support introduced perennial bunchgrasses or in some cases a mixture of introduced and native bunch grasses. These communities can include common native forbs and over time may develop a sagebrush overstory. Introduced bunchgrasses that may inhabit these areas include a numerous crested wheatgrass varieties (e.g., Fairway, Ephraim, Douglas, Nordan, and Hycrest) as well as Siberian wheatgrass and, in the case of higher precipitation zones, pubescent or intermediate wheatgrass. In some cases, nonnative grasses were seeded to increase livestock forage, but were also be better adapted in competing with and suppressing invasive annual grasses. These plant communities also provide habitat for GRSG once the overstory of sagebrush is re-established.

Permanent Conversion

Within the planning area, portions have been permanently converted to uses that preclude them from providing GRSG habitat. This includes conversion to agricultural lands as well as development or urbanization. In much of the Snake River Plain, these lands were at one time supporting sagebrush plant communities.

3.3.2 Conditions on BLM-Administered Lands

The habitat most important to BLM-administered lands in this planning effort is the overstory vegetation component. As described above, GRSG are a sagebrush obligate species, so an overstory component of sagebrush is a good indicator of potential habitat. Perennial grasslands are also an important component to track as they are still capable of providing habitat if the overstory of sagebrush is returned. Tracking the relative expansion or reduction in annual grass dominated lands is also a potential indicator of our success in protecting GRSG habitat. These broad-scale vegetation types are currently being tracked through various efforts.

Table 3-6 details the acreages in each cover type for BLM-administered and National Forest System lands in the planning area. In addition, **Table 3-6** through **Table 3-13** show the acres of vegetation communities by GRSG analysis area; these numbers were used to support vegetation modeling (**Section 4.2** and **Appendix X**).

Table 3-6
Acres of Vegetation Communities within PPH and PGH on BLM-Administered and National Forest System Lands within the Planning Area

Vegetation Type	PGH (Forest Service)	PGH (BLM)	PGH (Total)	PPH (Forest Service)	PPH (BLM)	PPH (Total)
Sagebrush	441,600	952,500	1,394,100	658,300	5,561,700	6,220,000
Low sagebrush	6,690	55,200	61,900	15,500	751,700	767,200
Mixed sagebrush	301,900	291,200	593,100	455,400	1,871,100	2,326,400
Tall sagebrush	133,000	606,200	739,100	187,400	2,939,000	3,126,400
Perennial grass	17,400	420,600	438,000	22,100	855,900	878,100
Annual grass	190	21,100	21,300	310	51,400	51,700
Conifer encroachment	15,100	117,800	133,000	41,200	178,700	219,900
Crested wheatgrass	2,580	63,300	65,900	2,590	65,200	67,800

Source: BLM GIS 2015

Table 3-7
Acres of Low Sagebrush within PPH and PGH on BLM-Administered and National Forest System lands within the Planning Area by GRSG Analysis Area

GRSG Analysis Area	PGH	PPH
East-Central Idaho	**30**	**10**
BLM	30	10
Forest Service	0	0
North Side Snake	**3,760**	**66,000**
BLM	740	65,700
Forest Service	3,020	270
Southwest Idaho	**33,600**	**354,200**
BLM	33,600	354,200
Forest Service	0	0
South Side Snake	**1,920**	**45,100**
BLM	1,590	43,400
Forest Service	330	1,660
Southwest Montana	**1,730**	**4,230**
BLM	1,570	4,130
Forest Service	160	100
Bear Lake	**0**	**0**
BLM	0	0
Forest Service	0	0
Mountain Valleys	**7,910**	**280,200**
BLM	4,730	266,700
Forest Service	3,180	13,500
Weiser	**12,900**	**17,500**
BLM	12,900	17,500
Forest Service	0	0
Sawtooth	**0**	**0**
BLM	0	0
Forest Service	0	0
Total	**61,900**	**767,200**
BLM	55,200	751,700
Forest Service	6,690	15,500

Source: BLM GIS 2015

Table 3-8
Acres of Mixed Sagebrush within PPH and PGH on BLM-Administered and National Forest System lands within the Planning Area by GRSG Analysis Area

GRSG Analysis Area	PGH	PPH
East-Central Idaho	**0**	**0**
BLM	0	0
Forest Service	0	0

Table 3-8
Acres of Mixed Sagebrush within PPH and PGH on BLM-Administered and National Forest System lands within the Planning Area by GRSG Analysis Area

GRSG Analysis Area	PGH	PPH
North Side Snake	**0**	**0**
BLM	0	0
Forest Service	0	0
Southwest Idaho	**0**	**0**
BLM	0	0
Forest Service	0	0
South Side Snake	**0**	**0**
BLM	0	0
Forest Service	0	0
Southwest Montana	**254,800**	**489,300**
BLM	156,000	400,200
Forest Service	98,800	89,100
Bear Lake	**4,420**	**41,200**
BLM	4,060	40,000
Forest Service	360	1,200
Mountain Valleys	**319,400**	**1,795,900**
BLM	131,200	1,430,800
Forest Service	188,300	365,100
Weiser	**0**	**0**
BLM	0	0
Forest Service	0	0
Sawtooth	**14,500**	**0**
BLM	0	0
Forest Service	14,500	0
Total	**593,100**	**2,326,400**
BLM	291,200	1,871,100
Forest Service	301,900	455,400

Source: BLM GIS 2015

Table 3-9
Acres of Tall Sagebrush within PPH and PGH on BLM-Administered and National Forest System lands within the Planning Area by GRSG Analysis Area

GRSG Analysis Area	PGH	PPH
East-Central Idaho	**28,200**	**8,660**
BLM	13,500	8,660
Forest Service	14,700	0
North Side Snake	**267,800**	**1,135,500**
BLM	212,300	1,114,100
Forest Service	55,500	21,400

Table 3-9
Acres of Tall Sagebrush within PPH and PGH on BLM-Administered and National Forest System lands within the Planning Area by GRSG Analysis Area

GRSG Analysis Area	PGH	PPH
Southwest Idaho	**159,900**	**1,146,500**
BLM	159,900	1,146,500
Forest Service	0	0
South Side Snake	**226,700**	**795,000**
BLM	163,900	628,900
Forest Service	62,800	166,100
Southwest Montana	**0**	**0**
BLM	0	0
Forest Service	0	0
Bear Lake	**0**	**0**
BLM	0	0
Forest Service	0	0
Mountain Valleys	**0**	**0**
BLM	0	0
Forest Service	0	0
Weiser	**56,600**	**40,700**
BLM	56,600	40,700
Forest Service	0	0
Sawtooth	**0**	**0**
BLM	0	0
Forest Service	0	0
Total	**739,100**	**3,126,400**
BLM	606,200	2,939,000
Forest Service	133,000	187,400

Source: BLM GIS 2015

Table 3-10
Acres of Annual Grass within PPH and PGH on BLM-Administered and National Forest System lands within the Planning Area by GRSG Analysis Area

GRSG Analysis Area	PGH	PPH
East-Central Idaho	**80**	**30**
BLM	80	30
Forest Service	0	0
North Side Snake	**7,150**	**6,860**
BLM	7,070	6,860
Forest Service	80	0
Southwest Idaho	**6,540**	**19,200**
BLM	6,540	19,200
Forest Service	0	0

Table 3-10
Acres of Annual Grass within PPH and PGH on BLM-Administered and National Forest System lands within the Planning Area by GRSG Analysis Area

GRSG Analysis Area	PGH	PPH
South Side Snake	**4,830**	**24,600**
BLM	4,720	24,300
Forest Service	110	310
Southwest Montana	**0**	**0**
BLM	0	0
Forest Service	0	0
Bear Lake	**0**	**0**
BLM	0	0
Forest Service	0	0
Mountain Valleys	**0**	**0**
BLM	0	0
Forest Service	0	0
Weiser	**2,720**	**1,050**
BLM	2,720	1,050
Forest Service	0	0
Sawtooth	**0**	**0**
BLM	0	0
Forest Service	0	0
Total	**21,300**	**51,700**
BLM	21,100	51,400
Forest Service	190	310

Source: BLM GIS 2015

Table 3-11
Acres of Perennial Grass within PPH and PGH on BLM-Administered and National Forest System lands within the Planning Area by GRSG Analysis Area

GRSG Analysis Area	PGH	PPH
East-Central Idaho	**490**	**10**
BLM	430	10
Forest Service	50	0
North Side Snake	**158,900**	**346,000**
BLM	156,900	344,100
Forest Service	1,980	1,930
Southwest Idaho	**53,100**	**78,900**
BLM	53,100	78,900
Forest Service	0	0
South Side Snake	**191,300**	**418,000**
BLM	178,700	400,200
Forest Service	12,700	17,800

Table 3-11
Acres of Perennial Grass within PPH and PGH on BLM-Administered and National Forest System lands within the Planning Area by GRSG Analysis Area

GRSG Analysis Area	PGH	PPH
Southwest Montana	**3,470**	**590**
BLM	1,750	530
Forest Service	1,720	60
Bear Lake	**0**	**520**
BLM	0	520
Forest Service	0	0
Mountain Valleys	**2,390**	**29,600**
BLM	1,390	27,300
Forest Service	1,000	2,350
Weiser	**28,300**	**4,460**
BLM	28,300	4,460
Forest Service	0	0
Sawtooth	**20**	**0**
BLM	0	0
Forest Service	20	0
Total	**438,000**	**878,100**
BLM	420,600	855,900
Forest Service	17,400	22,100

Source: BLM GIS 2015

Table 3-12
Acres of Crested Wheatgrass within PPH and PGH on BLM-Administered and National Forest System lands within the Planning Area by GRSG Analysis Area

GRSG Analysis Area	PGH	PPH
East-Central Idaho	**190**	**10**
BLM	30	10
Forest Service	160	0
North Side Snake	**42,800**	**36,900**
BLM	40,800	36,900
Forest Service	2,000	90
Southwest Idaho	**2,540**	**950**
BLM	2,540	950
Forest Service	0	0
South Side Snake	**16,000**	**27,900**
BLM	15,500	25,400
Forest Service	410	2,500
Southwest Montana	**0**	**0**
BLM	0	0
Forest Service	0	0

Table 3-12
Acres of Crested Wheatgrass within PPH and PGH on BLM-Administered and National Forest System lands within the Planning Area by GRSG Analysis Area

GRSG Analysis Area	PGH	PPH
Bear Lake	**0**	**0**
BLM	0	0
Forest Service	0	0
Mountain Valleys	**0**	**0**
BLM	0	0
Forest Service	0	0
Weiser	**4,480**	**2,020**
BLM	4,480	2,020
Forest Service	0	0
Sawtooth	**0**	**0**
BLM	0	0
Forest Service	0	0
Total	**65,900**	**67,800**
BLM	63,300	65,200
Forest Service	2,580	2,590

Source: BLM GIS 2015

Table 3-13
Acres of Conifer Encroachment within PPH and PGH on BLM-Administered and National Forest System lands within the Planning Area by GRSG Analysis Area

GRSG Analysis Area	PGH	PPH
East-Central Idaho	**270**	**10**
BLM	170	10
Forest Service	100	0
North Side Snake	**1,260**	**2,120**
BLM	510	1,870
Forest Service	750	260
Southwest Idaho	**99,100**	**108,400**
BLM	99,100	108,400
Forest Service	0	0
South Side Snake	**28,100**	**105,400**
BLM	16,200	65,700
Forest Service	11,900	39,700
Southwest Montana	**900**	**440**
BLM	370	230
Forest Service	520	200
Bear Lake	**0**	**10**
BLM	0	10
Forest Service	0	0

Table 3-13
Acres of Conifer Encroachment within PPH and PGH on BLM-Administered and National Forest System lands within the Planning Area by GRSG Analysis Area

GRSG Analysis Area	PGH	PPH
Mountain Valleys	**2,380**	**3,390**
BLM	840	2,380
Forest Service	1,540	1,010
Weiser	**740**	**110**
BLM	740	110
Forest Service	0	0
Sawtooth	**320**	**0**
BLM	0	0
Forest Service	320	0
Total	**133,000**	**219,900**
BLM	117,800	178,700
Forest Service	15,100	41,200

Source: BLM GIS 2015

3.3.3 Conditions on National Forest System Lands

In general the plant communities and disturbance factors that influence them are the same on National Forest System lands as on BLM-administered lands. As a general rule, the National Forest System lands with GRSG habitat in the planning area tend to be on the higher end of the precipitation and elevation gradient. Therefore, the relative proportion of sagebrush plant communities on National Forest System lands would be higher for the mountain big sagebrush plant communities, at the higher elevation and precipitation gradient, and lower for Wyoming big sagebrush plant communities which occur at the lower end of the precipitation range for big sagebrush. Due to the more resilient nature of mountain big sagebrush communities after disturbance, it is less likely they will be impacted by invasive annual grass and convert to annual grass plant communities.

3.3.4 Trends

The main disturbance factors with the potential to alter vegetation providing GRSG habitat over a majority of the planning area include conversion to annual grassland following fire disturbance, modification of plant communities due to livestock grazing, and the potential impacts of climate change. To a lesser extent, some permanent conversion to agriculture or urbanization may occur, but typically these areas are already highly disturbed and not likely to be providing high-quality GRSG habitat.

3.3.5 Regional Context

Table 3-14 through **Table 3-16** display acreages for different kinds of vegetation cover in the planning area.

Table 3-14
Acres of Conifer and Pinyon-Juniper Land Cover within GRSG Habitat

Surface Management Agency	Acres within PGH[1]			Acres within PPH[1]		
	Planning Area	MZ II/VII[2]	MZ IV	Planning Area	MZ II/VII[2]	MZ IV
BLM	174,700	595,500	311,300	397,300	499,700	938,700
Forest Service	191,200	62,300	228,100	150,900	18,200	248,200
Tribal and other Federal	10,400	88,400	11,100	7,700	77,100	10,000
Private	143,700	545,800	295,200	157,400	373,000	427,500
State	40,700	97,800	69,600	56,100	106,600	67,700
Other	2,900	700	2,900	6,400	1,700	6,400

Source: Manier et al. 2013
[1]Includes acres of pinyon-juniper or conifer land cover within 400 feet of GRSG habitat.
[2]BER combined acres for MZs II and VII

Table 3-15
Acres of Cheatgrass Potential within GRSG Habitat

Surface Management Agency	Acres[1] within PGH			Acres[1] within PPH		
	Planning Area	MZ II/VII[2]	MZ IV	Planning Area	MZ II/VII[2]	MZ IV
BLM	3,053,600	6,325,000	6,234,900	8,022,500	7,091,200	13,995,500
Forest Service	885,700	407,400	1,086,900	927,100	124,100	1,521,600
Tribal and Other Federal	687,800	1,252,100	740,200	946,800	701,900	974,100
Private	2,003,400	6,202,500	4,257,400	2,045,100	5,631,600	5,643,800
State	645,800	861,400	945,500	853,200	1,135,900	1,022,900
Other	54,900	6,000	54,900	93,700	30,100	93,800

Source: Manier et al. 2013
Acreage comprised of areas with a high potential for cheatgrass occurrence.
[2]BER combined acres for MZs II and VII

Table 3-16
Acres of Cropland within GRSG Habitat

Surface Management Agency	Acres[1] within PGH			Acres[1] within PPH		
	Planning Area	MZ II/VII[2]	MZ IV	Planning Area	MZ II/VII[2]	MZ IV
BLM	14,200	3,200	14,500	11,800	2,100	14,800
Forest Service	1,800	300	1,800	600	0	900
Tribal and Other Federal	1,700	5,200	1,800	500	1,400	500
Private	165,500	385,900	233,600	19,400	106,100	55,200
State	2,700	7,700	4,400	700	3,300	800
Other	1,300	0	1,300	200	100	200

Source: Manier et al. 2013
[1]Based on data provided by the National Agricultural Statistics Service
[2]BER combined acres for MZs II and VII

The BLM-administered and National Forest System lands in the Idaho and Southwestern Montana planning area provide a variety of habitats. Landownership ranges from mostly sagebrush habitats in Owyhee County, Idaho, to scattered BLM-administered and National Forest System lands with intermingled private and state lands composed of sagebrush habitats in southwestern Montana. On BLM-administered and National Forest System lands, these habitats can be segregated into four major habitat groups: sagebrush steppe, riparian/wetlands, nonnative grasslands, and conifer woodlands/forests. These habitats serve as a basis, to the extent practical, for describing existing conditions and for developing and comparing management alternatives throughout the planning effort.

Sagebrush Steppe Habitats

Sagebrush steppe habitats in the planning area are found on the Snake River Plain and minor portions in the Wyoming Basins floristic provinces identified by West (1983). This is the dominant habitat in the planning area. Riparian and wetland habitats, nonnative grasslands, and conifer/woodland forests are interspersed in and next to sagebrush habitats.

Sagebrush habitats occur from lower elevation (2,500 feet) drier salt desert shrub communities to mountain shrub communities at 10,100 feet in elevation. Sagebrush habitats support a wide diversity of generalist wildlife species, as well as sagebrush-dependent wildlife species.

At mid- to lower elevations, Wyoming big and basin sagebrush are the dominant habitat types that provide important winter habitat for such wildlife species as mule deer, pronghorn, and GRSG, and localized yearlong habitat for such sagebrush-obligate species as pygmy rabbit. Much of the basin big sagebrush habitats are limited to deeper soils near ephemeral drainages. Intermingled occurrences of basin big sagebrush, mountain big sagebrush, tall three-tip sagebrush, and several low sagebrush's such as low (little) and black sagebrush, add to the diversity of vegetation and habitat structure. At higher elevations, moist mountain big sagebrush communities provide elk calving and GRSG brood-rearing habitat, along with dispersed spring, summer, and fall habitat for numerous other species, often in association with conifer woodland/forested habitat. Mixed sagebrush communities and localized dominance by other sagebrush species on specific sites in the broader sagebrush types often support uniquely dependent wildlife, such as pygmy rabbits.

Many sagebrush steppe habitats have been modified or disturbed throughout the planning area during the past 150 years; therefore, the species that depend on them have usually been negatively affected. Primary factors changing sagebrush steppe habitats are wildfire and changes in fire regimes, invasive species, developments, and livestock grazing (Miller et al. 2011; Knick et al. 2011). Wildfire and changes in fire regimes affect xeric sagebrush steppe, which is highly influenced by the spread of invasive species, especially exotic annual grasses, such as cheatgrass and medusahead. In these lower elevation habitats, fire return intervals are greatly shortened and prevent sagebrush from reestablishing. Large areas of the Snake River Plain in southern Idaho have undergone these habitat changes, thus making habitats less suitable for wildlife.

Past management activities that reduce sagebrush habitats are herbicide application, plowing, and other techniques, followed by nonnative perennial grass seeding. These land treatments or burned areas following wildfire have historically been seeded by highly competitive introduced species, such as crested wheatgrass, desert wheatgrass, and Siberian wheatgrass. The characteristics that made these introduced species effective for seeding establishment also created communities dominated by near monocultures, which resulted in poor quality habitats for wildlife lacking sagebrush or forbs (Pyke 2011). Recent policies have encouraged native seed mixes, but often native seed supplies are limited or not affordable within current budgets. Seed in some seed mixes used in these treatments may have been selected for other wildlife species and not specifically for GRSG (Knick et al. 2011).

In higher elevations of sagebrush steppe, conifer woodlands/forests have encroached onto sagebrush habitats. Miller and Rose (1999) identified that the encroachment of conifer woodlands/forests was the result of longer fire return intervals that permitted woodlands to expand into sagebrush steppe. The situation of conifers greater than 50 years old on productive sites and greater than 90 years on nonproductive sites results in reduced fire frequency, permitting conifers to become established on the site (Burkhardt and Tisdale 1976; Bunting 1984; Miller and Rose 1999). A number of studies identified a widespread decline in fires at the sagebrush/conifer interface with the coincidence of large numbers of livestock in the late 1800s (Miller and Rose 1999; Heyerdahl et al. 2006; Swetnam et al. 2001). These large numbers of cattle may have reduced the current year's fuel loads and changed the structure and abundance of fuels, thus reducing the frequency of wildfires (Miller et al. 2011). Increased conifer dominance results in a decline of cover by sagebrush and other shrubs.

Development has reduced the extent and quality of sagebrush steppe habitat across much of the planning area. The activities have occurred on private lands but infrastructure to support urbanization and agriculture along the Snake River Plain and other waterways has occurred on BLM-administered and National Forest System lands. Many of these types of facilities or uses are railroads, roads, power lines, pipelines, irrigation canals, communication towers, military training, and off-highway vehicles (Knick et al. 2011).

Livestock grazing is the most widespread land use across sagebrush steppe habitats from the 1880s to present. Livestock numbers and use of these habitats was greatest from the late 1880s through the 1930s. During this period, the greatest change occurred to these habitats as a result of heavy livestock use and drought, which resulted in loss of soil and depleted native vegetation communities that greatly impacted these habitats (Knick et al. 2011). From the 1940s until the 1980s, plowing, herbicides, and burning was followed by seeding nonnative perennial grasses to increase forage for livestock production, thus impacting many sagebrush habitats in southern Idaho.

In recent decades, management emphasis has shifted to maintaining healthy, functioning native ecosystems and reducing the spread of nonnative species. Grazing regulations enacted in 1995 mandated that public land grazing allotments conform to the Fundamentals of Rangeland Health, as well as subsequent standards and guidelines (S&Gs). The regulations also mandate that changes to grazing management be made if livestock management is

determined to be a significant factor in failing to meet Fundamentals of Rangeland Health or S&Gs. Since that time, the BLM has been reviewing rangeland health conditions and modifying livestock grazing management as necessary to conform to the Fundamentals of Rangeland Health and S&Gs. In addition, vegetation has been treated on many allotments to restore functionality of impacted sagebrush steppe habitats. For more information about livestock grazing, see **Section 3.8**, Livestock Grazing.

Riparian/Wetland Habitats

Riparian habitats are regarded as one of the most important for wildlife due the availability of water and the structural diversity of the vegetation communities. Approximately 75 percent of all wildlife species use riparian habitats for at least some portion of their annual life cycle (USEPA 1990). Riparian habitats are estimated to make up approximately 1 percent of all habitats in the planning area. The riparian habitats in the planning area are composed of lotic systems that are associated with running water or lentic/wetland habitats associated with standing water.

Riparian habitats in the planning area have been subject to many activities that have affected their functionality and their ability to support wildlife. These activities include dewatering for irrigation, domestic cattle grazing, road construction, dam construction, and land treatments. These activities change plant species composition and structure, vegetative cover, sedimentation water quality, and temperature and alter streambanks and the duration of available water.

Wildlife habitat values are degraded on riparian habitats with functional-at-risk or nonfunctional conditions. Information on proper functioning condition is not available at the sub-regional planning scale.

Big Game

The planning area hosts a wide variety of big game species—mule deer, pronghorn, and elk—that use habitats associated with sagebrush steppe and riparian habitats. Other big game species in these habitats but in lesser quantities are bighorn sheep, moose, and white-tailed deer. The planning area provides habitat for all seasonal use periods for mule deer, pronghorn, elk, bighorn sheep, and other species. These species are generally widespread across the entire planning area.

Mule deer are the most abundant and widely distributed big game animal. Their populations and habitat have changed greatly during the past 100 years. Loss of shrub-steppe habitats, conversion of native landscapes to agriculture or residential development, and past and current grazing management are key management issues for mule deer populations throughout the planning area (Cox et al. 2009).

Within the planning area mule deer populations vary greatly from current population objectives. In southeast Idaho, populations have declined following the winter of 1992/1993 and have been slow to respond to changes in management (IDFG 2011a). This has resulted in IDFG developing an initiative to target this area of the state to modify management strategies and improve habitat conditions for mule deer. In other portions of the planning

area, including south-central Idaho and southwestern Montana, populations appear to be stable or increasing but are below levels observed in the late 1980s and early 1990s (IDFG 2011a; MFWP 2012).

Mule deer are primarily browsers, and their diet is composed mostly of leaves and twigs of shrubs, especially during the winter. Grasses and forbs are also crucial components of their diet in the spring and summer. The quality and quantity of nutritious forage in spring (April through July) has major implications on the production and survival of fawns. Summer and fall ranges are important because this is where deer produce fat reserves that will allow survival through winter. The quality of summer-fall forage also directly influences pregnancy and ovulation rates and, therefore, fawn production (Cook et al. 2001; Tollefson et al. 2010; Vavra 1992). Much of Idaho's historic mule deer winter range has been developed for other uses and is now occupied by humans. Residential, commercial, and industrial developments in the foothills and at lower elevations have eliminated winter range (IDFG 2011a).

Pronghorn distribution has changed relatively little since the early 1980s, but numbers have trended downward since the winter of 1993/1994 (IDFG 2011b). Pronghorn are typically associated with sagebrush habitats but readily use grasslands if there are adequate amounts of forbs (Yoakum 2004a). In sagebrush habitats, pronghorn diets consist of sagebrush and other shrubs during all seasons, but particularly in the fall and winter (Yoakum 2004a). The species prefers forbs when available (Yoakum 2004b). The availability of forbs in sagebrush habitats may have important implications for pronghorn because they are rich in nutritional values required for reproduction (Pyrah 1987; Yoakum 2004b).

Large landscape-level fires have reduced the availability of sagebrush in parts of pronghorns' range. In portions of the planning area, extensive fencing has contributed to the inability of some populations to access otherwise suitable habitats. Noxious weeds, livestock grazing, and drought has also impacted current pronghorn populations and their habitat.

Elk are found throughout the planning area in sagebrush steppe and associated conifer/forested woodlands. Elk are considered generalists and do not totally depend on sagebrush steppe, but they do require food, water, and where hunted, hiding cover and security areas. The combination of the resources determines the distribution and number of elk within sagebrush steppe. Elk populations in the planning area are generally at or above state wildlife management agencies objectives (IDFG 2011c; MFWP 2004).

Other big game species, such as moose, bighorn sheep, and white-tailed deer, are also found in the planning area. Moose and white-tailed deer are generally associated with riparian/wetland habitats. Bighorn sheep usually are found near escape terrain, composed of steep rugged slopes, and make use of sagebrush steppe year-round in southwest Idaho. In east-central Idaho and southwestern Montana, bighorn sheep generally make use of sagebrush steppe near escape terrain during the winter and spring.

Migratory Birds

There are numerous species of migratory birds that use the planning area during part of the year, including over 40 species of greatest conservation need in Idaho and in Montana

(IDFG 2005; BLM 2006a). These birds are as diverse as the Calliope hummingbird, green-tailed towhee, Brewer's sparrow, ferruginous hawk, mallard, and sandhill crane. Most of these birds are summer residents that use habitats ranging from low elevation wetlands to high elevation forests for breeding and raising young. Some species, such as American robin and mallard, are migratory, but small populations may be present yearlong, depending on seasonal conditions. Winter residents, such as the rough-legged hawk, snow buntings, and rosy-crowned gray finches, arrive from arctic breeding grounds or high elevation alpine areas to use winter habitats in sagebrush steppe, seasonally replacing summer residents.

The 1988 amendment to the Fish and Wildlife Conservation Act mandates that the USFWS "identify species, sub species, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973."

The USFWS's Birds of Conservation Concern 2008 is the most recent effort to carry out that mandate. It identifies those species in greatest need of conservation action in specific geographic bird conservation regions. The planning area overlaps three bird conservation regions: the Great Basin, Northern Rockies, and a very small portion of the Southern Rockies/Colorado Plateau. The list of species likely to inhabit sagebrush steppe and riparian/wetlands of this planning area for these three conservation regions can be found in **Appendix O**. This mandate was emphasized with the issuance of Executive Order 13186, which directs federal land management agencies to develop cooperative plans to protect and manage habitat for all migratory birds. Expansion of funding opportunities under the North American Wetlands Conservation Act and other partnership opportunities through the North American Bird Conservation Initiative will support increased management consideration for these species.

Furbearers/Upland Game/Nongame

A large variety of other wildlife species use sagebrush steppe, riparian/wetland habitats, and nonnative grasslands and conifer woodland/forests habitats in and next to sagebrush steppe in the planning area. Furbearers commonly found in these habitats are red fox, bobcat, muskrat, beaver, and mink. River otter may be present, but the species is generally associated with larger river riparian systems. Cottontail and pygmy rabbits are found throughout the planning area; their numbers are variable because populations are cyclic (USFWS 2010b). Pygmy rabbits, a species of greatest conservation need in Idaho and southwestern Montana, are found in sagebrush habitats with relatively deep, loose soils that provide food and shelter. Upland game birds common or locally abundant in the planning area are Columbian sharp-tailed grouse, pheasant, mourning dove, chukar, gray partridge, California quail, dusky (blue) grouse, and ruffed grouse.

Many other species of nongame wildlife have limited information on their distribution or life history requirements. Information on these species is maintained by the Idaho, Montana, Utah, and Nevada Natural History Programs within each state. Site-specific inventories have not been conducted for many of the species, but information about species distribution and relative abundance continues to be modified as funding becomes available.

Amphibians/Reptiles

Amphibians, specifically frogs and toads, have been recognized as important indicators of ecosystem health, as many populations are declining in the western United States. Amphibians are generally found near some form of water. There are eight species of salamanders, frogs, and toads found in the planning area, including three species of greatest conservation need in Idaho; there are three amphibian species on the BLM special status species list in Montana (IDFG 2005; Montana Natural Heritage Program 2013).

There are 16 species of reptiles in sagebrush habitats and riparian/wetland habitat in the planning area: seven lizard species, one turtle species, and eight snake species. The sagebrush lizard and short-horned lizard are two of the most common species associated with sagebrush habitats. Two snake and two reptile species found in the planning area are species of greatest conservation need in Idaho (IDFG 2005). There are no BLM special status reptile species in the southwestern Montana portion of the sub-region (Montana Natural Heritage Program 2013).

Insects

Insect occurrence and distribution are not generally specifically considered in land management activities. Three species of insects that are identified as sensitive due to their limited distribution occur in or next to sagebrush habitats. These species are Idaho pointheaded grasshopper, St. Anthony Sand Dunes tiger beetle, and Bruneau Dunes tiger beetle (See **Section 3.5**, Other Special Status Species).

Insects provide important food sources for many species of wildlife, including adult and juvenile GRSG. Although there are thousands of species of insects in sagebrush and riparian and wetland habitats, species in the Scarabeidae and Tenebrionidae (beetle) families, Formicidae (thatch ants) family, and Orthopthera (grasshopper) family are a high protein food source of many wildlife species, including GRSG (Klebenow and Gray 1968; Peterson 1970; Johnson and Boyce 1990; Pyle 1993; Fischer 1994; Drut et al. 1994).

3.4 Fish and Wildlife

3.4.1 Terrestrial Wildlife

Conditions within the Planning Area

The BLM and Forest Service manage wildlife habitat, and the state wildlife management agencies manage wildlife populations. These habitats reflect the influence of a variety of past and ongoing human activities and disturbances, resulting in increases in some species populations, declines in others, and the modification of large blocks of habitat. These habitats and the wildlife species that rely on them rarely exist solely on BLM-administered or National Forest System lands, and often extend across administrative boundaries to other federal, state, and private lands. Further information regarding wildlife on National Forest System lands is provided in **Appendix CC**.

3.4.2 Aquatic Wildlife

Conditions within the Planning Area

Fish of interest within the planning area consist primarily of cold-water species. The condition of aquatic habitat is influenced by upland and riparian processes. Uplands influence aquatic habitat primarily through hydrologic processes. For example, the arid nature of the planning area makes the influence of groundwater on surface water particularly important. Therefore, impacts on uplands, such as compaction, that reduce water infiltration have the potential to reduce the amount of groundwater being released into streams. Water in compacted areas can pond on the surface and be lost into the atmosphere through evaporation or be delivered rapidly to channels during high flows. The amount of water and whether it enters stream channels via surface flow or subsurface flow have a significant effect on sediment delivery and deposition, streamside vegetation, and water quality. Riparian areas influence aquatic habitat more directly due to their proximity to water. For example, riparian vegetation shades streams from solar radiation which reduces increases in water temperature, and provides organic material to streams which act as a food source for aquatic macroinvertebrates. Well-vegetated floodplains dissipate energy of flood flows, provide velocity refugia for juvenile and adult fish during flood events, filter sediment during floods, and store water for release during lower flows. Fine sediment deposition within the substrate; and water quality, including, temperature, turbidity, and dissolved oxygen affect fish and fish habitat.

Aquatic habitat within the planning area includes perennial and intermittent streams, springs, lakes, and reservoirs that support fish during at least a portion of the year.

The majority of the planning area within Idaho is within the Snake River basin, while the portion of the planning area within Montana is within the Missouri River basin. The portion of the southeast corner of Idaho is located within the Bear River basin which flows into the Great Salt Lake.

The climate throughout the planning area is generally arid, with runoff being dominated by spring snowmelt. Summer flows are provided by snowmelt, subsurface storage, and thunderstorm events. Native fish species consist primarily of salmonids, sculpin, and minnows, and suckers.

Conditions on BLM-Administered and National Forest System Lands

Fish-bearing streams, and lakes, ponds, and reservoirs within the planning area provide habitat for a variety of native and nonnative game and nongame fish species. **Table 3-17**, displays the various fish species that occur within the planning area.

Table 3-17
Native and Nonnative Fish Species Found within the Planning Area and their Status

Common Name	Scientific Name	Status
Native Fish Species		
Sockeye salmon	*Oncorhynchus nerka*	ESA Endangered
Chinook salmon	*O. tshawytscha*	ESA Threatened

Table 3-17
Native and Nonnative Fish Species Found within the Planning Area and their Status

Common Name	Scientific Name	Status
Steelhead	*O. mykiss*	ESA Threatened
Bull trout	*Salvelinus confluentus*	ESA Threatened
Redband trout	*O. mykiss gairdneri*	BLM Sensitive
Westslope cutthroat	*O. clarki lewisi*	BLM Sensitive
Yellowstone cutthroat	*O. clarki bouvieri*	BLM & Forest Service Sensitive
Bonneville cutthroat	*O. clarki utah*	BLM Sensitive
Bear Lake whitefish	*Prosopium abyssicola*	BLM Sensitive
Bonneville whitefish	*P. spilonotus*	BLM Sensitive
Bonneville cisco	*P. gemmiferum*	BLM Sensitive
Big Lost River whitefish	*P. williamsoni*	Forest Service Sensitive
Mountain whitefish	*P. williamsoni*	No status
White sturgeon	*Acipenser transmontanus*	BLM Sensitive
Bear Lake sculpin	*Cottus extensis*	BLM Sensitive
Shoshone sculpin	*C. greenei*	BLM Sensitive
Wood River sculpin	*C. leiopomus*	BLM Sensitive
Paiute sculpin	*C. beldingii*	No status
Shorthead sculpin	*C. confusus*	No status
Mottled sculpin	*C. bairdii*	No status
Northern leatherside chub	*Lepidomeda copei*	BLM & Forest Service Sensitive
Utah chub	*Gila atraria*	No status
Chiselmouth	*Acrocheilus alutaceus*	No status
Redside shiner	*Richardsonius balteatus*	No status
Speckled dace	*Rhinichthys osculus*	No status
Utah sucker	*C. ardens*	No status
Bluehead sucker	*Catostomus discobulus*	No status
Bridgelip sucker	*C. columbianus*	No status
Largescale sucker	*C. macrocheilus*	No status
Mountain sucker	*C. platyrhynchus*	No status
Nonnative Fish Species		
Brook trout	*S. fontinalis*	No status
Brown trout	*Salmo trutta*	No status
Tadpole madtom	*Notorus gyrimus*	No status
Black bullhead	*Ameiurus melas*	No status
Brown bullhead	*A. nebulosus*	No status
Blue catfish	*Ictalurus furcatus*	No status
Channel catfish	*I. punctatus*	No status
Flathead catfish	*Pylodictis olivaris*	No status
Common carp	*Cyprinus carpio*	No status
Grass carp	*Ctenopharyngodon idella*	No status
Goldfish	*Carassius auratus*	No status
Eastern mosquitofish	*Gambusia holbrooki*	No status
Western mosquitofish	*G. affinis*	No status
Fathead minnow	*Pimephales promelas*	No status
Spottail shiner	*Notropis hudsonius*	No status

Table 3-17
Native and Nonnative Fish Species Found within the Planning Area and their Status

Common Name	Scientific Name	Status
Green swordtail	*Xiphophorus hellerii*	No status
Guppy	*Poecilia reticulata*	No status
Black crappie	*Pomoxis nigromaculatus*	No status
White crappie	*P. annularis*	No status
Yellow perch	*Perca flavescens*	No status
Bluegill	*Lepomis macrochirus*	No status
Green sunfish	*L. cyanellus*	No status
Pumpkinseed	*L. gibbosus*	No status
Largemouth bass	*Micropterus salmoides*	No status
Smallmouth bass	*M. dolomieu*	No status
Walleye	*Sander vitreus*	No status
Muskellunge	*Esox masquinongy*	No status
Northern pike	*E. lucius*	No status
Tiger musky	*E. masquinongy* x *E. lucius*	No status
Convict cichlid	*Archocentrus nigrofasciatus*	No status
Mozambique tilapia	*Tilapia mossambica*	No status
Redbelly tilapia	*T. zilli*	No status
Oriental weatherfish	*Misgumus anguillicaudatus*	No status

Status of Aquatic Species in the Planning Area

The following discussion on status of aquatic species focuses on native species and particularly special status species. Twelve of the seventeen special status species are salmonids, three are sculpin, one is the white sturgeon, and one is the northern leatherside chub. None of the special status species are ubiquitous across the planning area. Each species is found in a particular portion of the planning area with some of the species being endemic to a particular water body or portion of a water body.

Three of the 12 salmonids are anadromous fish found in the BLM Challis and Salmon field offices and the Payette, Salmon-Challis, and Sawtooth national forests, and each is listed under the ESA. Snake River Basin steelhead and Snake River spring/summer-run Chinook salmon are listed as threatened under the ESA and Snake River sockeye salmon are listed as endangered under the ESA. Adults passing Lower Granite dam on the Snake River are counted for all three of these species (Columbia Basin Research 2013). The 10-year average number of adults passing Lower Granite dam from 2003 through 2012 for steelhead is 190,535, for spring/summer-run Chinook salmon is 67,241, and for sockeye salmon is 610.

Bull trout within the planning area are found in the BLM Salmon, Challis, Jarbidge, and Upper Snake field offices and the Boise, Payette, Salmon-Challis, and Sawtooth national forests, and are listed as threatened under the ESA. Bull trout in the planning area largely occupy higher elevation areas with cold water temperatures.

The native range of redband trout within the planning area is the Snake River and its tributaries up to Shoshone Falls and the upper Salmon River basin. The current distribution

of redband trout has been significantly reduced relative to the historical distribution, and it is likely that across its range slightly more than 44 percent of the occupied stream miles contain redband that have been genetically altered due to extensive stocking of hatchery fish (Wild Trout Enterprises 2012). Conditions for occupied redband trout habitat across its range was rated as part of the 2012 redband trout status assessment (Wild Trout Enterprises 2012). Approximately 5 percent of habitats were judged to be in excellent condition, 27 percent were judged to be in good condition, 34 percent in fair condition, 18 percent in poor condition, and 16 percent of the occupied habitats were not rated.

Three cutthroat trout species occur within the planning area: Westslope cutthroat, Yellowstone cutthroat, and Bonneville cutthroat. In Idaho, Westslope cutthroat only occur in the Salmon River portion of the planning area, while they occur in the entire portion of the planning area within Montana. Wild Trout Enterprises (2009) estimated that Westslope cutthroat currently occupy 58 percent of the stream miles they historically occupied across their range. Conditions for occupied Westslope cutthroat habitat across its range were rated as part of the 2009 Westslope cutthroat status assessment (Wild Trout Enterprises 2009). Approximately 18 percent of habitats were judged to be in excellent condition, 41 percent were judged to be in good condition, 24 percent in fair condition, 4 percent in poor condition, and 13 percent of the occupied habitats had an unknown condition. Within the planning area, Yellowstone cutthroat occur in the Snake River system above Shoshone Falls and within the Yellowstone River system. May et al. (2007) determined that Yellowstone cutthroat currently occupy 43 percent of the stream miles they historically occupied. Conditions for occupied Yellowstone cutthroat habitat across its range were rated as part of the 2006 Westslope cutthroat status assessment (May et al. 2007). Approximately 14 percent of habitats were judged to be in excellent condition, 52 percent were judged to be in good condition, 20 percent in fair condition, 5 percent in poor condition, and 9 percent of the occupied habitats had an unknown condition. In the planning area, Bonneville cutthroat trout only occur within the Bear River drainage in southeast Idaho. An adfluvial population occurs in Bear Lake. The range-wide status of Bonneville cutthroat improved considerably from 1980 to 2000 (Lentsch et al. 2000).

Seven of the remaining nine special status fish species are endemics. Four species, Bear Lake whitefish, Bonneville whitefish, Bonneville cisco, and Bear Lake sculpin are endemic to Bear Lake. While the Big Lost River whitefish is endemic to the Big Lost River system, the Shoshone sculpin is endemic to springs and spring creeks in the Hagerman Valley, and the Wood River sculpin is endemic to the Wood River system.

The white sturgeon occurs in the Snake River below Shoshone Falls. Their numbers have been greatly reduced largely due to the lack of passage at dams and reduced spawning habitat due to the reservoirs behind the dams. The sturgeon fishery in the Snake River is popular, but no harvest of white sturgeon is allowed.

The northern leatherside chub has a patchy distribution within the planning area. The species occupies habitat within the Goose Creek and Salt River systems. They are generally found sporadically, in low numbers, and in the presence of other minnow species, such as

redside shiners and speckled dace. The USFWS completed a status review for the species in 2011, and found that they were not warranted for listing under the ESA.

In general, the remaining fish in **Table 3-17** are more broadly distributed within the planning area. Special status aquatic mollusks are discussed in the Special Status Species section of the EIS.

3.5 Other Special Status Species

3.5.1 Conditions within the Planning Area

The list of special status species for BLM-administered lands in Idaho and the Western Montana District; the Beaverhead-Deerlodge, Boise, Caribou, Challis, Payette, Salmon, Sawtooth, and Targhee National Forests; and the Curlew National Grassland includes mammals, birds, reptiles, amphibians, fish, invertebrates, and plants. There are 383 special status species. Of these, 28 species are mammals, 51 are birds, 4 are reptiles, 8 are amphibians, 25 are fish, 21 are invertebrates, and 246 are plants.

The BLM's objectives for special status species are to conserve and recover ESA-listed species and the ecosystems on which they depend so that ESA protections are no longer needed for these species, and to initiate proactive conservation measures that reduce or eliminate threats to BLM sensitive species to minimize the likelihood of and need for listing of these species under the ESA. The BLM 6840 Manual, Special Status Species Management, sets policy for the management of candidate species and their habitat. The 6840 manual directs the BLM to undertake conservation actions for such species before listing is warranted and also to "work cooperatively with other agencies, organizations, governments, and interested parties for the conservation of sensitive species and their habitats to meet agreed on species and habitat management goals."

The BLM 6840 Manual requires the BLM to identify strategies, restrictions, management actions, and provisions necessary to conserve or recover ESA-listed species and conserve BLM sensitive species. The 6840 Manual also requires managers to determine to the extent practicable, the distribution, abundance, population condition, current threats, and habitat needs for sensitive species, and evaluate the significance of actions in conserving those species.

Similarly, Forest Service direction for threatened and endangered species is to manage habitats and activities to achieve recovery of these species so that special protection measures provided under ESA are no longer necessary. Direction for sensitive species is to develop and implement management practices to ensure that these species do not become threatened or endangered because of management actions. Additionally, the Forest Service Manual 2670 directs the Forest Service to maintain viable populations of all native and desired nonnative wildlife, fish, and plant species.

Activities within the planning area are likely to primarily affect sagebrush habitat. Areas of conifer encroachment (primarily western or Utah juniper; Douglas-fir in some limited areas) targeted for sagebrush restoration to benefit GRSG will also be affected to varying degrees

depending on time and scale. Therefore, only those species that depend on sagebrush habitat or that are strongly associated with juniper will be analyzed. **Table 3-18** within the Planning Area, identifies these species, their status, and where the designations apply. There are a total of 215 special status species that depend on sagebrush habitat. Of these, 16 species are mammals, 20 are birds, 4 are reptiles, 3 are amphibians, 3 are invertebrates, and 169 are plants.

Table 3-18
Special Status Species within the Planning Area

Common Name (*Scientific Name*)	Status*	Federal Land	
		BLM	Forest Service
Mammals			
Grizzly bear (*Ursus arctos*)	ESA Threatened	X	X
Canada lynx (*Lynx canadensis*)	ESA Threatened	X	X
Southern Idaho ground squirrel (*Spermophilus brunneus endemicus*)	ESA Candidate	X	X
Gray wolf (*Canis lupus*)	BLM & Forest Service Sensitive	X	X
Pygmy rabbit (*Brachylagus idahoensis*)	BLM & Forest Service Sensitive	X	X
Piute ground squirrel (*Spermophilus mollis artemisae*)	BLM Sensitive	X	
California bighorn sheep (*Ovis canadensis californiana*)	BLM Sensitive	X	
Rocky Mountain bighorn sheep (*Ovis canadensis*)	Forest Service Sensitive		X
Cliff chipmunk (*Tamias dorsalis*)	BLM Sensitive	X	
Uinta Chipmunk (*Tamias umbrinus*)	BLM Sensitive	X	
Merriam's ground squirrel (*Spermophilus canus vigilis*)	BLM Sensitive	X	
Wyoming ground squirrel (*Spermophilus elegans nevadensis*)	BLM Sensitive	X	
Great Basin pocket mouse (*Perognathus parvus*)	BLM Sensitive	X	
Little pocket mouse (*Perognathus longimembris*)	BLM Sensitive	X	
Dark kangaroo mouse (*Microdipodops megacephalus*)	BLM Sensitive	X	
Kit fox (*Vulpes velox*)	BLM Sensitive	X	
Birds			
Greater Sage-Grouse (*Centrocercus urophasianus*)	ESA Candidate	X	X
Bald eagle (*Haliaeetus leucocephalus*)	BLM & Forest Service Sensitive	X	X
Golden eagle (*Aquila chrysaetos*)	BLM Sensitive	X	
Upland sandpiper (*Bartramia longicauda*)	BLM Sensitive	X	
Long-billed curlew (*Numenius americanus*)	BLM Sensitive	X	
Peregrine falcon (*Falco peregrinus anatum*)	BLM & Forest Service Sensitive	X	X
Prairie falcon (*Falco mexicanus*)	BLM Sensitive	X	
Ferruginous hawk (*Buteo regalis*)	BLM Sensitive	X	
Swainson's hawk (*Buteo swainsoni*)	BLM Sensitive	X	
Columbia sharp-tailed grouse (*Tympanuchus phasianellus columbianus*)	BLM & Forest Service Sensitive	X	

Table 3-18
Special Status Species within the Planning Area

Common Name (*Scientific Name*)	Status*	Federal Land	
		BLM	Forest Service
Mountain quail (*Oreotyx pictus*)	BLM & Forest Service Sensitive	X	X
Calliope hummingbird (*Stellula calliope*)	BLM Sensitive	X	
Loggerhead shrike (*Lanius ludovicianus*)	BLM Sensitive	X	
McCown's longspur (*Calcarius mccownii*)	BLM Sensitive	X	
Sage sparrow (*Amphispiza belli*)	BLM Sensitive	X	
Brewer's sparrow (*Spizella breweri*)	BLM Sensitive	X	
Sage thrasher (*Oreoscoptes montanus*)	BLM Sensitive	X	
Black-throated sparrow (*Amphispiza bilineata*)	BLM Sensitive	X	
Bobolink (*Dolichonyx oryzivorus*)	BLM Sensitive	X	
Burrowing owl (*Athene cunicularia*)	BLM Sensitive	X	
Reptiles			
Mojave black-collared lizard (*Crotaphytus bicinctores*)	BLM Sensitive	X	
Longnose snake (*Rhinocheilus lecontei*)	BLM Sensitive	X	
Western ground snake (*Sonora semiannulata*)	BLM Sensitive	X	
Common garter snake (*Thamnophis sirtalis*)	BLM Sensitive	X	
Amphibians			
Western toad (*Bufo boreas*)	BLM Sensitive	X	
Woodhouse toad (*Bufo woodhousii*)	BLM Sensitive	X	
Plains spadefoot (*Spea bombifrons*)	BLM Sensitive	X	
Columbia spotted frog (*Rana luteiventris*)	BLM & Forest Service Sensitive	X	X
Invertebrates			
Idaho point-headed grasshopper (*Acrolophitus pulchellus*)	BLM Sensitive	X	
St. Anthony sand dunes tiger beetle (*Cicindela arenicola*)	BLM Sensitive	X	X
Bruneau Dunes tiger beetle (*Cicindela waynei waynei*)	BLM Sensitive	X	X
Plants			
Goose Creek milkvetch (*Astragalus anserinus*)	ESA Candidate	X	X
Packard's milkvetch *(Astragalus cusickii* var. *packardiae)*	ESA Candidate	X	
Christ's Indian Paintbrush (*Castilleja christii*)	ESA Candidate		X
Slickspot peppergrass (*Lepidium papilliferum*)	ESA Proposed	X	X
Cusick's horse-mint (*Agastache cusickii)*	BLM & Forest Service Sensitive	X	X
Western boneset (*Agertina occidentalis* = *Eupatorium occidentale*	BLM & Forest Service Sensitive	X	X
Pink agoseris, Mill Creek agoseris (*Agoseris lackschewitzii*)	BLM Sensitive	X	
Aase's onion (*Allium aaseae*)	BLM Sensitive	X	
Tapertip onion (*Allium acuminatum)*	BLM & Forest Service Sensitive	X	X
Two-headed onion (*Allium anceps*)	BLM Sensitive	X	
King's angelica, Great Basin angelica (*Angelica kingii*)	BLM & Forest Service Sensitive	X	X

Table 3-18
Special Status Species within the Planning Area

Common Name (*Scientific Name*)	Status*	Federal Land	
		BLM	Forest Service
Coral lichen (*Aspicilia rogerii*)	BLM Sensitive	X	
Challis milkvetch (*Astragalus amblytropis*)	BLM Sensitive	X	
Lost River milkvetch (*Astragalus amnis-amissi*)	BLM Sensitive	X	
Lemhi milkvetch (*Astragalus aquilonius*)	BLM & Forest Service Sensitive	X	X
Sweetwater milkvetch (*Astragalus aretiodes* = *Orophaca aretioides*)	BLM Sensitive	X	
Mourning milkvetch (*Astragalus astratus* var. *inseptus*)	BLM Sensitive	X	
Barr's milkvetch (*Astragalus barrii*)	BLM & Forest Service Sensitive	X	X
Painted milkvetch (*Astragalus ceramicus* var. *apus*)	BLM Sensitive	X	
Stiff milkvetch, Idaho milkvetch (*Astragalus conjunctus*)	BLM Sensitive	X	
Lesser rushy milkvetch (*Astragalus convallarius* var. *convallarius* = *A. junciformis*)	BLM Sensitive	X	
Barren milkvetch (*Astragalus cusickii* var. *sterilis*)	BLM & Forest Service Sensitive	X	X
Meadow milkvetch (*Astragalus diversifolius*)	BLM Sensitive	X	
Geyer's milkvetch (*Astragalus geyeri*)	BLM Sensitive	X	
Tufted milkvetch, Plains milkvetch (*Astragalus gilviflorus*)	BLM Sensitive	X	
Starveling milkvetch (*Astragalus jejunus* var. *jejunus*)	BLM & Forest Service Sensitive	X	X
Mulford's milkvetch (*Astragalus mulfordiae*)	BLM & Forest Service Sensitive	X	X
Newberry's milkvetch (*Astragalus newberry* var. *castoreus*)	BLM Sensitive	X	
Picabo milkvetch (*Astragalus oniciformis*)	BLM Sensitive	X	
Wind River Astragalus (*Astragalus oreganus*)	BLM Sensitive	X	
Payson's milkvetch (*Astragalus paysonii*)	BLM & Forest Service Sensitive	X	X
Snake River milkvetch (*Astragalus purshii* var. *ophiogenes*= *A. ophiogenes*)	BLM Sensitive	X	
Bitterroot milkvetch (*Astragalus scaphoides)*	BLM & Forest Service Sensitive	X	X
Railhead milkvetch (*Astragalus terminalis*)	BLM Sensitive	X	X
Four-wing milkvetch (*Astragalus tetrapterus*= *A. cinerascens*)	BLM Sensitive	X	
Mudflat milkvetch (*Astragalus yoder-williamsii*)	BLM Sensitive	X	
Large-leaved balsamroot (*Balsamorhiza macrophylla)*	BLM & Forest Service Sensitive	X	X
King's desert grass (*Blepharidachne kingii*)	BLM & Forest Service Sensitive	X	X
Daggett rock cress (*Boechera demissa* = *Arabis demissa* var. *languida*)	BLM Sensitive	X	
Sapphire rockcress (*Boechera fecunda* = *Arabis fecunda)*	BLM & Forest Service Sensitive	X	X

Table 3-18
Special Status Species within the Planning Area

Common Name (*Scientific Name*)	Status*	Federal Land	
		BLM	Forest Service
Peculiar moonwort (*Botrychium paradoxum)*	BLM & Forest Service Sensitive	X	X
Blue gramma (*Bouteloua gracilis*)	BLM Sensitive	X	
Mohave brickellbush (*Brickellia oblongifolia)*	BLM Sensitive	X	
Beautiful bryum (*Bryum calobryoides*)	BLM Sensitive	X	
Fringed redmaids (*Calandrinia ciliata*)	BLM Sensitive	X	
Cusick's camas (*Camassia cusickii*)	BLM Sensitive	X	
Obscure evening primrose (*Camissonia andina* = *Oenothera andina*)	BLM Sensitive	X	
Small camissonia (C*amissonia parvula* = *Oenothera parvula*)	BLM Sensitive	X	
Winged-seed evening primrose (*Camissonia pterosperma* = *Oenothera pterosperma*)	BLM & Forest Service Sensitive	X	X
Idaho sedge (*Carex idahoa* = C. *parryana* ssp. *Idahoa*)	BLM & Forest Service Sensitive	X	X
Earth lichen (*Catapyrenium congestum*=*Heteroplacidium congestum*)	BLM Sensitive	X	
Mahala mat (*Ceanothus prostratus*)	BLM Sensitive	X	
Cusick's false yarrow (*Chaenactis cusickii*)	BLM Sensitive	X	
Desert pincushion (*Chaenactis stevioides*)	BLM Sensitive	X	
Birchleaf mountain-mahogany (*Cercocarpus montanus*)	BLM Sensitive	X	
Lancefeaf springbeauty (*Claytonia multiscapa* var. *flava* = *C. lanceolata* var. *multiscapa*)	BLM Sensitive	X	
Yellow bee plant (*Cleome lutea*)	BLM Sensitive	X	
Twisted/Alkali cleomella (*Cleomella plocasperma*)	BLM Sensitive	X	
Short-spored jelly lichen (*Collema curtisporum*)	BLM Sensitive	X	
Uinta Basin cryptantha (*Cryptantha breviflora*)	BLM Sensitive	X	
Tufted cryptantha (*Cryptantha caespitosa*)	BLM Sensitive	X	
Malheur cryptantha (*Cryptantha propria* = *Oreocarya propria*)	BLM Sensitive	X	
Miner's candle (*Cryptantha scoparia)*	BLM Sensitive	X	
Silky cryptantha (*Cryptantha sericea* = *Oreocarya sericea*)	BLM Sensitive	X	
Sepal-tooth dodder (*Cuscuta denticulata*)	BLM Sensitive	X	
Greeley's wavewing (*Cymopterus acaulis*, var. *greeleyorum*)	BLM Sensitive	X	
Ibapah springparsley (*Cymopterus ibapensis* = *Epallageiton ibapensis*)	BLM Sensitive	X	
California damasonium (*Damasonium californicum*= *Machaerocarpus californicus*)	BLM Sensitive	X	
Silver-skin lichen (*Dermatocarpon lorenzianum*)	BLM Sensitive	X	
Doublet (*Dimeresia howellii*)	BLM & Forest Service Sensitive	X	X
Bacigalupi's downingia (*Downingia bacigalupii*)	BLM Sensitive	X	

Table 3-18
Special Status Species within the Planning Area

Common Name (*Scientific Name*)	Status*	Federal Land	
		BLM	Forest Service
Harlequin calicoflower, Parti-color Dowingia (*Downingia insignis*)	BLM Sensitive	X	
Pointed draba, Beavertip draba, Rockcress draba (*Draba globosa = D. apiculata*)	BLM Sensitive	X	
White false tickhead (*Eatonella nivea*)	BLM Sensitive	X	
Swamp willow-herb (*Epilobium palustre*)	BLM Sensitive	X	
Rabbitbrush goldenweed, Bloomer's goldenweed (*Ericameria bloomeri =Haplopappus bloomeri*)	BLM Sensitive	X	
Windward's goldenbush (*Ericameria discoidea* var. *winwardii =Ericameria winwardii*)	BLM Sensitive	X	
Linearleaf fleabane (*Erigeron linearis*)	BLM Sensitive	X	
Matted buckwheat (*Eriogonum caespitosum)*	BLM Sensitive	X	
Welsh's buckwheat (*Eriogonum capistratum* var. *welshii*)	BLM Sensitive	X	
Great Basin desert buckwheat (*Eriogonum desertorum*)	BLM Sensitive	X	
Hooker's buckwheat (*Eriogonum hookeri*)	BLM & Forest Service Sensitive	X	X
Calcareous buckwheat (*Eriogonum ochrocephalum* var. *calcareum*)	BLM Sensitive	X	
Packard's buckwheat (*Eriogonum shockleyi* var. *packardiae*)	BLM Sensitive	X	
Shockley's matted buckwheat (*Eriogonum shockleyi* var. *shockleyi*)	BLM Sensitive	X	
Railroad Canyon wild buckwheat (*Eriogonum soliceps)*	BLM Sensitive	X	
Cushion cactus/spinystar (*Escobaria vivipara* var. *vivipara=Coryphantha vivipara*)	BLM Sensitive	X	
White-margined wax plant (*Glyptopleura marginata*)	BLM Sensitive	X	
Spiny hopsage (*Grayia spinosa)*	BLM Sensitive	X	
Cronquist's forget-me-not (*Hackelia cronquistii = H. patens*)	BLM Sensitive	X	
Bug-leg goldenweed (*Haplopappus insecticruris= H. integrifolius*)	BLM Sensitive	X	
Prostate huchensia (*Hornungia procumbens = Hutchinsia procumbens*)	BLM Sensitive	X	
Cooper's rubber-plant (*Hymenoxys cooperi* var. *canescens = Actinea canescens*)	BLM Sensitive	X	
Large Canadian St. John's wort (*Hypericum majus = H. canadense* var. *majus*)	BLM Sensitive	X	
Ballhead ipomopsis (*Ipomopsis congesta* ssp. *crebrifolia)*	BLM Sensitive	X	
Spreading gilia (*Ipomopsis polycladon= Gilia polycladon*)	BLM & Forest Service Sensitive	X	X
Davis' peppergrass (*Lepidium davisii= L. montanum*)	BLM Sensitive	X	
Thick-leaf pepperweed (*Lepidium integrifolium*)	BLM Sensitive	X	
Pryor Mountain bladderpod (*Lesquerella lesicii*)	BLM Sensitive	X	
Middle Butte bladderpod (*Lesquerella obdeltata*)	BLM Sensitive	X	

Table 3-18
Special Status Species within the Planning Area

Common Name (*Scientific Name*)	Status*	Federal Land	
		BLM	Forest Service
Sacajawea's bitterroot (*Lewisia sacajaweana*)	BLM & Forest Service Sensitive	X	X
Nuttall desert-parsley (*Lomatium nuttallii*)	BLM Sensitive	X	
Packard's desert parsley (*Lomatium packardiae*)	BLM Sensitive	X	
Inch-high lupine (*Lupinus uncialis*)	BLM & Forest Service Sensitive	X	X
Torrey's desert dandelion (*Malacothrix torreyi = M. sonchoides* var. *torreyi)*	BLM Sensitive	X	
United blazingstar (*Mentzelia congesta*)	BLM Sensitive	X	
Smooth stickleaf (*Mentzelia mollis*)	BLM Sensitive	X	
Leafy nama (*Nama densum)*	BLM Sensitive	X	
Green needlegrass (*Nassella viridula =Stipa viridula*)	BLM Sensitive	X	
Rigid threadbush (*Nemacladus rigidus*)	BLM Sensitive	X	
Saint Anthony evening-primrose (*Oenothera psammophila*)	BLM Sensitive	X	
Challis crazyweed (*Oxytropis besseyi* var. *salmonensis = O. nana* var. *salmonensis*)	BLM Sensitive	X	
Creeping nailwort (*Paronychia sessiliflora*)	BLM & Forest Service Sensitive	X	X
Simpson's hedgehog cactus (*Pediocactus simpsonii*)	BLM Sensitive	X	
Idaho penstemon (*Penstemon idahoensis*)	BLM Sensitive	X	
Janish's penstemon (*Penstemon janishiae*)	BLM & Forest Service Sensitive	X	X
Lemhi beardtongue (*Penstemon lemhiensis*)	BLM & Forest Service Sensitive	X	X
Short-lobed penstemon (*Penstemon seorsus*)	BLM Sensitive	X	
Indian apple, Wild crab apple (*Peraphyllum ramosissimum*)	BLM Sensitive	X	
Spine-noded milkvetch (*Peteria thompsoniae= P. nevadensis*)	BLM Sensitive	X	
Obscure phacelia (*Phacelia inconspicua*)	BLM Sensitive	X	
Malheur yellow phacelia (*Phacelia lutea* var. *calva*)	BLM Sensitive	X	
Least phacelia, Small-flower phacelia (*Phacelia minutissama*)	BLM Sensitive	X	
Idaho twinpod, Salmon twin bladderpod (*Physaria didymocarpa* var. *lyrata*)	BLM Sensitive	X	
Small-flowered ricegrass (*Piptatherum micranthum = Oryzopsis micrantha*)	BLM & Forest Service Sensitive	X	X
Thorn skeleton weed (*Pleiaranthus spinosa = Stephanomeria spinosa = Lygodesmia spinosa*)	BLM Sensitive	X	
Platte cinquefoil (*Potentilla plattensis*)	BLM Sensitive	X	
Alkali primrose (*Primula alcalina*)	BLM Sensitive	X	
Cusick's primrose (*Primula cusickiana)*	BLM Sensitive	X	
Turtleback, Annual brittlebrush (*Psathyrotes annua = Bulbostylis annua*)	BLM Sensitive	X	

Table 3-18
Special Status Species within the Planning Area

Common Name (*Scientific Name*)	Status*	Federal Land	
		BLM	Forest Service
Dwarf wooly-heads (*Psilocarphus brevissimus*)	BLM & Forest Service Sensitive	X	X
Beartooth large-flowered goldenweed (*Pyrrocoma carthamoides* var. *subsquarrosa* = *haplopappus carthamoides* var. *subsquarrosus*)	BLM & Forest Service Sensitive	X	X
Thinleaf goldenhead (*Pyrrocoma linearis* = *Haplopappus uniflorus* var. *howellii*)	BLM Sensitive	X	
Snake River goldenweed, Radiate goldenweed (*Pyrrocoma radiata* = *Haplopappus raidatus*)	BLM Sensitive	X	
White grouse pellet lichen (*Rhizoplaca idahoensis*)	BLM & Forest Service Sensitive	X	X
Least snapdragon (*Sairocarpus kingii*)	BLM Sensitive	X	
Silver chicken sage (*Sphaeromeria argentea*)	BLM Sensitive	X	
Lost River silene (*Silene scaposa* var. *lobata*)	BLM Sensitive	X	
Basin goldenrod (*Solidago spectabilis*)	BLM Sensitive	X	
Few-flowered goldenrod (*Solidago velutina* = *S. sparsifolia*)	BLM Sensitive	X	
White-stemmed globe-mallow (*Sphaeralcea munroana*)	BLM Sensitive	X	
Tall dropseed (*Sporobolus compositus* var. *compositus* = *Sporobolus asper*)	BLM Sensitive	X	
Malheur princesplume (*Stanleya confertiflora*=*S. annua, S. rara, S. viridiflora*)	BLM Sensitive	X	
Smooth buckwheat (*Stenogonum salsuginosum* = *Eriogonum salsuginosum*)	BLM Sensitive	X	
Rush aster (*Symphyotrichum boreale* = *Aster junciformis*)	BLM Sensitive	X	
American wood sage (*Teucrium canadense* var. *occidentale*)	BLM Sensitive	X	
Woven-spore lichen (*Texosporium sancti-jacobi* = *Cyphellium sancti-jacobi*)	BLM Sensitive	X	
Wavy-leaf thelypody (*Thelypodium repandum*)	BLM Sensitive	X	
Meadow pennycress (*Thlaspi parviflorum*)	BLM Sensitive	X	
Showy townsendia (*Townsendia florifera*)	BLM Sensitive	X	
Scapose townsendia (*Townsendia scapigera*)	BLM Sensitive	X	
Douglas's clover (*Trifolium douglasii*)	BLM Sensitive	X	
Owyhee clover (*Trifolium owyheense*)	BLM Sensitive	X	
Plumed clover (*Trifolium plumosum* var. *amplifolium*)	BLM & Forest Service Sensitive	X	X
Idaho range lichen (*Xanthoparmelia idahoensis*)	BLM Sensitive	X	
Sitka columbine (*Aquilegia formosa*)	Forest Service Sensitive		X
Lost River milvetch (*Astragalus amnis-amissi*)	Forest Service Sensitive		X
White Cloud milkvetch (*Astragalus vexilliflexus* var. *nubilus*)	Forest Service Sensitive		X
Beautiful bryum (*Bryum calobryoides*)	Forest Service Sensitive		X
Centennial rabbitbrush (*Chrysothamnus parryi* ssp. *montanus*)	Forest Service Sensitive		X

Table 3-18
Special Status Species within the Planning Area

Common Name (*Scientific Name*)	Status*	Federal Land	
		BLM	Forest Service
Davis' wavewing (*Cymopterus davisii*)	Forest Service Sensitive		X
Douglas' biscuitroot (*Cymopterus douglasii*)	Forest Service Sensitive		X
Serpentine draba (*Draba oreibata* var. *serpentine*)	Forest Service Sensitive		X
Payson bladderpod (*Lesquerella paysonii*)	Forest Service Sensitive		X
Idaho pennycress, Stanley thlaspi (*Noccaea idahoensis* var. *aileeniae*)	Forest Service Sensitive		X
Cache beardtongue (*Penstemon compactus*)	Forest Service Sensitive		X
Marsh's bluegrass (*Poa abbreviate* ssp. *marshii*)	Forest Service Sensitive		X
Tobias' saxifrage (*Saxifraga bryophora* var. *tobiasiae*)	Forest Service Sensitive		X
Tolmie's saxifrage (*Saxifraga tomiei* var. *ledifolia*)	Forest Service Sensitive		X

3.6 Wild Horse and Burro Management

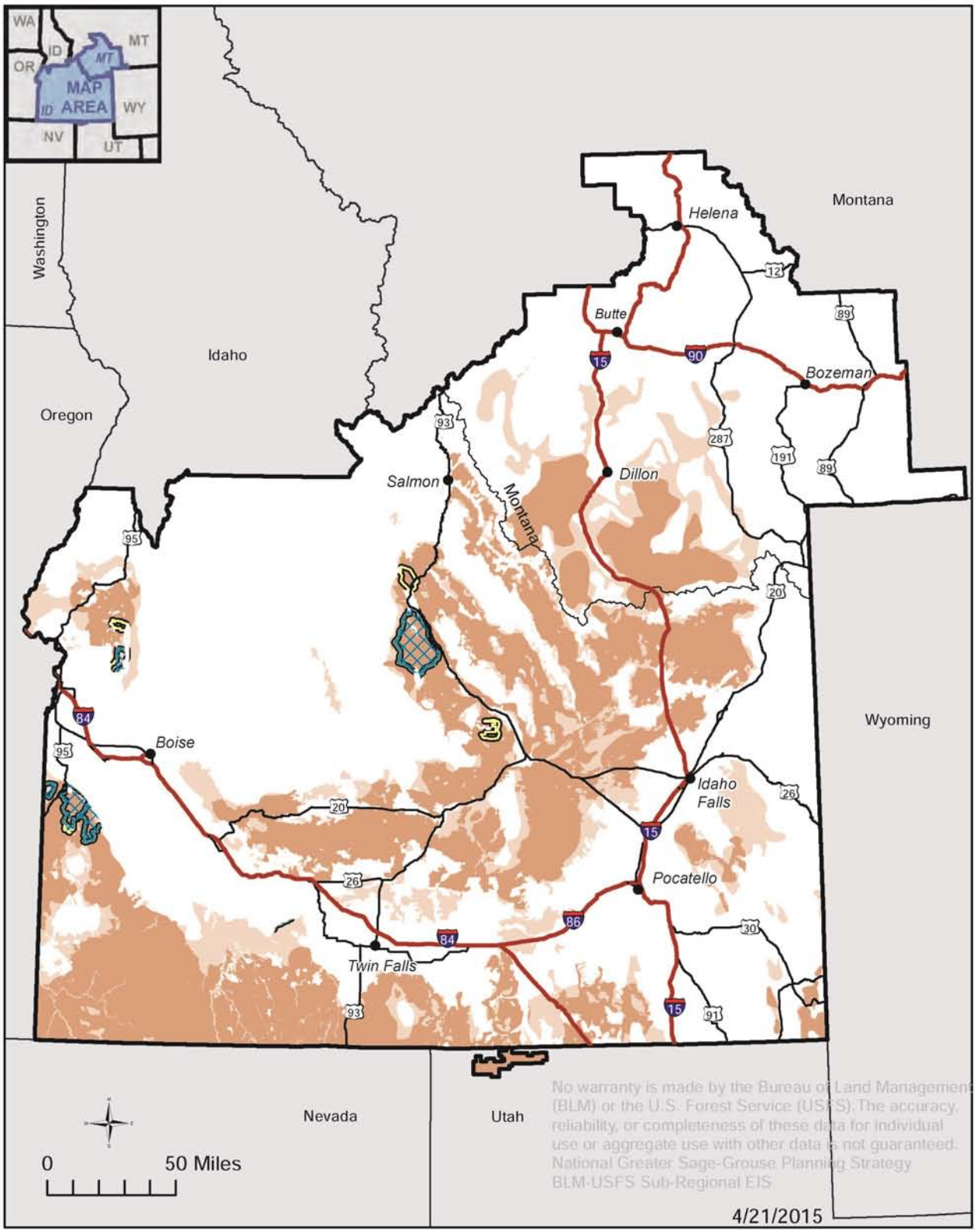
The Wild Free-Roaming Horses and Burros Act of 1971, as amended by FLPMA and the Public Rangeland Improvement Act of 1978, direct the protection and management of wild horses and burros on BLM-administered and National Forest System lands. Both the BLM and Forest Service have responsibility for managing Wild and Free Roaming Horses and Burros. Under the Act, the BLM identified herd areas as places used as habitat by a herd of wild horses at the time the Act was passed. To carry out its duties under the 1971 law, the BLM periodically evaluates each herd area to determine if it has adequate food, water, cover, and space to sustain healthy and diverse wild horse and burro populations over the long-term. The areas that meet these criteria are then designated as HMAs, where horses or burros can be viably managed as a component of the BLM-administered lands. The BLM designates an appropriate management level (AML) and specifies an allowable range in horse numbers for each HMA based upon available forage and other resources necessary to sustain the horse or burro populations, as well as resource objectives and other designated uses of the BLM-administered lands.

Wild horse and burro management areas on National Forest System lands are called territories. However, no active territories exist within the planning area. There are two inactive territories in Idaho on the Challis National Forest which no longer have any wild horses.

3.6.1 Conditions on BLM-Administered Lands

Within the planning area, the BLM manages six HMAs, all in the state of Idaho: four in the Boise District, one in the Twin Falls District, and one in the Idaho Falls District. Additionally, there are nine herd areas within the planning area, five of which are in southwestern Montana, and four of which are in Idaho (see **Figure 3-2**). The HMAs encompass approximately 361,900 acres of BLM-administered lands, and support between 424 and 617 head of horses when populations are within AML. Approximately 551 horses

Figure 3-2
Wild Horse and Burro Herd Management Areas and Herd Areas



Alternative B Habitat
- Preliminary Priority Management Atea
- Preliminary General Management Area
- Wild Horse and Burro Herd Management Areas
- Wild Horse and Burro Herd Areas
- Major Cities
- Idaho and SW Montana Sub-regional boundary
- Interstate Highway
- US Highway

are on BLM-administered lands within these HMAs based upon current population estimates (**Table 3-19**). A wild horse is assumed to consume 12 AUMs per year; as such, the AML can be multiplied by 12 to determine the number of AUMs used by wild horses.

Table 3-19
HMAs within the Planning Area

HMA	AML Range	Population Estimate[1]	Acres of BLM-Administered Lands within Planning Area
Black Mountain	30-60	55	38,900
Challis	185-253	185	154,300
Fourmile	60[2]	65	13,000
Hardtrigger	66-130	141	57,200
Sands Basin	33-64	65	9,500
Saylor Creek	50[3]	40	89,000

Source: Manier et al. 2013
[1]Population estimates current as of November 2012
[2] An AML target, rather than a range, was specified for this herd by the existing LUP
[3]AML not established, but is currently managed for 50 horses in accordance with the 1987 Jarbidge Resource Management Plan.

3.6.2 Conditions on National Forest System Lands

The Forest Service does not manage any wild horses or burros within the planning area.

3.6.3 Regional Context

Table 3-20, displays acres of wild horse and burro territories in GRSG habitat (Manier et al. 2013). In the table, data are presented by surface management agency and their occurrence within occupied habitat in the planning area.

Table 3-20
Acres of Wild Horse and Burro Areas within GRSG Habitat in the Planning Area

Surface Management Agency	Acres within PGH[1]			Acres within PPH[1]		
	Planning Area	MZ II/VII[2]	MZ IV	Planning Area	MZ II/VII[2]	MZ IV
BLM	41,300	2,007,200	601,400	228,500	1,792,900	1,177,200
Forest Service	0	0	0	0	0	0
Tribal and Other Federal	0	50,700	7,200	0	69,800	0
Private	2,300	602,400	29,100	4,400	271,200	51,900
State	3,500	74,300	4,800	14,200	83,200	15,000
Other	0	0	0	0	0	0

Source: Manier et al. 2013
[1]Includes number of acres where BLM and Forest Service Wild Horse and Burro areas overlap GRSG habitat.
[2]BER combined acres for MZs II and VII

3.7 Wildland Fire Management

The Federal Wildland Fire Management Policy was developed by the Secretaries of the Departments of the Interior and Agriculture in 1995 in response to dramatic increases in the frequency, size, and catastrophic nature of wildland fires in the United States. The 2001 review and update of the 1995 Federal Wildland Fire Management Policy consists of findings, guiding principles, policy statements, and implementation actions, and replaces the 1995 Federal Wildland Fire Management Policy. Known as the 2001 Federal Wildland Fire Management Policy (DOI et al. 2001), this update recommends that federal fire management activities and programs include the following:

- Provide for firefighter and public safety
- Protect and enhance land management objectives and human welfare
- Integrate programs and disciplines
- Require interagency collaboration
- Emphasize the natural ecological role of fire
- Contribute to ecosystem sustainability

The Federal Wildland Fire Management Policy provides nine guiding principles fundamental to the success of the federal wildland fire management program and the implementation of review recommendations. These umbrella principles compel each agency to review its policies to ensure compatibility.

The wildland fire management program encompasses the full range of hazardous fuels, management of wildfire, and the rehabilitation of lands affected by wildfire.

The wildfire suppression program utilizes a coordinated effort to respond to all unplanned ignitions (wildfire) with a preplanned, appropriate response. Each response is guided by LUP and fire management plan direction. As the severity and number of wildfires escalates, the further response and prioritization of fire suppression resources becomes a collaborative effort with all management levels within BLM and Forest Service working closely with interagency partners.

Trend analysis of fire starts and acres burned in the sage steppe ecosystem is very general and dependent predominately upon weather and fuels conditions. The relative fuel conditions of live fuel moistures and fine fuel loadings coupled with weather conditions such as relative humidity, wind speed, and days since last rainfall drive large fire growth in the grass fuel type.

Fire occurrence is weighed towards human causes, especially around urban centers and along major highway corridors. However, lightning is the major contributor to multiple large fire days and high numbers of acres burned. Lightning storms generally track from southwestern towards eastern Idaho, leaving successive lightning starts across all three southern districts, often times in remote or difficult to reach areas. These lightning events are commonly

associated with strong winds, which contribute to rapid large fire growth. Summer storms commonly lack significant rainfall. It should be reasonably expected that the majority of large fire days correspond to high percentile Burning Index days. Burning Index is a number related to the contribution of fire behavior to the effort of containing a fire. The Burning Index rates fire danger related to potential flame length over a fire danger rating area.

Since 2006, emphasis upon the protection of GRSG habitat during suppression actions has taken center stage in planning and operational discussions. High numbers of PPH and PGH acres were burned in 2007 and 2012. The majority of these acres were burned during corresponding high Burning Index days or periods. Fire season generally extends from early June thru October, and large fires can be expected during that time.

Fire Regime Condition Class

Natural Fire Regime: A natural fire regime is a general classification of the role fire would play across a landscape without modern human mechanical intervention (Agee 1993; Brown 1995). The five natural fire regimes are classified based on average number of years between fires (fire frequency) combined with the severity of the fire on the dominant overstory vegetation (amount of vegetation replacement). These five regimes include:

I – 0 to 35 year frequency and low (surface fires most common) to mixed (less than 75 percent of the dominant overstory vegetation replaced) severity

II – 0 to 35 year frequency and high severity (greater than 75 percent of the dominant overstory vegetation replaced)

III – 35 to 100+ year frequency and mixed severity (less than 75 percent of the dominant overstory vegetation replaced)

IV – 35 to 100+ year frequency and high severity (greater than 75 percent of the dominant overstory vegetation replaced)

V – 200+ year frequency and high severity (greater than 75 percent of the dominant overstory vegetation replaced)

Fire regime condition class (FRCC) is a classification of the amount of change in fire frequency and severity from the natural fire regime (Hann and Bunnell 2001). The three classes are based on low (FRCC 1), moderate (FRCC 2), and high (FRCC 3) change from the natural fire regime (Hardy et al. 2001; Schmidt et al. 2002). The change in natural fire regime results from changes to one or more of the following fire regime attributes: vegetation characteristics (e.g., species composition, structural stages, stand age, canopy closure, and mosaic pattern); fuel composition; fire frequency, severity, and pattern; and other associated disturbances (e.g., insect and disease mortality, grazing, and drought).

Characteristic vegetation and fuel conditions are considered to be those that occurred within the natural fire regime. Uncharacteristic conditions are considered to be those that did not occur within the natural fire regime. Examples of uncharacteristic conditions include

invasive species (e.g., weeds, insects, and diseases) or excessive vegetation removal. The amount of change is based on comparison of the fire regime attributes as identified above to the natural fire regime. The amount of change is then classified to determine the FRCC.

3.7.1 Conditions within the Planning Area

The Hazardous Fuels Reduction Program (HFR) involves a variety of treatments to accomplish the following:

- Modify vegetation to provide for firefighter safety
- Reduce the potential of wildfire spread
- Reduce the detrimental effects of wildfire on a landscape
- Restore ecosystem resiliency
- Allow the natural role of fire on the landscape
- Protect private holdings and infrastructure
- Decrease the costs of rehabilitation efforts after a wildfire has occurred

Depending on the specifics of the overall project, multiple treatment types may be involved over several years to obtain the specifications for the project. One example of this would be: For an annual grass dominated area, prescribed fire will be used to remove existing layers of the annual grass and reduce the seed source. Chemical applications would be utilized to further reduce the seed source and the resulting new annual grass plants. Mechanical seedings of perennial (native or nonnative, grass/shrub/forb) mixtures would occur, pending the most successful time of year for applications.

Examples of treatment types include:

- **Prescribed Fire (Treatment)** – An HFR Treatment Category for any fire ignited by management actions to meet specific objectives and to achieve Fire Management objectives.
- **Mechanical (Treatment)** – An HFR Treatment Category that describes work that manually or mechanically removes or modifies fuel load structures to achieve Fire Management objectives.
- **Other (Treatment)** – An HFR Treatment Category that describes work involving the use of chemicals and biological methods to achieve Fire Management objectives.

In Idaho, the HFR Program has been in place since the start of the 2000 National Fire Plan identified the need and funding source to develop and maintain the program. Within the last 5 years, which would represent the most current treatments on the existing landscape, the following acreage and types of treatments are shown below. The prescribed fire acreages have decreased from historical levels due to multiple large scale wildfires accomplishing the

removal of undesirable vegetation in areas planned for future projects. Mechanical treatments have increased in, both, seeding and mechanical reductions of conifer encroachment throughout PPH and PGH areas. The use of chemical or "Other" types of treatments has grown to increase the probability of success of seeding(s) of perennial (native or nonnative, grass/shrub/forb) mixtures by removing the dominance and competitiveness of the undesirable annual grass and weed species. Biological or "Other" treatments (insects, goat, and specific pathogens) have recently been of interest in very specific areas due to the "high risk" in areas that may have significant values should accidents occur during implementation of mechanical treatments (e.g., rocks and windows).

As described in Section 4.2.2, cheatgrass can dramatically alter sagebrush ecosystems and their fire frequencies. Increasing exotic annual grasses, primarily cheatgrass, are resulting in sagebrush loss and degradation (USFWS 2010a, p. 13,932). Cheatgrass can more easily invade and create its own feedback loop in areas that are dry with understory vegetation cover that is not substantial or that are experiencing surface disturbance, such as road construction. It can facilitate short fire return intervals by outcompeting native herbaceous vegetation with early germination, early moisture and nutrient uptake, prolific seed production, and early senescence[1] (Hulbert 1955; Mack and Pyke 1983; Pellant 1996).

Furthermore, by providing a dry, fine fuel source during peak fire season, cheatgrass increases the likelihood of fire, which increases the likelihood of further cheatgrass spread (Pellant 1990). While research and management is focused on developing means of controlling cheatgrass on a large scale, the only current management actions under the fire program to minimize the spread of fire in GRSG habitat are fuels treatments, fire prevention planning, and effective fire suppression geared toward protecting GRSG habitat. Reducing the spread of cheatgrass and the scale of wildfire through appropriate conservation actions could also result in more or improved habitat for GRSG. These actions would be those associated with other BLM and Forest Service post-fire programs, such as ES&R and BAER.

3.7.2 Trends

Table 3-21 presents fuel treatment types and acreages over the past five years.

Table 3-21
BLM Treatment Types and Acreages Over the Past Five Years

Treatment Type	2008	2009	2010	2011	2012
Prescribed fire	11,199 acres	8,647 acres	7,189 acres	6,398 acres	3,021 acres
Mechanical	46,073 acres	38,992 acres	33,975 acres	30,987 acres	30,725 acres
Other	59,003 acres	47,991 acres	36,500 acres	39,895 acres	71,666 acres

Source: BLM GIS 2015

[1]Deterioration due to age

Over the past few years, the focus of the HFR program was to treat acreages within the WUI. This was specific to protecting private in-holdings in the attempt to decrease the detrimental effects of wildfire to human structures and the associated infra-structure for the communities.

Emergency Stabilization and Rehabilitation (ESR)

Alteration to the historic fire regime has substantially reduced the sagebrush steppe communities of the Sub Unit and the larger Great Basin. The exclusion of wildfire within the upper elevations shrub steppe communities (primarily mountain big sagebrush) has converted GRSG habitat into juniper woodland.

The greatest loss of GRSG habitat however has been from cheatgrass proliferation and wildfire within the lower elevation sagebrush communities (primarily Wyoming big sagebrush). Historically, wildfire was not a common occurrence within the Wyoming big sagebrush sites. Current literature estimates the fire interval at approximately 100 years. When these sites did burn, the discontinuous fuels of the scattered native bunch grasses likely resulted in small, discontinuous fires. Conversely, cheatgrass is highly flammable due to its uniform fine fuels which dry out early in the growing season. Each recurring fire set the stage for further cheatgrass expansion, resulting in an ever increasing cheatgrass/fire cycle and loss of GRSG habitat. On many of these sites, fire-return intervals have been shortened to between 2 and 4 years (Whisenant 1990).

Lower elevation shrub steppe communities within the subunit (even those containing minimal cheatgrass understories) will cross a threshold into fire maintained cheatgrass dominated communities unless they are successfully rehabilitated within the first couple years following wildfire. Such areas are also highly susceptible to noxious weed invasions. Therefore, successfully reestablishing perennial vegetation within this narrow time frame is essential for reducing the loss of low elevation GRSG habitat.

Fire rehabilitation consists of mitigating damaging effects from wildfire and in restoring vegetative structure and function to recently burned fire damaged areas which cannot recover on their own. These efforts consist of seeding perennial grasses, shrubs, and forbs. The seeding technique is based largely on seed size. Most grasses (which have relatively large seeds) are drill seeded to effectively cover the seed, whereas sagebrush and many forbs (which consist of small seeds) are most successful broadcast seeded.

Drought and invasive annual grass competition are the two biggest challenges to reestablishing perennial vegetation following wildfire on the low elevation sites. Seedings are most successful during years of adequate precipitation and on sites where cheatgrass competition is minimal such as recently burned sagebrush stands in good condition, or sagebrush stands with cheatgrass in the understory which burned hot enough consume cheatgrass seed lying on the soil surface underneath the sagebrush canopy. Accordingly, the higher the density of sagebrush cover prior to the burn, the greater the likelihood for seedings success. Because sagebrush fires burn hotter and slower than grassland fires, the cheatgrass seed lying on the soil surface underneath the sagebrush canopy is usually consumed, whereas the seed laying outside of the sagebrush canopy or other shrub free areas

(such as previously burned cheatgrass-dominated sites) is not consumed and remains viable. Accordingly, the areas underneath the burned sagebrush canopy create a cheatgrass free "clean" seedbed which allows seeded species to establish relatively free of cheatgrass competition. Although the areas outside of the canopies will remain dominated by cheatgrass, the established plants underneath the former sagebrush canopy will usually outcompete the adjacent cheatgrass over time. However, strong wind-driven fires often prevent consumption of cheatgrass seed, thereby require cheatgrass control. Seeding previously burned cheatgrass-dominated sites devoid of a brush overstory, is not usually successful because these rapid cheatgrass driven fires do not provide enough heat to consume cheatgrass seed lying on the soil surface.

Herbicides have proven to be the most effective and noninvasive method for controlling annual grasses prior to seeding. Before 1991, the use of herbicides to control invasive annual grasses was prohibited on public land. Therefore, various tilling methods such as plowing and disking were the only available options. Unfortunately, these treatments damaged remaining native vegetation and biologic soil crusts, increased site susceptibility to wind erosion and often resulted in seed being drilled too deeply, thereby opening the site for total cheatgrass domination when seedings were unsuccessful. Prescribed fire was used in attempts to kill cheatgrass seed while still on the plant. Although such fires kill some seed still on the plant, they do not burn hot enough to kill cheatgrass seed on the soil surface.

Intensive livestock grazing is often suggested for controlling cheatgrass competition. Although targeted grazing may have some applications for fuels management, it is not effective in reducing cheatgrass competition (Hempy-Mayer and Pyke 2008). During the short time when cheatgrass is highly palatable in the spring, a sufficient number of livestock cannot be concentrated on a small enough area to reduce the cheatgrass seed significantly or reduce cheatgrass seed lying on the soil surface. In addition, this type of grazing can be detrimental to remaining perennial grasses, opening the site up for further cheatgrass expansion in the future.

The BLM and Forest Service are authorized to use various approved contact and pre-emergent herbicides for controlling invasive annual grasses. Both types of herbicides have their advantages and shortcomings.

Contact herbicides such as Glyphosate have been widely and successfully used within the Boise, Twin Falls, and Idaho Falls Districts in Idaho. These herbicides must be applied during the short period that cheatgrass is actively growing, and before seed development occurs. When numerous cheatgrass crops occur on a given year, repeated applications are required. Additionally, application rates must be tuned to minimize damage to existing perennial plants while effectively controlling the invasive annuals. Glyphosate binds quickly to soil particles and is inactivated. Unbound glyphosate is degraded by soil bacteria.

Pre-emergent herbicides such as imazapic and sulfometuron methyl are highly effective in controlling invasive annual grasses while having minimal impacts on most established perennial species. They are also classified as nontoxic to fish and wildlife. These herbicides do not require the specific application timing needed with glyphosate, and their residual

action in the soil controls annual grasses whenever they happen to germinate. The residual action lasts from 1 to 3 years, depending on soil moisture, pH, and temperature. In addition to controlling invasive annual grasses prior to seeding, these herbicides could be used to help maintain and protect existing native plant communities which have been invaded with annual grasses. Such treatments would allow the natives to gain a competitive advantage over the exotic annuals, and the associated reduction in annual grass fuels would reduce the site's risk to wildfire. A limitation of these herbicides is their potential to damage crops at extremely low concentrations. Accordingly, these herbicides must be used in accordance to the label and/or other appropriate restrictions in such situations.

Recent research on naturally occurring fungi and bacteria for controlling cheatgrass is encouraging and may prove to be an effective future control method. Examples include Dooley and Beckstead's (2010) *Characterizing the interaction between a fungal seed pathogen and a deleterious rhizobacterium for biological control of cheatgrass*; Stewart's (2009) *The grass seed pathogen Pyrenophora semeniperda as a biological agent for annual Brome grasses*; and Meyer et al.'s (2008). *Cheatgrass (Bromus tectorum) biocontrol using indigenous fungal pathogens.*

Selecting plant materials which can establish and persist in these arid cheatgrass competitive environments is essential for restoring GRSG habitat lost through wildfire. Prior to the mid-1980s, fire rehabilitation funds could not be used for sagebrush seeding. Since that time, sagebrush is included in most fire rehabilitation seedings on its respective ecological sites. Occasionally, during busy fire years, sagebrush seed shortages restrict its use to priority burned GRSG habitat.

Native grasses and forbs are preferred over introduced species when they can meet the above requirements. Historically, few adapted native grass seed was available which could persist in these desert environments, thereby requiring the use of durable introduced species such as crested wheatgrass. Over time, selections of native blue bunch wheatgrass, basin wildrye, Snake River wheatgrass, squirreltail, Indian ricegrass, and Sandberg bluegrass have become increasingly available and are now used extensively in fire rehabilitation seedings for areas that receive at least 10 inches of annual precipitation in recently burned sagebrush communities. For the past ten years, the BLM has been funding the interagency Great Basin Native Plant Selection and Increase Project for increasing native seed availability, especially native forbs important to GRSG, and to improve the success of land managers in establishing native plants (Forest Service 2013b).

However, some important native grasses (such as Thurber's needlegrass) are still not widely available and or effective in competing with cheatgrass in the harshest environments. In these areas, durable introduced species as Siberian wheatgrass and Russian wild rye are still the only viable option. Even those species are often unsuccessful on those sites. Additionally, restoring native plant communities in repeatedly burned annual dominated grasslands has proven largely unsuccessful. Considerable speculation and research has attempted to understand why. A lack of mycorrhiza, soil nutrients, and other changes to the soil environment from years of invasive annual grass domination is believed to be at least partially responsible.

The theory of "assisted succession" is suggested as a method for ultimately restoring these areas by first vegetating with resilient introduced species to break the fire cycle, removing annual grass dominance and deplete annuals' seed source, and restore soil characteristics which may in time make the site more hospitable to restoring the native community, followed by eventual seeding with natives. Accordingly, this is a long term costly process which cannot begin to be implemented until the fire cycle has been broken. Until the majority of annual grass dominated landscapes can be rehabilitated to less fire prone species in the long-term, these short fire cycles will result in a continual loss of these investments, and in the remaining native sagebrush steppe communities.

Seeded areas require rest from livestock use to become fully established, followed by livestock management which will maintain plant health and vigor. BLM policy traditionally prescribes a minimum of two growing seasons rest from livestock grazing, and until plant establishment objectives are met. Depending on moisture and other site conditions, longer rest is often needed before grazing can be resumed. However, a true native restoration could require years of rest from grazing to become successfully established (depending on plant materials used and site characteristics). Such large-scale treatments could have significant repercussions to grazing permittees, and may also necessitate more restrictive management to maintain the native seeded species over the long term.

The ability to protect these areas from recurring wildfire is crucial to maintaining the reestablished sagebrush component. Successful fire rehabilitation seeding can contribute to this goal by changing the fuels from highly flammable annual grasses with high fuel continuity, into less-fire-prone perennial bunch grasses, which stay greener longer and which provide much less fuel continuity (Pellant 1992). Accordingly, when fire does return to these rehabilitated areas, the fires are often spotty and leave substantial unburned sagebrush islands and a seed source for naturally reestablishing sagebrush. Additionally, the burned perennial grasses quickly re-sprout and compete effectively with annual weeds.

Also warranted is a system of effectively managed fuel breaks consisting of durable, fire-resistant vegetation, such as forage kochia, placed primarily along roads or other appropriate, strategic features. In general, vegetative fuel breaks have characteristics that disrupt fuel continuity, harbor lower fuel loads, and have lower volatile compounds and increased moisture content (Pellant 1992). Fuel breaks help provide defensible anchor points for facilitating fire suppression activities and can allow fires to be compartmentalized, ultimately reducing potential fire size.

Burned Area Emergency Response

The Forest Service's Burned Area Emergency Response (BAER) program is designed to address emergency situations through its key goals of protecting life, property, and critical natural and cultural resources. The objective of the program is to determine the need for and to prescribe and implement emergency treatments on federal lands to minimize threats to life or property resulting from the effects of a fire or to stabilize and prevent unacceptable degradation to natural and cultural resources. Loss of vegetation exposes soil to erosion; runoff may increase and cause flooding, sediments may move downstream and damage houses or fill reservoirs, and put endangered species and community water supplies at risk.

BAER teams are staffed by specially trained professionals, and BAER assessments usually begin before a wildfire has been fully contained. There are a variety of emergency stabilization techniques that the BAER team might recommend. Reseeding of ground cover with quick-growing or native species, mulching with straw or chipped wood, construction of straw, rock or log dams in small tributaries, and placement of logs to catch sediment on hill slopes are the primary stabilization techniques used. The team also assesses the need to modify road and trail drainage mechanisms by installing debris traps, modifying or removing culverts to allow drainage to flow freely, adding additional drainage dips and constructing emergency spillways to keep roads and bridges from washing out during floods.

3.7.3 Regional Context

Table 3-22 and **Table 3-23** display wildland fire data for GRSG habitat in the planning area (Manier et al. 2013). **Table 3-23** also uses data from the Forest Service's fire simulator, FSim. FSim generates burn probabilities by simulating fires using historical weather data and current land cover data. **Figure 3-3** and **Figure 3-4** illustrate fire issues in the sub-region.

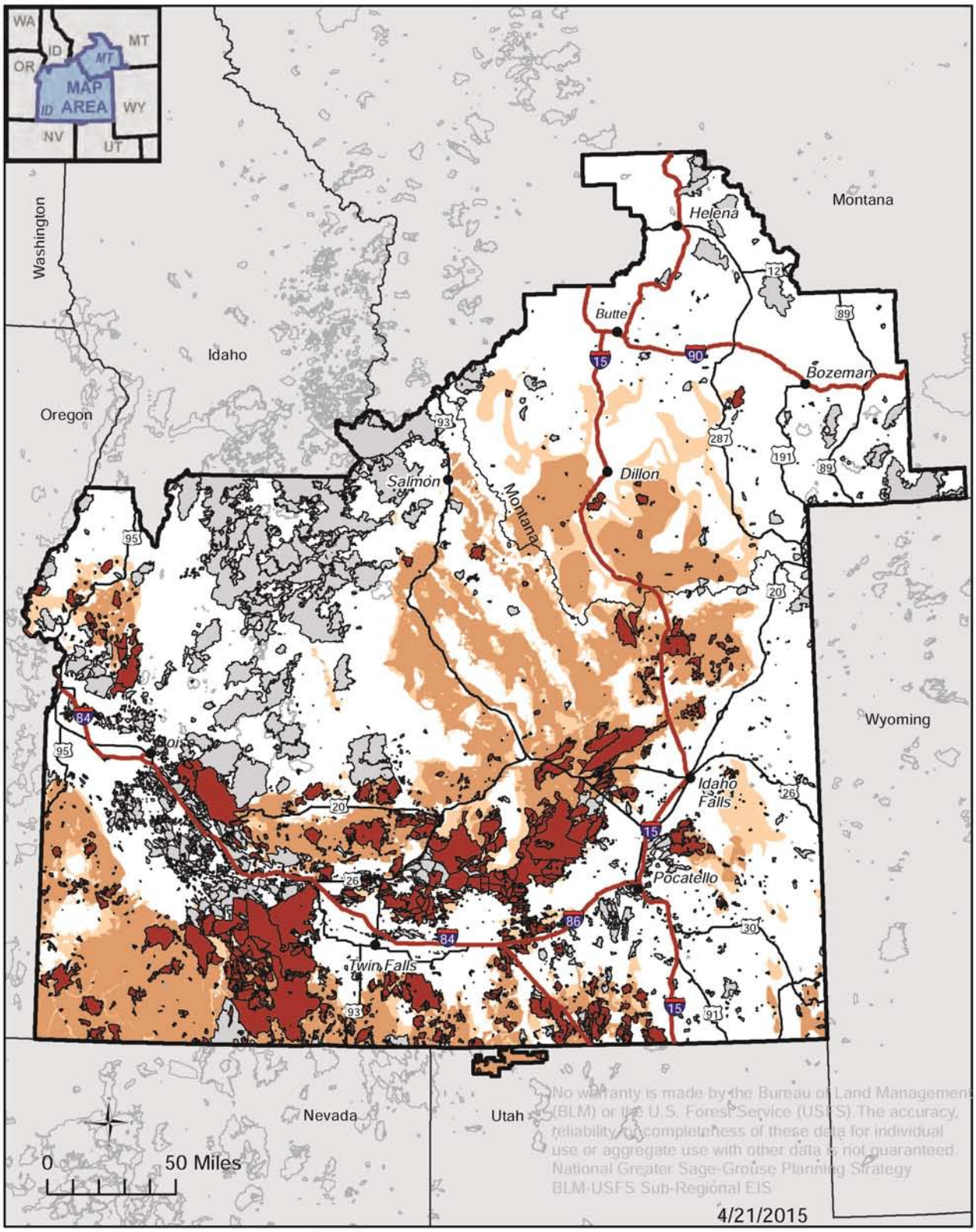
3.8 Livestock Grazing

The foremost authority for providing grazing on BLM-administered lands is the Taylor Grazing Act, which was passed on June 28, 1934. It protects public rangelands and their resources from degradation, provides for orderly use to improve and develop public rangelands, and stabilizes the livestock industry. Following various homestead acts, the Taylor Grazing Act established a system for allotting grazing privileges. The FLPMA and the Public Rangeland Improvement Act (1978) also provide authority for managing grazing on public rangelands managed by the BLM. BLM grazing administration, excluding Alaska, is governed by 43 CFR, Part 4100.

The primary laws that govern grazing on National Forest System lands are the Organic Administration Act of 1897, the Granger-Thye Act of 1950, Multiple Sustained Yield Act of 1960, FLPMA, the Forest Rangeland Renewable Resources and Planning Act of 1974, the National Forest Management Act of 1976, and the Public Rangelands Improvement Act of 1978. The Forest Service manages livestock grazing under direction in 36 CFR, Part 222, Forest Service Manual 2200, and Forest Service Handbook 2209.13. In addition, LUPs identify the suitability of land on National Forest System units to produce forage for grazing animals and to establish programmatic direction for grazing. Specific directions are goals, objectives, desired conditions, standards, guidelines, and monitoring requirements. Although an area may be deemed suitable for use by livestock in a LUP, a project-level analysis evaluating the site-specific impacts of the grazing activity, in conformance with NEPA, is required in order to authorize livestock grazing on specific allotments.

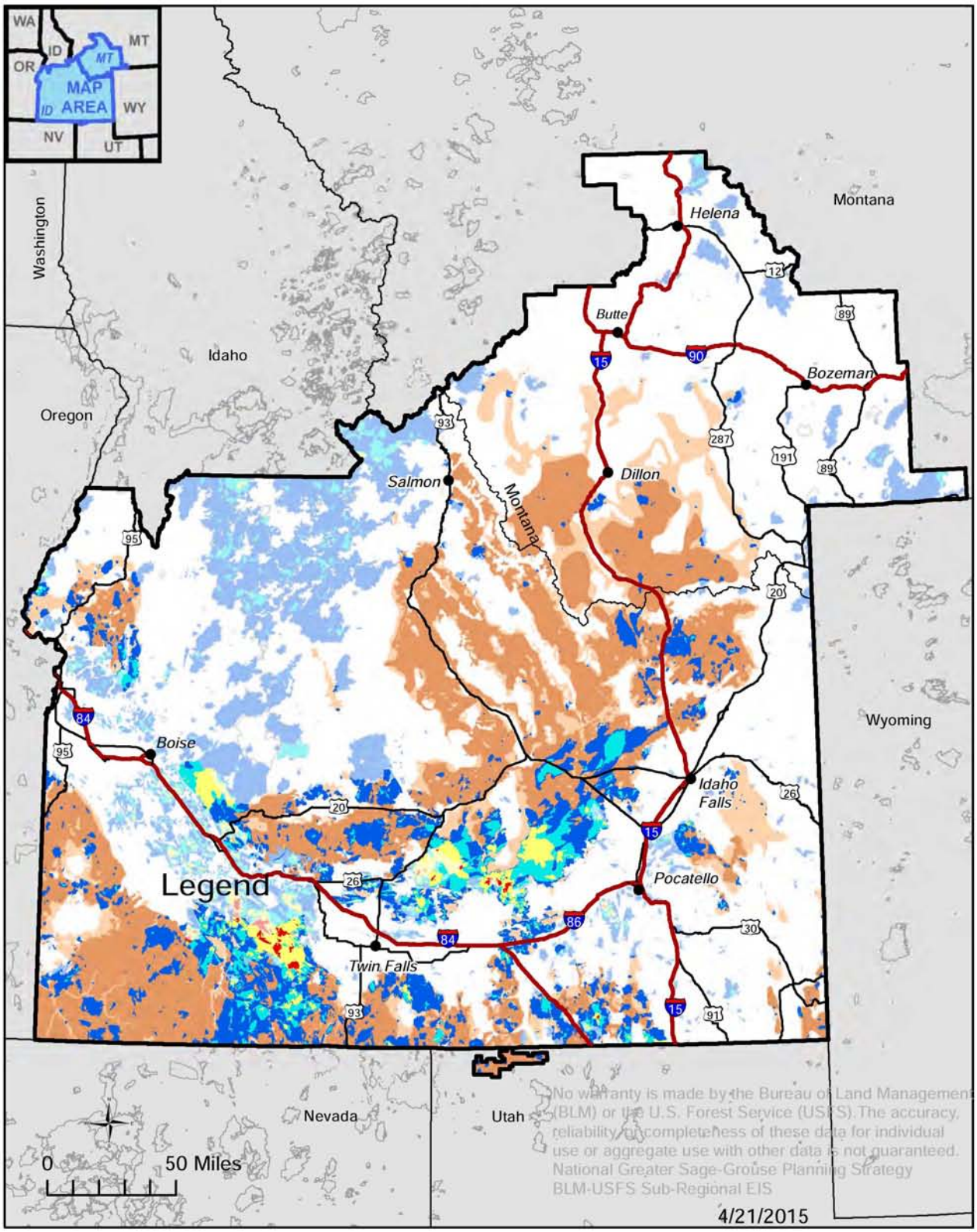
The BLM grazing administration regulations were revised in 1995 to include Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration (43 CFR, Part 4180). On August 12, 1997, Part 4180.2 of 43 CFR put into effect both the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management and the Standards for Rangeland Health and Guidelines for Livestock Grazing Management for

Figure 3-3
Fire History in the Planning Area



Fire History - Within Habitat 1980-2013
Fire History - Outside Habitat 1980-2013
National Historic Perimeters 2000-2013
Preliminary Priority Management Area
Preliminary General Managment Area
Analysis Boundary

Figure 3-4
Fire Frequency in the Planning Area



Fire Frequency 1980-2013

within Habitat
- 5 - 9
- 3 - 4
- 2
- 1

Outside Habitat
- 5 - 9
- 3 - 4
- 2
- 1

National HIstoric Perimeters 2000-2012

Alternative B Habitat

Habitat Management Area
- PHMA
- GHMA

Idaho and SW Montana Sub-regional boundary

Table 3-22
Acres of Wildland Fire within GRSG Habitat

Surface Management Agency	Acres[1] within PGH			Acres[1] within PPH		
	Planning Area	MZ II	MZ IV	Planning Area	MZ II/VII[2]	MZ IV
BLM	400,000	39,300	965,900	836,500	30,100	1,809,400
Forest Service	36,700	8,700	161,500	2,800	12,600	33,900
Tribal and Other Federal	80,200	127,000	82,400	58,100	17,100	58,100
Private	47,200	73,300	190,300	72,400	13,800	417,400
State	28,300	9,800	30,900	38,600	11,100	53,100
Other	100	0	100	600	0	700

Source: Manier et al. 2013
[1]Acres calculated from wildland fires occurring between 2000 and 2012; represents total acres burned.
[2]BER combined acres for MZs II and VII

Table 3-23
Acres with High Probability for Wildland Fire within GRSG Habitat[1]

Surface Management Agency	Acres[2] within PGH			Acres[1] within PPH		
	Planning Area	MZ II	MZ IV	Planning Area	MZ II/VII[3]	MZ IV
BLM	1,801,400	402,600	4,438,100	6,035,000	862,000	11,904,200
Forest Service	428,900	182,700	621,400	601,200	31,100	1,163,200
Tribal and Other Federal	270,100	435,900	301,900	461,500	180,100	487,200
Private	890,300	593,300	2,268,400	1,338,600	871,200	4,068,100
State	363,900	62,700	649,700	600,300	151,600	738,700
Other	26,300	1,300	26,300	61,900	8,400	62,000

Source: Manier et al. 2013
[1] High burn probability is based on a national burn probability dataset generated for the 2012 Fire Program Analysis System and provided by the National Interagency Fire Center. Areas were classified in several categories: non-burnable; low probability, and high probability.
[2] Derived from Forest Service FSim Burn data
[3]BER combined acres for MZs II and VII

Public Lands Administered by the BLM for Montana and the Dakotas. Both of these guidelines apply to grazed BLM-administered lands in the planning area.

Standards are integrated into the BLM's land management by being incorporated into grazing permits and LUPs, as a basis for environmental assessments, through NEPA analysis, and as a basis for monitoring. Guidelines are incorporated into livestock grazing authorizations and management practices. The standards and guidelines provide a clear statement of agency policy and direction for those who use BLM-administered lands for livestock grazing and for those who are responsible for their management and accountable for their conditions. In accordance with 43 CFR, Part 4180, if the BLM determines that grazing management practices or levels of grazing are failing to achieve the standards and to

conform to the guidelines, the BLM will take appropriate action before the next grazing season to adhere to the standards and conform to the guidelines.

3.8.1 Conditions within the Planning Area

Grazing permits and leases are the documents that authorize livestock grazing on BLM-administered lands (43 CFR 4100.0-5). The kind and number of livestock, the period of use (seasonal), the allotment to be used, and the amount of use in animal unit months (AUMs) are mandatory terms and conditions of every grazing permit or lease (43 CFR 4130.3). An AUM is the amount of forage necessary for the sustenance of one cow or its equivalent for one month and an allotment is an area of land designated and managed for grazing of livestock (43 CFR 4100.0-5). Livestock graze on approximately 12,129,800 acres of BLM-administered land within 2,654 allotments in the planning area.

Grazing on National Forest System lands is permitted through term grazing permits that authorize grazing on National Forest System lands. The term grazing permit authorizes the number, kind, and class of livestock as well as the period of use and grazing allotment on which livestock are permitted to graze. Permit holders may not assign or transfer grazing privileges in whole or part (36 CFR 222.1-4). There are 319 allotments on 9,646,900 acres on National Forest System land in the planning area.

Table 3-24 provides information on the allotments managed in the planning area.

Table 3-24
Idaho and Southwestern Montana Sub-region Planning Area—Allotments

District or Forest	Allotments	Acres in Planning Area	Active AUMs	Non Habitat	PGH	PPH
BLM						
BLM Boise District	522	3,709,900	410,800	1,325,500	568,300	1,816,100
BLM Idaho Falls District	873	3,420,500	396,300	551,500	366,600	2,502,400
BLM Twin Falls District	534	3,750,900	543,700	813,600	685,300	2,252,000
BLM Western Montana District	426	849,500	103,600	185,000	211,100	453,500
Total	**2,355**	**11,730,700**	**1,454,400**	**2,875,600**	**1,831,200**	**7,024,000**
Forest Service						
Beaverhead-Deerlodge	83	2,334,900	207,600	2,008,700	177,200	149,000
Boise	16	1,244,500	48,300	1,168,400	56,500	19,600
Caribou-Targhee	64	2,224,600	308,700	2,002,100	164,500	105,800
Curlew	2	47,800	27,900	1,800	6,800	39,200
Salmon-Challis	82	2,184,100	142,200	1,639,500	201,800	342,900
Sawtooth	72	1,611,000	172,100	1,135,300	202,800	273,000
Total	**319**	**9,646,900**	**906,800**	**7,955,800**	**809,600**	**929,500**

Sources: BLM GIS 2015; Forest Service 2013a, 2013c

Facilities for livestock management on BLM-administered and National Forest System lands in the planning area occur at varying densities based upon management needs, landownership patterns and other factors. These facilities include, but are not limited to fences, cattle guards, corrals, pipelines, water troughs, wells and reservoirs. Fences are used to delineate allotment boundaries, pastures within allotments, landownerships, and to exclude the impact of ungulate grazing from certain resources. Corrals are smaller fenced areas that are occasionally located on BLM-administered and National Forest System lands for the purposes of gathering, sorting and handling livestock. Watering facilities are used to improve livestock distribution in areas where naturally occurring surface water is not available, and to reduce livestock use of naturally occurring springs and streams. In addition, supplemental salt, mineral, and protein may be provided for livestock grazing on BLM-administered and National Forest System lands, to aid with distribution of authorized livestock.

Since 1999, an assessment of rangeland health standards and guidelines has been made on 2,219 BLM allotments comprising 9,978,899 acres within the planning area. Of the allotments which have been assessed, 1,403 allotments comprising 3,509,733 acres are meeting all applicable standards and guidelines. An additional 451 allotments comprising 4,581,851 acres are not achieving one or more of the applicable standards and guidelines due to livestock grazing management, but management actions have been implemented to correct the identified issues. On 61 allotments comprising 660,901 acres, standards are not being achieved due to livestock management, but management actions have not yet been taken to make progress towards meeting standards. On 293 allotments comprising 1,226,179 acres, one or more applicable standards was not met due to factors other than livestock management. Standards and guidelines assessments have not been completed on 528 allotments comprising 2,406,238 acres within the planning area. The Forest Service does not have an equivalent assessment to the BLM's rangeland health standards and guidelines, nor are similar assessment data available for National Forest System lands.

3.8.2 Regional Context

Table 3-25 through **Table 3-27** display grazing data for GRSG habitat in the planning area (Manier et al. 2013). In each table, data are presented by surface management agency and their occurrence within occupied habitat in the planning area. Note that the data in **Table 3-26** were assembled in 2008 from available records, and progress has been made towards meeting standards and guidelines since this time. In addition, this table reflects only those allotments not meeting Idaho Standards for Rangeland Health and Guidelines, Standard 8 (Threatened and Endangered Plants and Animals).

Table 3-25
Acres of Grazing Allotments within GRSG Habitat

Surface Management Agency	Acres within PGH			Acres within PPH		
	Planning Area	MZ II/VII[1]	MZ IV	Planning Area	MZ II/VII[1]	MZ IV
BLM	1,976,900	8,916,400	4,670,700	7,256,900	8,946,000	13,408,800
Forest Service	865,700	416,700	1,050,800	954,000	146,500	1,566,700

Table 3-25
Acres of Grazing Allotments within GRSG Habitat

Surface Management Agency	Acres within PGH			Acres within PPH		
	Planning Area	MZ II/VII[1]	MZ IV	Planning Area	MZ II/VII[1]	MZ IV
Tribal and other Federal	128,700	148,500	153,800	262,900	156,400	266,200
Private	465,400	4,524,200	1,201,300	1,101,900	3,957,300	3,044,600
State	214,000	771,600	257,900	629,000	1,032,700	693,600
Other	400	4,200	400	1,400	17,700	1,500

Source: Manier et al. 2013
[1]BER combined acres for MZs II and VII

Table 3-26
Acres of BLM Allotments Not Meeting Land Health Standards within GRSG Habitat

Surface Management Agency	Acres[1] within PGH			Acres[1] within PPH		
	Planning Area	MZ II/VII[2]	MZ IV	Planning Area	MZ II/VII[2]	MZ IV
BLM (Idaho)	440,700	366,000	968,900	1,397,800	286,900	2,617,200

Source: Manier et al. 2013
[1]Only includes allotments not meeting Land Health Standards with grazing as the causal factor
[2]BER combined acres for MZs II and VII

Table 3-27
Miles of Fences within GRSG Habitat

Surface Management Agency	Miles within PGH[1]			Miles within PPH[1]		
	Planning Area	MZ II/VII[2]	MZ IV	Planning Area	MZ II/VII[2]	MZ IV
BLM	4,600	8,800	7,200	10,600	9,300	16,100
Forest Service	1,600	1,100	1,900	2,000	500	2,800

Source: Manier et al. 2013
[1]Derived from a dataset that identifies pasture and allotment borders on BLM-administered and National Forest System land as potential fences
[2]BER combined acres for MZs II and VII

3.9 Recreation

The diverse planning area offers multiple settings for a wide range of opportunities for recreation requiring no permits and no or minimal fees on BLM-administered and National Forest System land.

3.9.1 Conditions within the Planning Area

BLM Recreation

Objectives of the BLM recreation program are to: (1) provide broad spectrum of resource dependent recreation opportunities to meet the needs and demands of public land visitors,

(2) foster agency-wide efforts to improve service to the visiting public, (3) maintain high quality recreation facilities to meet public needs and enhance the image of the agency, and (4) improve public understanding and support of the BLM by effectively communicating the agency's multiple use management programs to the recreation visitor. The BLM accomplishes these objectives by focusing on visitor services, information and interpretation, resource enhancement and protection, facility maintenance and development, tourism programs, improved accessibility, and essential administrative functions. In meeting these objectives, the BLM also considers the presence of other federal, state and local, and private recreation opportunities; the need to assist states and local communities served by the agency to broaden and improve their economic base; and the need to continually monitor recreation trends, customer preferences, and technological advances to improve short, medium and long range strategic planning efforts.

BLM recreation planning and management is based on the establishment of Recreation Management Areas. Recreation management areas fall into two categories: 1) Special Recreation Management Areas (SRMA) and 2) Extensive Recreation Management Areas (ERMA). The BLM Recreation Planning Manual 8320 was released in 2011. Manual 8320 made policy changes to how BLM addresses planning for recreation management areas. Because the policy changes are recent, there are currently no LUPs that have recreation decisions based on the new policy. Consequently, the management decisions described here are done so in the context of the previous recreation policy.

Recreation management areas are administrative sub-units that serve as the basic land unit for recreation management. Each area is identified and managed as a unit based on similar or interdependent recreation values, homogenous or interrelated recreation use, land tenure and use patterns, or administrative efficiency.

SRMAs are established to direct recreation program priorities, including the allocation of funding and personnel, to those BLM-administered lands where a commitment has been made to provide specific recreation activity and experience opportunities on a sustainable basis. This includes a long term commitment to manage the physical, social, and administrative settings to sustain these activities and experience opportunities. Delineation is based on administrative/management criteria, including the existence of congressional designations, similar or interdependent recreation values, homogenous or interrelated recreation uses, land tenure and use patterns, transportation systems, administrative efficiency, intensity of use, high resource values, public concerns, or interagency considerations. These areas usually require a high level of recreation investment and/or management. They include recreation sites, but recreation sites alone do not constitute a SRMA. SRMAs established to reflect a congressional designation may be larger than the designation boundary when significant recreation issues or management concerns occur outside the designated area.

ERMAs are where recreation management is only one of several management objectives and where limited commitment of resources is required to provide extensive and unstructured type of recreation activities. They may contain recreation sites. The areas consist of the remainder of land areas not included in SRMAs within a field office.

The number of SRMAs and ERMAs are listed in **Table 3-28** and are mapped in **Figure 3-5**.

Table 3-28
Recreation Management Areas

SRMAs	48
ERMAs	18

Source: BLM GIS 2013

Within the recreation management are, there are approximately 400 recreation sites. These sites range in size and intensity of use from intensely used OHV areas (e.g., St Anthony Sand Dunes), boat ramps, and campgrounds to lightly used overlooks, trailheads and interpretive wayside exhibits. All developed recreation sites (including trailheads, picnic areas, etc.) are closed to target shooting per 43 CFR 8365.2-5(a).

BLM-administered lands received over 6 million visits in 2012. The BLM estimates that 20 to 25 percent of recreation visits were related to OHV use (e.g., motorcycles, all-terrain vehicles, and trucks). OHV use on BLM-administered lands has seasonal variations. In early spring when the forests often still have snow, BLM-administered lands will get recreational OHV use. As the temperatures rise and the lower elevation areas get hotter, OHV users will migrate to higher elevations where temperatures are cooler (often making more use of national forests). Use on BLM-administered lands in the fall will increase as temperatures cool and hunting season starts. There are BLM-administered lands that see little recreation use except during hunting season. OHV use is low during the cold winter months.

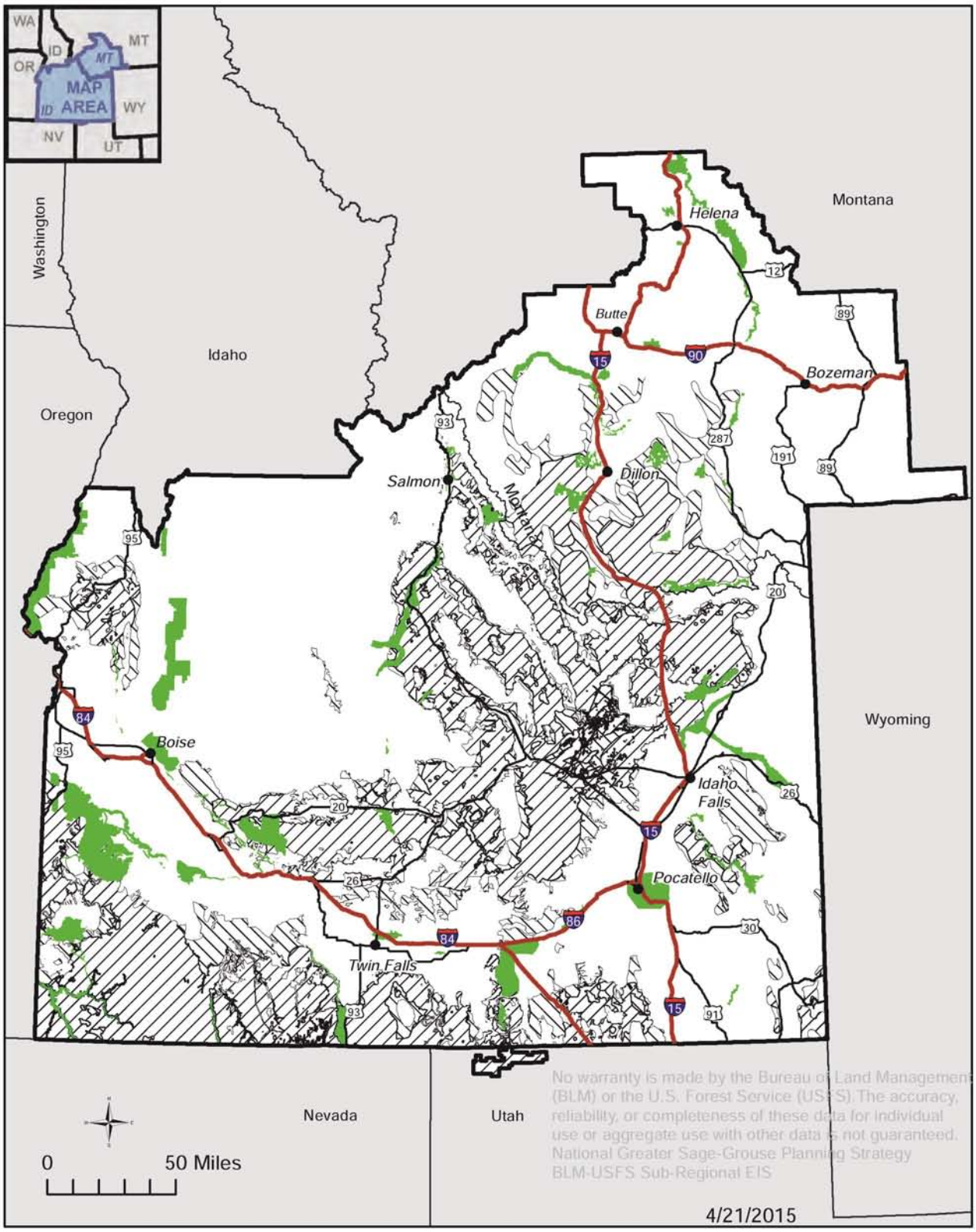
Depending on the OHV designation, use will be on routes in limited areas or possibly off routes where the area is designated as open (see **Section 3.10**, Travel Management, for OHV designations).

Other types of recreation activity that occur include bicycling, camping, hiking, horseback riding, skiing, snowmobiling, rafting/floating, power boating, fishing, swimming, photography, wildlife viewing, and hunting.

Forest Service Recreation

The Forest Service provides and manages a myriad of recreation opportunities for the visiting public. The National Forests and Grasslands provide the greatest diversity of outdoor recreation opportunities in the world, connecting visitors with nature in an unmatched variety of settings and activities. Visitors can hike, bike, ride horses, and drive OHVs; picnic, camp, hunt, fish, and navigate waterways; view wildlife and scenery; and explore historic places. Visitors glide through powder at world class alpine resorts and challenge themselves on primitive cross-country ski or snowmobile routes. With many partners, the recreation program strives to promote healthy lifestyles, support local economies, and connect citizens to their public lands. The Intermountain Region of the Forest Service manages over 34 million acres of forests and grasslands (5.8 million in Wilderness), with almost all of it open for public use and enjoyment. In 2012, over 11.5 million visitors came to enjoy the resources provides within the region.

Figure 3-5
Special Recreation Management Areas



Special Recreation Management Areas
Preliminary Priority Management Area
Preliminary General Managment Area
Analysis Boundary

BLM Special Recreation Permits

The BLM manages organized, commercial, and competitive recreation activities on BLM-administered lands and related waters with special recreation permits (SRPs). As a management tool, SRPs reduce user and resource conflicts, mitigate adverse impacts on resources, provide opportunities for monitoring activities, enhance visitor experience opportunities, and, with user fee requirements, allow for a fair return for these types of land uses. Issuance of an SRP is discretionary, with proposed activities subject to NEPA compliance and mitigation requirements specific to the proposed activity. The BLM may deny a permit request if assessment indicates unacceptable impacts; if an approved moratorium or restricted allocation system exists for the proposed activity, location, or time-frame; if there are serious health and safety concerns; or if past performance by an applicant has been deemed unacceptable and problematic. The BLM may require an applicant to possess appropriate insurance, bonding, certifications of training, and state permits/licenses to protect resource values, the served public, and the federal government.

In 2012, the BLM had 341 active SRPs. Of those SRPs, 241 were commercial river permits and 24 are commercial big game hunting permits. The remaining SRPs are for organized groups, competitive events, or other types of commercial recreation outfitters (e.g., bike tours).

Forest Service Special Use Permits

The Forest Service manages trail, river, and similar recreation opportunities and their access and supports facilities under the principles enumerated in FSM 2303. Special Use Permits are issued for specific types of recreation activities on Forest Service managed land and may be required when extra measures are needed to protect natural or cultural resources. The following are recreation special uses that involve facilities:

- Recreation special use permits involving privately owned facilities include resorts, marinas, ski areas, target ranges, organization camps, recreation residences, and other facilities. These permits are typically authorized under term permits and users pay a land use fee based on a percent of revenue or appraised value of the land.
- Recreation special uses involving government-owned facilities are concession campgrounds, resorts, organization camps, and some other facilities.
- Recreation special uses involving commercial public services are outfitting and guiding for a broad range of activities, groomed cross-country ski trails, and recreation events (including competitive races, eco-challenges, dog trails, adventure games, and endurance races). These uses are usually authorized under the Recreation Enhancement Act, which allows fees to be retained by the administrative unit that collected them.

Additionally, noncommercial group use permits are required for groups of 75 or more people. These users do not pay fees.

The Forest Service has 910 active recreation special use permits within the planning area (197 at Boise National Forest, 258 at Sawtooth National Forest, 114 at Salmon-Challis National Forest, 29 at Payette National Forest, and 312 at Caribou-Targhee National Forest).

No permits are required for private, non-commercial use of public lands for camping, fishing, hiking, hunting, horseback riding, or similar activities.

In 2012, the Intermountain Region of the Forest Service had 2335 recreation special use permits and 267 recreation special use permits for group activities and recreation events. Of the total recreation special use permits about 1400 were for recreation residences, 796 were for outfitter and guiding services, 53 were for organizational camps, 42 were for resort and marina permits, 28 were for concessionaires, and 16 were for ski areas.

3.9.2 Trends

Recreation use is expected to continue to grow throughout the planning area. The proximity of many recreation opportunities to the area surrounding Boise has dramatically increased recreational visitation within portions of the planning area and is expected to continue to do so.

Five key drivers are causing changes to recreation in the planning area:

1. Increased urbanization as a result of population growth and changing demographics
2. Changing public expectations and demand for outdoor recreation opportunities, especially for dispersed recreation
3. Increased energy development in portions of the planning area
4. Close proximity of BLM-administered lands to private property, and the growing use of BLM-administered lands as a community-based recreation asset
5. Technological advances, such as all-terrain or utility vehicles and mountain bikes, affordable global positioning system (GPS) units, as well as better outdoor equipment and clothing

These drivers will impact the activity opportunities that can be offered and the recreation experience and benefit opportunities that can be produced by land managers and partners.

Hunting

Although hunting licenses issued have dropped over the last decade, hunting remains a popular recreation activity within the region. While deer and elk are the most popular game in the planning area, of more relevance to this analysis are falconry and upland bird hunting.

Falconry

Falconry permit holders were surveyed after the fall 2010-spring 2011 hunting season (**Table 3-29**).

Table 3-29
Falconry Permits (Fall 2010-Spring 2011)

Species	# Hunters	# Days	# Harvest	Birds/Hunter	Days/Hunter	Birds/Day
Forest grouse	1	3	0	0.00	2.0	0.00
Chukar	8	95	4	0.49	12.3	0.04
California quail	5	46	4	0.76	8.8	0.09
Gray partridge (huns)	42	1,261	86	2.04	30.0	0.07
Pheasant	27	850	117	4.35	31.7	0.14
Rabbit	15	467	83	5.69	32.1	0.18
Sage-grouse	25	551	58	2.28	21.8	0.10
Sharp-tailed grouse	8	149	13	1.67	19.8	0.08
Mourning doves	6	173	8	1.16	26.6	0.04
Ducks	42	1,173	340	8.05	27.8	0.29
Geese	1	3	0	0.00	2.0	0.00
	180	**4,770**	**711**	**3.94**	**26.4**	**0.15**

159 hunters purchased Idaho falconry permits which would allow hunting in Fall 2010-Spring 2011.

Upland Birds

Idaho offers a multitude of upland game bird hunting opportunities on millions of acres of BLM-administered and National Forest System land.

Hunters can pursue three species of forest grouse – dusky, ruffed, and spruce – and two species of prairie grouse – Columbian sharp-tailed grouse and GRSG – all native to Idaho. Forest grouse hunting opportunities exist across the state, while Columbian sharp-tailed grouse and GRSG hunting is limited to certain areas only.

While GRSG are widely distributed in areas with large blocks of sagebrush, the hunting season is generally short (1 week during 2012) and opportunities are limited to areas of southern Idaho.

Idaho also offers chukar and gray partridge hunting, and has robust populations of California quail. Chukar and gray partridge (huns) thrive on large tracts of public ground and are available to everyone willing to make the effort to hunt them.

Chukar are typically found in rocky, arid areas covered with cheatgrass and sagebrush. Gray partridge (huns) are often found in close proximity to chukar and adjacent to cultivated land across the state. Expect to find the best populations of chukar and gray partridge in the Clearwater, Magic Valley, and Southwest regions.

California quail occur from south-central Idaho, west to the Oregon border and north to the Palouse Prairie. Good populations live along rivers and streams with brushy cover below 3,500 feet in elevation.

Historically, Idaho was a destination pheasant hunting location, but populations have declined because of changes in farming practices and the resultant loss of habitat.

Upland game population trends are monitored through harvest surveys, August roadside counts, August helicopter flush counts, mourning dove coo counts, hunter check stations, and wing barrel harvest data. Each region collects data using various methods based on regional bird densities and sampling constraints. Statewide, telephone surveys assess overall hunter activity and harvest of upland game species. From 1996-2000, telephone surveys estimated statewide rather than regional trends (except turkey) due to budget constraints. A separate telephone survey has been conducted since 2000 for GRSG and sharp-tailed grouse to improve sample size for these two species that have been considered for listing under the ESA.

In 2009, approximately 40,100 resident hunting license buyers hunted upland game and approximately 5,300 nonresident hunting license buyers hunted upland game. This represents 18 percent of all resident hunting license buyers and 16 percent of all nonresident hunting license buyers.

For GRSG, the season framework was altered in 1996 to provide three different types of seasons: liberal, conservative, and closed. In 2002, the season framework was modified. The Birch Creek Valley and the Big Desert areas, closed to GRSG hunting from 1995 to 2001, were reopened. Research suggested that the closed season did not have any measurable effect on GRSG populations, as measured by number of GRSG counted on lek routes. In 2009, there was a 7-day season with a 1-bird daily bag limit in Zone 2, and a 23-day season with a 2-bird daily bag limit in Zone 3.

Starting in 2000, GRSG hunters were required to purchase a GRSG hunting validation. This requirement provided a means to collect better harvest estimates from a sample of GRSG hunters through a telephone survey. Approximately 4,400 hunters harvested 7,200 GRSG in 2009.

Numerous check stations are run in the state to gather information on reproductive success in different areas. In general, the sample size has decreased at these check stations in recent years due to shortened seasons and reduced hunter participation.

3.10 Travel Management

3.10.1 Conditions on BLM-Administered Lands

Travel and transportation are integral parts of virtually every activity that occurs on BLM-administered lands. The BLM has taken a comprehensive approach to travel and transportation management (TTM). It is an interdisciplinary approach to travel and transportation planning and management that addresses resource uses and associated access to BLM-administered lands and waters, including motorized, nonmotorized, mechanical, and animal-powered modes of travel.

Travel and transportation management planning means providing clear and specific direction that addresses public and administrative access needs on the proper levels of land and water for all modes of travel. The TTM process addresses variability among landscapes, users' interests, equipment options, and cultural and biological resource constraints. The primary

goal of TTM is to develop a systematic network of routes with appropriately designated uses that provides opportunities for a diverse set of activities to occur on BLM-administered lands, such as recreation, energy development, grazing, and wildlife management. Travel management objectives serve as the foundation for appropriate travel and access prescriptions.

There is considerable overlap between travel management and all other uses on BLM-administered lands. For example, many people visit BLM-administered lands for recreation purposes. For these visitors, a route system may serve as either a means to reach a destination where the activity occurs (e.g., a road to a trailhead or parking area) or as the focus of the recreation activity itself (e.g., four-wheel driving, hiking, or horseback riding trails).

To reduce the duplication of narrative between travel management and the other sections of this document, this section addresses only public travel and access (i.e., OHV management area designations, route designations, types of travel, and seasonal area limitations). The interrelated recreation components, such as OHV use, are addressed under **Section 3.9**, Recreation.

Modes of Travel

Visitors to BLM-administered lands use roads and trails for a variety of activities involving various modes of travel. Motorized travel in the planning area ranges from standard passenger vehicles driving on maintained roads to OHVs operating on primitive roads and trails. OHV is synonymous with off-road vehicle, as defined in 43 CFR 8340.0-5(a):

> Off-road vehicle means any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding: 1) Any nonamphibious registered motorboat; 2) Any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes; 3) Any vehicle whose use is expressly authorized by the authorized officer or otherwise officially approved; 4) Vehicles in official use; and 5) Any combat or combat-support vehicle when used in times of national defense emergencies.

OHVs commonly used in the planning area include off-road motorcycles, all-terrain vehicles, utility terrain vehicles, jeeps, specialized 4-by-4 trucks, and snowmobiles. Other modes of travel include mountain biking, cross-country skiing, snowshoeing, horseback riding, pack animal driving, hiking, boating, hang-gliding, paragliding, ballooning, and wheelchairs. The type and amount of use and the location of roads and trails influence physical, social, and administrative recreation setting and the overall quality of the recreation experience.

Travel Designations

Executive Order 11644 and 43 CFR 8340 both require the BLM to designate all BLM-administered lands nationally as open, closed, or limited for OHV use.

Open
Areas designated as Open are areas where all types of vehicle use are permitted at all times anywhere in the area. Use is subject to any operating regulations and vehicle standards established in other parts of the CFR.

Limited
Areas designated as Limited are areas restricted at certain times, in certain areas, or to certain vehicular use. These restrictions may be of any type but can generally be accommodated within the following categories: numbers of vehicles; types of vehicles; time or season of vehicle use; permitted or licensed use only; use on existing roads and trails; use on designated roads and trails; and other restrictions.

Closed
Areas designated as Closed are areas restricted at certain times, in certain areas, and to certain vehicular use. These restrictions may be of any type but can generally be accommodated within the following type of categories: numbers of vehicles; types of vehicles; time or season of vehicle use; permitted or licensed use only; use on existing roads and trails; use on designated roads and trails; and other restrictions.

Federal Regulations
Route designation criteria are described in 43 CFR 8342.1 and state:

> The authorized officer shall designate all public lands as open, limited, or closed to off-road vehicles. All designations shall be based on the protection of the resources of the public lands, the promotion of the safety of all the users of the public lands, and the minimization of conflicts among various uses of the public lands; and in accordance with the following criteria:
>
> (a) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, air, or other resources of the public lands, and to prevent impairment of wilderness suitability.
>
> (b) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats.
>
> (c) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.
>
> (d) Areas and trails shall not be located in officially designated wilderness areas or primitive areas. Areas and trails shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, esthetic, scenic, or other values for which such areas are established.

National Guidance

On a national level and in response to increasing demand for motorized and mechanized recreation trails on BLM-administered lands, the BLM first developed an OHV strategy and then a mountain bike strategy. These strategies emphasize that the BLM should be proactive in seeking travel management solutions that conserve natural resources while providing for ample recreation opportunities.

The BLM released the current version of the Land Use Planning Handbook (H-1601-1) in March 2005. Guidance on determining Open, Limited, and Closed OHV Area designations during the planning process was incorporated into the Comprehensive Trails and Travel Management Section (Appendix C, Section II D).

Additional TTM guidance continued to be developed and culminated with the release of the Travel and Transportation Management Manual (1626) in July 2011. Current policy states that Open areas will be limited to a size that is geographically identifiable and can be effectively managed and that expansive open areas allowing cross-country travel will not be designated in LUP revisions or new travel management plans.

The Travel and Transportation Handbook (H-8342) was released in March of 2012. It provides detailed guidance using the designation criteria in 43 CFR 8342.1 for area and route selection. It includes guidance for developing other implementation plans including but not limited to sign plans, education and outreach plans, law enforcement plans, and maintenance plans.

3.10.2 Conditions on National Forest System Lands

The Forest Service published its Travel Management Rule in 2005. It required each national forest to designate roads, trails, and areas open or closed to motor vehicles. Designations were made in accordance with criteria described in Executive Order 11644 and included the type of vehicle and, if appropriate, time of year for motor vehicle use. A given route, for example, could be designated for use by motorcycles, ATVs, or street-legal vehicles. Once designation was complete, the rule prohibited motor vehicle use off the designated system.

In addition to its formal regulations, the Forest Service developed TTM planning guidance, including the Travel Management Manual, FSM 7700 (2008), and the Travel Planning Handbook, FSH 7709.55 (2008).

Federal Regulations

The criteria for Forest Service route designation are found in 36 CFR 212.55 (a), General criteria for designation of National Forest System roads, trails, and areas on National Forest System lands and state:

> In designating National Forest System roads, National Forest System trails, and areas on National Forest System lands for motor vehicle use, the responsible official shall consider effects on National Forest System natural and cultural resources, public safety, provision of recreational opportunities, access needs, conflicts among uses of National Forest System lands, the need for maintenance and administration of roads,

trails, and areas that would arise if the uses under consideration are designated; and the availability of resources for that maintenance and administration.

(b) Specific criteria for designation of trails and areas. In addition to the criteria in paragraph (a) of this section, in designating National Forest System trails and areas on National Forest System lands, the responsible official shall consider effects on the following, with the objective of minimizing:

(1) Damage to soil, watershed, vegetation, and other forest resources;

(2) Harassment of wildlife and significant disruption of wildlife habitats;

(3) Conflicts between motor vehicle use and existing or proposed recreational uses of National Forest System lands or neighboring Federal lands;

(4) Conflicts among different classes of motor vehicle uses of National Forest System lands or neighboring Federal lands. In addition, the responsible official shall consider:

(5) Compatibility of motor vehicle use with existing conditions in populated areas, taking into account sound, emissions, and other factors.

3.10.3 Current Conditions

Travel planning is complete for all lands administered by the Forest Service in the planning area. National Forest System lands with a designated route system are considered the same as the Limited designation on lands administered by BLM.

The BLM has not conducted travel management planning throughout the sub-region. In areas with a designation of Limited, motorized use will be limited to existing roads until individual route selection and designation occurs during subsequent implementation-level planning. Current travel management designations are presented by field office in **Table 3-30**.

Table 3-30
Travel Management Designations within the Planning Area

Field Office	Open	Limited	Closed
Bruneau	**0**	**975,300**	**210,400**
BLM	**0**	975,300	210,400
Forest Service	**0**	**0**	**0**
Burley	**0**	**949,400**	**19,400**
BLM	**0**	608,900	19,400
Forest Service	**0**	340,500	**0**
Challis	**0**	**1,064,700**	**13,400**
BLM	**0**	706,600	13,400
Forest Service	**0**	358,100	**0**
Dillon	**0**	**1,069,100**	**10,700**

Table 3-30
Travel Management Designations within the Planning Area

Field Office	Open	Limited	Closed
BLM	**0**	671,800	10,700
Forest Service	**0**	397,300	**0**
Four Rivers	**1,320**	**433,600**	**1,420**
BLM	50	351,500	1,420
Forest Service	1,260	82,100	**0**
Jarbidge	**0**	**961,800**	**55,200**
BLM	**0**	961,800	55,200
Forest Service	**0**	**0**	**0**
Owyhee	**0**	**813,000**	**224,400**
BLM	**0**	813,000	224,400
Forest Service	**0**	**0**	**0**
Pocatello	**0**	**406,100**	**310**
BLM	**0**	320,900	310
Forest Service	**0**	85,300	**0**
Salmon	**0**	**471,200**	**14,400**
BLM	**0**	348,300	14,400
Forest Service	**0**	122,800	**0**
Shoshone	**0**	**1,253,100**	**139,600**
BLM	**0**	1,214,900	139,600
Forest Service	**0**	38,200	**0**
Upper Snake	**40**	**1,930,200**	**16,900**
BLM	**0**	1,564,700	16,900
Forest Service	40	365,400	**0**
Other – Forest Service Raft River	**0**	**71,900**	**0**
Total Acres:	**1,350**	**10,399,300**	**706,200**

Source: BLM GIS 2015

3.10.4 Regional Context

Table 3-31 display data for roads within GRSG habitat in the planning area. In each table, data are presented by surface management agency and their occurrence within occupied GRSG habitat in the planning area and MZs that overlap the planning area.

Table 3-31
Miles of Roads within GRSG Habitat

Surface Management Agency	Miles within PGH			Miles within PPH		
	Planning Area	MZ II/VII[1]	MZ IV	Planning Area	MZ II/VII[1]	MZ IV
BLM	3,408	17,000	6,500	12,500	20,100	18,900
Forest Service	1,001	500	1,200	1,405	200	1,900
Tribal and other federal	600	2,700	700	1,000	1,600	1,000
Private	3,600	19,600	7,200	4,700	15,500	8,700
State	801	2,100	1,300	1,613	2,800	1,800

Table 3-31
Miles of Roads within GRSG Habitat

Surface Management Agency	Miles within PGH			Miles within PPH		
	Planning Area	MZ II/VII[1]	MZ IV	Planning Area	MZ II/VII[1]	MZ IV
Other	100	0	100	100	100	100

Source: Manier et al. 2013
[1]BER combined acres for MZs II and VII

Table 3-32
Acres of Roads within GRSG Habitat

Surface Management Agency	Acres within PGH[1]			Acres within PPH[1]		
	Planning Area	MZ II/VII[2]	MZ IV	Planning Area	MZ II/VII[2]	MZ IV
BLM	36,600	188,800	68,500	130,700	209,600	199,400
Forest Service	10,900	5,600	12,900	14,100	2,900	20,100
Tribal and Other Federal	7,600	28,600	8,000	10,900	17,100	11,200
Private	42,300	236,700	83,500	53,000	170,800	100,900
State	9,200	23,400	14,100	17,200	30,200	18,800
Other	800	200	800	1,200	900	1,200

Source: Manier et al. 2013
[1]Assumes footprint of 73.2 meters for interstate highways, 25.6 meters for primary and secondary highways, and 12.4 meters for other roads.
[2] BER combined acres for MZs II and VII

3.11 Lands and Realty

The primary goal of the BLM Lands and Realty program is to enhance the administration of public landownership to provide the most effective configuration of lands and interests in land, consistent with land use plans developed through a full and open public involvement process, and to further the purposes of FLPMA. The objectives of the Forest Service landownership adjustment program are to achieve the optimum landownership pattern for the protection and management of resource uses, settle land title claims, and provide resource administrators with title information about the use of and resources on the land they administer.

Lands and realty actions can generally be divided between land tenure adjustments and land use authorizations. Land tenure adjustments focus on land exchange, acquisition (including purchase and easement acquisition), and disposal. Withdrawals, while managed as part of land and realty, are administrative actions that do not affect land tenure. Land use authorizations consist of ROWs and other leases or permits for the use and occupancy of public land.

Forest Service land use plan prescriptions are similar to BLM exclusion and avoidance areas. Prescriptions can restrict or prohibit certain uses in a planning area. It should also be noted

that the Forest Service grants special use authorizations (granting ROWs, permits, easements, and leases), while the BLM grants ROWs on their respective agency lands. Lastly, the Forest Service completes landownership adjustments (purchase, exchange, donation, and ROW acquisition), while the BLM conducts land tenure adjustments (exchanges, disposals, and acquisitions).

3.11.1 Conditions within the Planning Area

The lands within the planning area are owned and may be managed by multiple federal, state, and local agencies, as well as private landowners. The configuration of landownerships and their proximity to each other is an important factor when considering land tenure adjustments and evaluating land use authorization applications. The planning area contains lands managed by several federal and state agencies, the Bureau of Indian Affairs (in trust for Native American tribes), and private lands. **Table 3-33** shows the acreage and overall percent ownership for each land manager in the planning area.

Table 3-33
Acres of GRSG Habitat by Surface Management

Surface Land Management	Acres PPH	Acres PGH	Acres Outside Habitat	Total Acres
BLM Total	**7,272,100**	**1,971,800**	**3,205,100**	**12,449,000**
BLM – Idaho	6,811,400	1,749,900	2,982,900	11,544,200
BLM – Montana	460,600	222,000	222,200	904,800
Forest Service Total	**962,400**	**898,100**	**11,391,900**	**13,252,400**
Forest Service - Idaho	728,200	664,100	9,718,800	11,111,100
Forest Service - Montana	162,300	234,000	1,673,100	2,069,400
Forest Service - Utah	71,900	0	0	71,900
US Fish and Wildlife Service	39,700	11,700	30,000	81,400
National Park Service	27,200	222,700	261,800	511,700
Department of Energy	378,000	182,500	1,670	562,200
Department of Defense	11,100	37,700	78,500	127,400
Bureau of Reclamation	3,250	3,260	109,800	116,300
Indian Tribe	143,900	10,700	189,000	343,600
Idaho State	642,400	377,500	804,500	1,824,400
Montana State	221,665	167,455	431,995	821,115
Utah State	630	0	0	630
Private	2,127,600	1,857,200	9,652,900	13,637,700
Other	87,800	32,200	294,400	414,400
Total Acres:	**11,921,200**	**5,756,600**	**26,164,500**	**43,842,300**

Source: BLM GIS 2015

Within the planning area, BLM-administered lands have been classified for retention or disposal pursuant to Section 7 of the Taylor Grazing Act (43 USC 315f), FLPMA, and 43 CFR Parts 2400 and 2500; BLM-administered lands have also been identified as ROW exclusion or avoidance areas, and ROW corridors, pursuant to FLPMA and 43 CFR Part 2800. Section 205 of the FLPMA authorizes the Secretary of Agriculture to acquire access (lands or interest therein) over non-federal lands to units of the National Forest System by

purchase, exchange, donation, or eminent domain. Several acts of Congress authorize occupancy and use of National Forest System lands and interests in lands administered by the Forest Service. The applicable statutory authority determines the appropriate special use authorization. For example, some permits and temporary permits are issued under the provisions of the Organic Administration Act of June 4, 1897 (16 USC 477-482, 551), while some easements and leases and other types of permits are issued under the provisions of Title V, Federal Lands Policy and Management Act of October 21, 1976 (43 USC 1761-1771), and the Forest Roads and Trails Act of 1964.

Table 3-34 lists the number of acres identified with land tenure classifications and ROW designations in the planning area. **Figure 3-6** and **Figure 3-7** provide an overview of the extent of lands currently occupied by ROWs.

Table 3-34
Land Classifications/Designations in Planning Area (Acres)

Land Status	Acres within Planning Area
Withdrawals (total)	4,032,400
Withdrawals (BLM)	3,827,900
Withdrawals (Forest Service)	204,500
ROW Avoidance (total)	8,306,100
ROW Avoidance (BLM)	1,134,300
ROW Avoidance (Forest Service)	7,171,800
ROW Exclusion (total)	3,333,200
ROW Exclusion (BLM)	1,061,500
ROW Exclusion (Forest Service)	2,271,700

Source: BLM GIS 2013, 2015

Land Tenure Adjustments

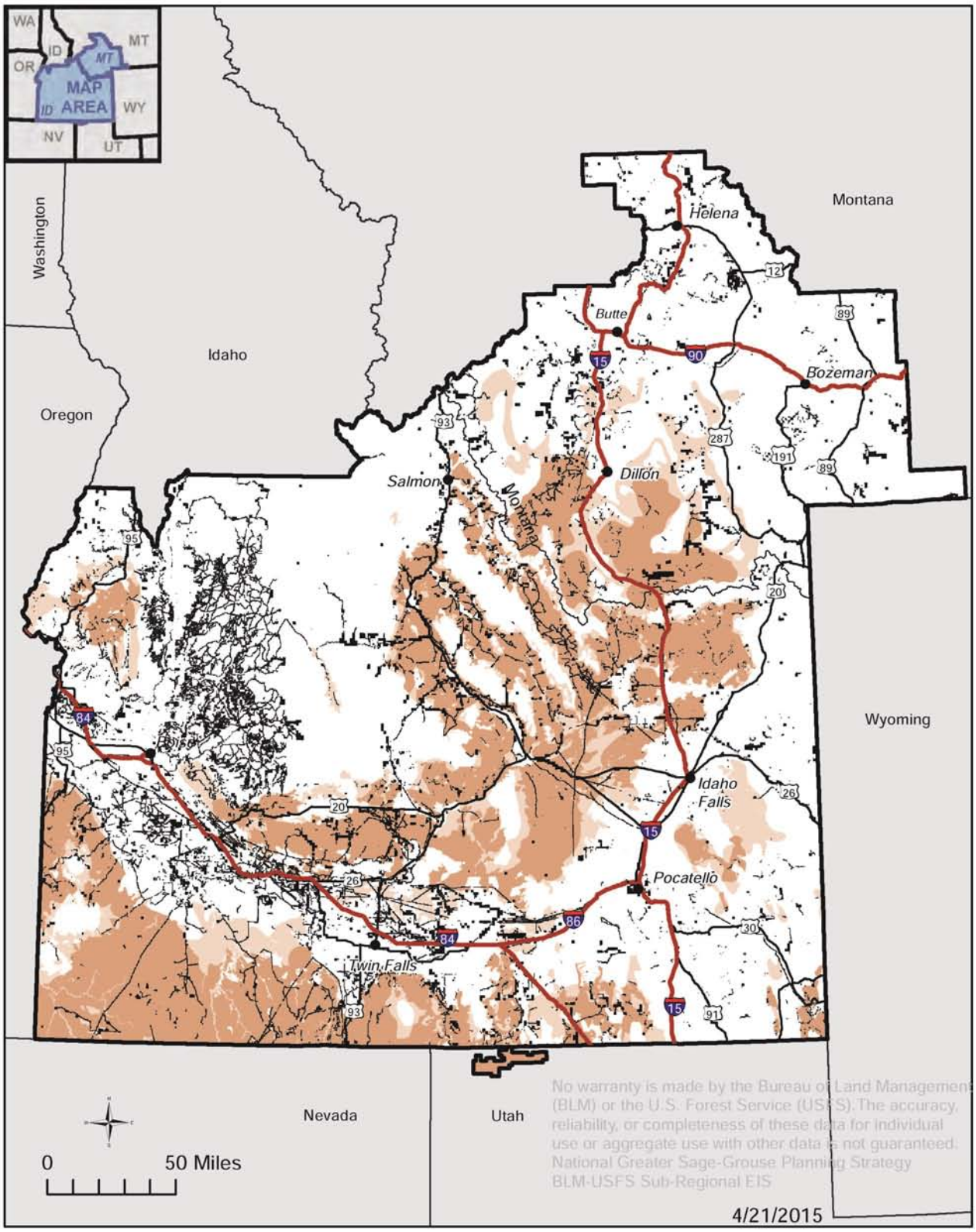
Landownership (or land tenure) adjustment refers to those actions that result in the disposal, acquisition, purchase, exchange, or donation of land or acquisition or grant of ROW by the BLM ; or purchase, exchange, or donation of land, or ROW acquisition by the Forest Service. Section 102(a) of FLPMA requires that land be retained in federal ownership unless, as a result of land use planning, it is determined that disposal of certain parcels will service in the national interest. In all land tenure adjustments, keeping the surface and mineral estate intact on both the lands disposed of and acquired would benefit the future owners and their use of the land.

Disposals

Disposal areas include tracts of land that are economically difficult to manage, and/or parcels that could serve important public objectives, including, but not limited to, expansion of communities and economic development. These lands are usually disposed of through exchanges or land sales.

The Forest Service has very limited authority to sell or otherwise dispose of National Forest System lands. Most authorities allowing the sale of lands have specific criteria or identify

Figure 3-6
Authorized Rights-of-Way in the Planning Area

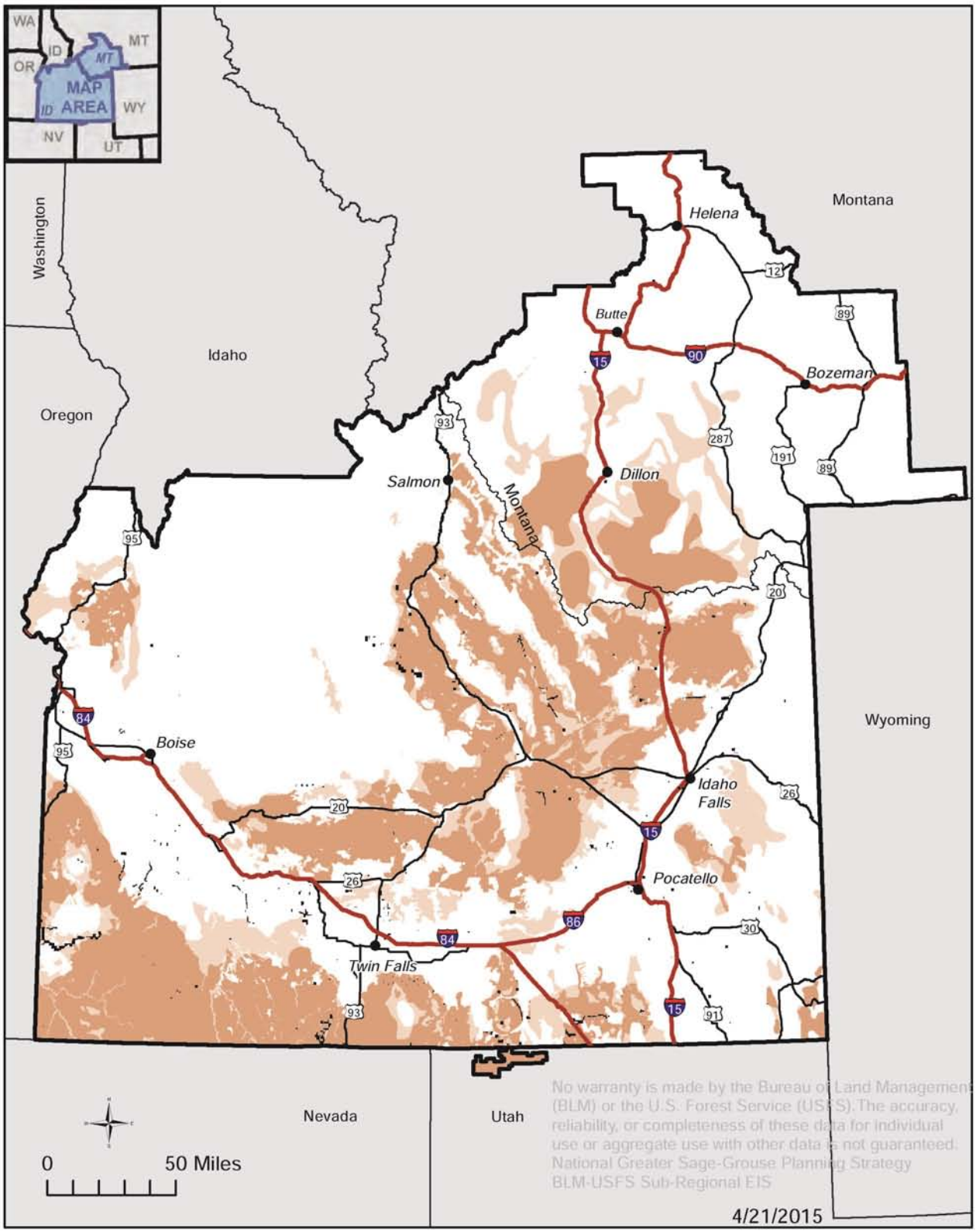


Authorized Rights of Way as of 4/26/2013

Preliminary Priority Management Atea

Preliminary General Management Area

Figure 3-7
Pending and Expired Rights-of-Way in the Planning Area



Pending and Expired Rights of Way as of 4/26/2013
Preliminary Priority Management Atea
Preliminary General Management Area

only a small number of properties for sale or disposal in a limited geographical area. The tool used most often for conveyance of lands within National Forest boundaries is land exchange.

LUPs relevant to the planning area identify 1,812,300 acres of BLM-administered land for disposal. Of these, 559,300 acres lie within PPH, while 257,400 acres lie within PGH. No National Forest System land has been identified for disposal in the planning area.

Exchanges. Exchange is the process of trading lands or interests in lands and serves as a viable tool for the BLM to accomplish its goals and mission. Exchanges must be in the public interest and conform to applicable BLM LUPs. The lands to be exchanged must be of approximately equal monetary value and located within the same state. BLM-administered lands may be exchanged for lands or interests in lands owned by corporations, individuals, or government entities. Except for those exchanges that are congressionally mandated or judicially required, exchanges are voluntary and discretionary transactions with willing landowners.

Land exchanges are used to bring lands and interests in land with high public resource values into public ownership, consolidate land and mineral ownership patterns to achieve more efficient management of resources and BLM programs, and dispose of BLM-administered land parcels identified for disposal through the planning process.

National Forest System lands are exchanged to achieve a desired national forest landownership pattern that supports forest land and resource goals and objectives, addresses fragmentation, reduces future management costs, and responds to urban and community needs. The objective of the Forest Service land exchange program is to use land exchanges as a tool, in concert with the purchase program, to implement Forest land and resource management planning and direction; to optimize National Forest System landownership patterns; to further resource protection and use; and to meet the present and future needs of the American people.

There are land exchanges pending on 76,982 acres (37,141 federal acres and 39,841 nonfederal acres) within the planning area. One land exchange totaling 52 acres has been identified on National Forest System land in the planning area.

Land Sales. Section 203 (a) of FLPMA provides for sale of public lands if one of the following criteria is met: (1) the tract is difficult and uneconomic to manage as part of the public lands and is not suitable for management by another federal agency; (2) such tract was acquired for a specific purpose and the tract is no longer required for that or any other federal purpose; or (3) disposal of such tract will serve important public objectives, including but not limited to, expansion of communities and economic development that cannot be achieved prudently or feasibly on land other than public land. Public lands that have been identified for consideration for disposal by sale in the approved LUPs meet one or more of these criteria. Public lands must be sold at fair market value.

Section 209 of FLPMA authorizes the conveyance of federal minerals through sale and specifies the conditions under which the mineral rights would be conveyed. The mineral rights could be sold with the land surface, sold as a separate transaction, or retained. Conveyance of mineral rights has occurred only in conjunction with the sale of land.

The Forest Service has very limited authority to sell or otherwise dispose of National Forest System lands. Most authorities allowing the sale of lands have specific criteria or identify only a small number of properties for sale or disposal in a limited geographical area. The tool used most often for conveyance of lands within National Forest boundaries is land exchange. Thus, no National Forest System land has been identified for sale in the planning area.

Withdrawal. Withdrawal are formal actions that accomplish one or more of the following actions:

- Transfers total or partial jurisdiction of federal land between federal agencies
- Segregates (closes) public lands to appropriation under public land laws including mineral laws
- Dedicates public land for a specific public purpose

There are three major categories of formal withdrawals: (1) congressional withdrawals, (2) administrative withdrawals, and (3) Federal Power Act or Federal Energy Regulatory Commission (FERC) withdrawals. Congressional withdrawals are legislative withdrawals made by Congress in the form of public laws (acts of Congress). Administrative withdrawals are made by the President, Secretary of the Interior, or other authorized officers of the executive branch of the federal government. Federal Power Act or FERC withdrawals are power project withdrawals established under the authority of the "Federal Power Act" of 1920. Such withdrawals are automatically created upon filing an application for a hydroelectric power development project with FERC.

Federal policy now restricts all withdrawals to the minimum time and acreage required to serve the public interest, maximize the use of withdrawn lands consistent with their primary purpose, and eliminate all withdrawals that are no longer needed. Management and adjustment of withdrawals focuses on the establishment, management, modification, and revocation of withdrawals.

The purpose of a withdrawal is to withhold National Forest System land from operation of various federal laws, to either reserve the area for some future use or to maintain other public values of the area. A withdrawal may prevent the land from leaving federal ownership, may prevent mineral leasing or may prevent entry under the mining laws. In recent years most withdrawals prevent entry under the mining laws since it is a nondiscretionary action.

The main object of a Forest Service withdrawal is to protect administrative sites and other capital improvements, and to protect designated management areas not compatible with mining activity. Other agencies such as FERC and the Bureau of Reclamation often request

withdrawal of National Forest System land for their purposes. The Department of Defense use of National Forest System lands is by special use authorization, agreement, or the Interchange Act of 1956.

There are currently 28 withdrawals in the planning area, encompassing 4,025,900 acres of BLM-administered lands. Of these withdrawals, 1,437,200 acres reside on PPH, and 782,000 acres reside on PGH. There are approximately 584,100 acres of Forest Service withdrawals in the planning area.

Acquisition

Acquisition of and interests in lands are important components of the BLM's land tenure adjustment strategy. Acquisition of lands can be pursued to facilitate various resource management objectives. Acquisitions, including easements, can be completed through exchanges (see above), land purchases, or donations.

The Forest Service purchases lands through the Land and Water Conservation Fund to protect critical resource areas and provide increased public recreation opportunities. Land donations are accepted to consolidate National Forest System lands and protect critical resource areas. The legal public use of National Forest System lands is improved by acquiring ROWs for roads and trails.

Lands and interests in lands are acquired for the following actions:

- Improve management of natural resources through consolidation of federal, state, and private lands
- Secure key property necessary to protect endangered species, promote biological diversity, increase recreational opportunities, and preserve archeological and historical resources
- Implement specific acquisitions authorized or directed by acts of Congress

Forest Service objectives in lands or interests in lands through purchase, donation, and rights-of-way are to:

- Enhance the multiple use and sustained yield of the goods and services from National Forest System lands
- Protect and improve the quality of renewable resources
- Protect and preserve important historic, cultural, and natural aspects of the national heritage
- Provide for access, use, and enjoyment of the forest resources by the public
- Improve administrative efficiency and effectiveness of National Forest System lands

One Forest Service land exchange is proposed in Idaho that would affect 52 acres of land within PGH.

Purchases. The BLM has the authority, under Section 205 of FLPMA, to purchase lands or interests in lands. Similar to other acquisitions, purchase is used to acquire key natural resources or to acquire legal ownership of lands that enhance the management of existing public lands and resources. Acquiring lands and interests in lands through purchase helps consolidate management areas to strengthen resource protection. Acquisitions are used primarily to enhance recreational opportunities and acquire crucial wildlife habitats.

Land Use Authorizations

The most common form of authorization to permit uses of BLM-administered lands by commercial, private, or governmental entities is the ROW grant. A ROW grant is an authorization to use a specific piece of BLM-administered land for certain projects such as roads, pipelines, transmission lines, or communication sites.

Some uses of BLM-administered lands are short-term uses and authorized through land use permits such as filming activities or apiary sites (bee hives).

Authorizations grant rights and privileges for a specific use of the land for a specific period of time. The BLM's objective is to grant land use authorizations to any qualified individual, business, or government entity, and to direct and control the use of authorizations on BLM-administered lands in a manner that:

- protects the natural resources associated with BLM-administered lands and adjacent lands, whether private or administered by a government entity
- prevents unnecessary or undue degradation to BLM-administered lands
- promotes the use of authorizations in common, considering engineering and technological compatibility, national security, and area LUPs
- coordinates, to the fullest extent possible, all BLM actions with local, state, Native American, and other federal agencies; interested individuals; and appropriate quasi-public entities (43 CFR 2801.2)

Forest Service special use permits authorize and administer use of National Forest System lands by individuals, companies, organized groups, other federal agencies and state or local levels of government in a manner that protects natural resource values and public health and safety. For example, special use permits authorize uses that contribute to the nation's infrastructure for generating and transmitting energy resources, such as: electric transmission facilities, oil and gas pipelines, hydropower facilities, and wind and solar facilities. They authorize uses for communications, commerce, public health and safety, and homeland security, such as fiber-optic and wireless telecommunications, water development systems, federal, state, and local highways.

The Forest Service objectives of granting ROWs for roads and trails are to:

- Provide ROWs for the public road system, including the federal-aid system, when such roads cross National Forest System lands or interests in lands
- Accommodate the access needs for the protection, development, and utilization of lands and resources owned by private interests or administered by public agencies when the planned forest development road system and public road system do not meet those needs adequately
- Protect and enhance the quality of air, water, soil, and natural beauty of National Forest System lands in the granting of any ROW
- Cooperate with intermingled and adjacent landowners in developing roads that serve the needs of both parties through the exchange of ROWs
- Provide access across National Forest System lands to private land that is adequate to secure the owners thereof of reasonable use and enjoyment of their land without unnecessarily reducing the management options of the Forest Service or damaging National Forest System lands or resources

ROW Avoidance and Exclusion Areas
Areas closed to mineral leasing, having a no surface occupancy restriction, or otherwise identified as unsuitable for surface disturbance or occupancy are generally identified as avoidance or exclusion areas for ROW authorizations. Restrictions and mitigation measures could be modified on a case-by-case basis for avoidance areas, depending on impacts on resources, while exclusion areas are strictly prohibited from ROW development. See **Table 3-34** for the number of acres currently identified as ROW avoidance and exclusion areas.

ROW Corridors
Designated utility corridors are developed to concentrate the effects of utility lines in manageable locations on BLM-administered and National Forest System lands, which often provide suitable locations for utility transmission lines. The corridors may contain power line, transcontinental fiber optic communications cables, and trans-state gas pipelines. Designated utility corridors are designated in BLM and Forest Service LUPs. Such corridor designations are relatively uncommon in the sub-region. The mere presence of a transmission line or pipeline does not imply that it is within a formally designated corridor. Under this planning effort there are no rescinded designations or changes to the character of previously existing designated corridors; for example, all West-Wide Energy Corridors in Idaho allow for both overhead and buried utilities; those designations will not change. Also, this plan does not attempt to establish any new formally designated ROW corridors.

For PPMA, new utility pipelines or transmission lines exceeding 50kV are excluded, unless they can be sited within a utility corridor previously designated in a BLM or Forest Service LUP (and subject to appropriate BMPs and siting considerations for GRSG). See **Table 3-34** for the number of acres currently identified as ROW avoidance and exclusion areas.

Renewable Energy
Solar, wind, biomass, and geothermal (which is managed as a fluid leasable mineral) are considered renewable energy resources. Renewable energy resources all have different

requirements related to economic development; however, some issues are common to all renewable energy resources, including connection to the existing power transmission facilities and compatibility with existing federal land use.

Wind and solar resource facilities are permitted with ROW authorizations, through the Lands and Realty Program. Geothermal resources, as mentioned above, are considered fluid leasable minerals (See **Section 3.12**, Mineral Resources). As a result, management actions related to the Lands and Realty Program and leasable minerals could affect renewable energy resources. Special management designation areas, such as ACECs and WSAs, could also affect the use of renewable energy resources by limiting the location of these facilities.

Forest Service renewable energy generation and transmission includes wind, solar, and geothermal energy facilities. Section 501(a) (4) of the FLPMA authorizes the Forest Service to issue ROWs for the use and occupancy of National Forest System lands for generation, transmission, and distribution of electric energy. The Energy Policy Act of 2005 recognizes the Forest Service's role in meeting the renewable energy goals of the United States.

Consistent with Forest Service policies and procedures, the use and occupancy of National Forest System lands for alternative energy production, such as wind energy development, are appropriate and will help meet the energy needs of the United States. Permits for solar energy power facilities are issued only if non-National Forest System lands are not available and if adverse impacts can be minimized. Permits for geothermal energy power facilities are issued only if feasibility studies have determined that it is not feasible to transmit geothermal water to a power-generating facility on non-National Forest System lands and if adverse impacts can be minimized.

3.11.2 Trends

Land Use Authorizations

Land use authorization requests are customer driven. Within the planning area most authorizations processed are primarily for roads, electric distribution lines, and communications sites. Major ROWs are those large-scale utility projects, such as for 500kV electric transmission, wind, and solar development. Land use authorization requests are customer driven.

Over the last 6 years in the planning area, the BLM has received a number of applications for major transmission line projects to traverse the state. Prior to that time, it had been over 20 years since major transmission line applications were received by the BLM. The BLM has not received any applications for utility-scale solar production in the planning area, nor are there solar resources comparable to the areas where utility-scale solar production projects are being proposed or built.

Over the last six years, the BLM has authorized and then relinquished a ROW for wind development and has two pending applications. Wind testing sites have been authorized on BLM lands in the planning area, though no wind developments have been authorized and constructed.

3.11.3 Regional Context

Table 3-35 display data for GRSG habitat in the planning area (Manier et al. 2013). In each table, data are presented by surface management agency and their occurrence within occupied GRSG habitat in the planning area and across the entire MZs.

The conversion of sagebrush habitat to agricultural land or urban areas can result in GRSG habitat becoming fragmented and increases in domestic predators such as cats and dogs (Knick and Rotenberry 1995). **Table 3-35** illustrates the locations where agricultural or urban development could occur given the location within a city boundary.

Table 3-35
Acres of GRSG Habitat within City Limits

Surface Management Agency	Acres within PGH			Acres within PPH		
	Planning Area	MZ II/VII[1]	MZ IV	Planning Area	MZ II/VII[1]	MZ IV
BLM	300	106,200	19,700	1,100	37,400	1,100
Forest Service	700	24,600	700	0	21	0
Tribal and other Federal	0	2,500	100	0	32,400	0
Private	4,600	209,300	43,400	4,202	79,100	4,100
State	51	10,900	2,800	31	6,800	31
Other	38	0	38	0	0	0

Source: Manier et al. 2013
[1]BER combined acres for MZs II and VII

Communication towers, transmission lines, electrical distribution lines and other vertical structures provide additional perching opportunities for ravens and other birds of prey can result in habitat fragmentation, habitat avoidance, and can increase vehicle traffic during maintenance operations (USFWS 2010a). **Table 3-36** presents the number of communication towers in each MZ.

Table 3-36
Number of Communication Towers within GRSG Habitat

Surface Management Agency	Number[1] within PGH			Number[1] within PPH		
	Planning Area	MZ II/VII[2]	MZ IV	Planning Area	MZ II/VII[2]	MZ IV
BLM	4	18	5	11	8	7
Forest Service	0	2	0	0	0	0
Tribal and other federal	8	5	8	1	2	1
Private	5	54	7	8	10	7
State	0	0	0	0	0	0
Other	0	0	0	0	0	0

Source: Manier et al. 2013
[1]Displays the number of Federal Communication Commission communication towers.
[2]BER combined acres for MZs II and VII

Table 3-37 shows the portion of transmission lines in occupied habitat in the planning area and MZs.

Utility corridors are a planning tool that enables the BLM and Forest Service to identify desired locations for future infrastructure. **Table 3-38** provides the miles and acres of Section 368 Energy corridors for occupied habitat.

Table 3-37
Acres of Transmission Lines within GRSG Habitat

Surface Management Agency	Acres[1] within PGH			Acres[1] within PPH		
	Planning Area	MZ II/VII[2]	MZ IV	Planning Area	MZ II/VII[2]	MZ IV
BLM	29,600	172,000	42,000	56,400	130,800	83,600
Forest Service	2,000	3,000	3,500	4,432	2,900	5,800
Tribal and other federal	4,683	33,900	4,700	10,700	7,500	10,700
Private	29,400	206,000	57,900	23,000	119,500	47,000
State	9,330	20,000	11,200	5,912	20,100	6,500
Other	900	100	900	2,800	1,000	2,800

Source: Manier et al. 2013
[1]Includes transmission lines greater than 115 kilovolts (kV) and assumes a 656-foot-wide (200 meter) footprint.
[2]BER combined acres for MZs II and VII

Table 3-38
Acres of Utility Corridors within GRSG Habitat

Surface Management Agency	Acres within PGH[1]			Acres within PPH[1]		
	Planning Area	MZ II/VII[2]	MZ IV	Planning Area	MZ II/VII[2]	MZ IV
BLM	61,700	269,000	90,200	54,100	151,600	131,900
Forest Service	300	1,200	300	900	2,900	900
Tribal and other federal	700	6,500	700	0	0	0
Private	11,200	190,100	21,900	12,600	84,100	34,000
State	6,500	15,300	6,800	3,900	13,900	4,100
Other	0	0	0	0	2,200	0

Source: Manier et al. 2013
[1]Centerlines for proposed locations of Section 368 energy corridors were buffered by varied widths, based on corridor width attribute data, to create the direct area of influence.
[2]BER combined acres for MZs II and VII

Railroads can fragment GRSG habitat (Knick and Rotenberry 1995). **Table 3-39** and **Table 3-40** show the railroad miles and acres, respectively, in occupied habitat.

Table 3-39
Miles of Railroads within GRSG Habitat

Surface Management Agency	Miles within PGH			Miles within PPH		
	Planning Area	MZ II/VII[1]	MZ IV	Planning Area	MZ II/VII[1]	MZ IV
BLM	66	200	100	84	100	100
Forest Service	1	0	1	8	0	8
Tribal and Other Federal	14	42	14	19	9	19
Private	42	700	300	39	300	100
State	4	100	0	0	0	0
Other	0	0	0	0	1	0

Source: Manier et al. 2013
[1]BER combined acres for MZs II and VII

Table 3-40
Acres of Railroads within GRSG Habitat

Surface Management Agency	Acres within PGH[1]			Acres within PPH[1]		
	Planning Area	MZ II/VII[2]	MZ IV	Planning Area	MZ II/VII[2]	MZ IV
BLM	300	1,500	500	200	500	400
Forest Service	8	0	8	58	0	58
Tribal and Other Federal	83	300	84	77	12	77
Private	200	5,100	900	200	1,400	400
State	21	400	24	21	75	21
Other	0	0	0	0	11	0

Source: Manier et al. 2013
[1]Assumes footprint of 9.4 meters.
[2]BER combined acres for MZs II and VII

Table 3-41
Acres of Vertical Obstructions within GRSG Habitat

Surface Management Agency	Acres[1] within PGH			Acres[1] within PPH		
	Planning Area	MZ II/VII[2]	MZ IV	Planning Area	MZ II/VII[2]	MZ IV
BLM	100	600	200	100	300	200
Forest Service	35	28	36	11	0	22
Tribal and other federal	51	100	100	11	0	11
Private	100	1,400	200	63	300	200
State	0	100	0	0	100	0
Other	3	0	0	0	0	0

Source: Manier et al. 2013
[1]Derived from dataset containing Federal Communication Commission communication towers and Federal Aviation Administration vertical obstructions. Excludes wind towers. Assumes a buffer of 56.4 meters (2.47 acres) around each obstruction.
[2]BER combined acres for MZs II and VII

Table 3-42
Acres of Wind Towers within GRSG Habitat

Surface Management Agency	Acres within PGH[1]			Acres within PPH[1]		
	Planning Area	MZ II/VII	MZ IV	Planning Area	MZ II/VII	MZ IV
BLM	0	0	0	0	0	0
Forest Service	0	0	0	0	0	0
Tribal and other federal	0	0	0	0	0	0
Private	3	600	200	0	18	0
State	0	100	0	0	0	0
Other	0	0	0	0	0	0

Source: Manier et al. 2013
[1]Assumes a footprint of 62 square meters per wind tower.
[2]BER combined acres for MZs II and VII

Table 3-43
Acres of Wind Energy Authorizations within GRSG Habitat

Surface Management Agency	Acres within PGH			Acres within PPH		
	Planning Area	MZ II/VII[1]	MZ IV	Planning Area	MZ II/VII[1]	MZ IV
BLM	14,000	0	296,500	16,100	0	580,600
Forest Service	0	0	0	0	0	0
Tribal and other federal	100	0	200	0	0	1,700
Private	900	0	2,300	2,100	0	13,900
State	38	0	400	0	0	0
Other	0	0	0	0	0	0

Source: Manier et al. 2013
[1]BER combined acres for MZs II and VII

3.12 Mineral Resources

Fluid Leasable Minerals

The right to drill for and develop fluid minerals, namely oil and gas and geothermal resources, on federal land may only be acquired through a mineral lease, offered and administered by the BLM in accordance with the Mineral Leasing Act of 1920, as amended and supplemented (30 USC 181 et seq.*)*. The limit for a competitive oil and gas lease is 2,560 acres in size, while a geothermal lease can be up to 5,280 acres in size. If an oil and gas lease is not sold during the competitive sale, it may be sold noncompetitively and may be combined with other parcels for a total of 10,240 acres, but the maximum size for a geothermal lease remains 5,280 acres.

The leases have a 10-year term. If there is no discovery in 10 years, the leases expire. There is no renewal for diligence. If there is a discovery, the lease may be held as long as there is

production. The BLM can modify the right conveyed by a lease by attaching a stipulation, which is an enforceable condition of the lease. During the leasing process, the BLM may apply stipulations (for example No Surface Occupancy, Controlled Surface Use, and Timing Limitations) to all or parts of a lease in order to protect a wide range of resources including soils, watersheds, cultural resources, and wildlife (e.g., GRSG). Stipulations may impact the availability of fluid mineral resources on a lease by restricting the timing and/or location of exploration and development activities. On National Forest System lands, the BLM cannot issue a lease without Forest Service consent. Forest Service consent includes stipulations that must be added to the lease to protect the resources on the Forest.

The issuance of a lease does not, in and of itself, authorize any surface-disturbing activities. If a lessee wishes to conduct exploratory drilling, an application for permit to drill must be submitted to the BLM for approval. An environmental analysis is conducted and as a result, the BLM may attach additional, site-specific and activity-specific conditions, called Conditions of Approval or Best Management Practices, to the drilling permit. The Forest Service approves the Surface Use Plan of Operations portion of the application for permit to drill, and may also add COAs. The BLM cannot deny operations on a lease unless the operation would violate other nondiscretionary statutes, such as the ESA or the Clean Water Act. In cases where surface operations would have unacceptable environmental impacts, the BLM's authority to deny operations on the lease, if not specified in a particular statute, must be established in the lease through the use of lease stipulations.

All leases, regardless of whether they have additional stipulations, are offered with standard terms and conditions. In accordance with a 2002 Instruction Memorandum from the BLM Washington Office, all fluid mineral leases must include the following stipulation:

Endangered Species Act Section 7 Consultation Stipulation
The lease area may now or hereafter contain plants, animals or their habitats determined to be threatened, endangered, or other special status species. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that will contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground-disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the Endangered Species Act as amended, 16 USC 1531 et seq., including completion of any required procedure for conference or consultation.

All geothermal and oil and gas leases in Idaho contain the ESA consultation stipulation. There is also a mandatory cultural resource protection stipulation applied to all leases.

Stipulations to protect other resources, such as GRSG, are developed during the land use planning process. Stipulations must be necessary and justifiable: If a lessee is to be prevented from extracting oil and gas on a lease and the prohibition is not mandated by a specific, nondiscretionary statute such as the ESA, the stipulation is necessary and is to be used. A

stipulation is justifiable if there are resource values, uses, and/or users present that cannot coexist with fluid mineral operations, cannot be adequately managed and/or accommodated on other lands for the duration of operations, and provide a greater benefit to the public than that of the fluid mineral operations. If a ground disturbing activity is proposed on the lease during any given year, the authorized officer may modify or waive restrictions if actual conditions do not warrant them.

3.12.1 Conditions within the Planning Area

Oil and Gas

There has never been a single producing oil and gas well in the entire state of Idaho, despite the drilling of over 150 wildcat wells in the state since the early 1900s. As of March 16, 2015, Idaho BLM has two federal oil and gas leases on split-estate lands near Gray's Lake in Bonneville County. The leases total approximately 4,000 acres, 40 of which is BLM surface and the remainder is split-estate. The leases were issued in 2006 for an initial term of 10 years. No drilling or exploration has occurred on any of the leases nor has any activity been proposed; however, a wildcat well was drilled on private land near the Gray's Lake leases in 2007. The well was drilled to approximately 11,000 feet without encountering an economically viable hydrocarbon source. Additionally, a company has drilled numerous wells on private lands in the New Plymouth area of southwest Idaho, and is planning to develop a natural gas field. BLM-administered lands are located near this field and have been nominated for leasing; however leasing is being deferred until completion of the Four Rivers RMP. There is no GRSG habitat in this area.

The Dillon Field Office has 47 active oil and gas leases, none of which are producing, according to LR2000. Approximately 50,000 acres of these leases are in GRSG habitat; however, many leases likely contain timing limitations for other wildlife species, as the Dillon RMP shows that much of the field office is covered by stipulations restricting activities during critical seasons for other wildlife species or prohibiting all surface occupancy.

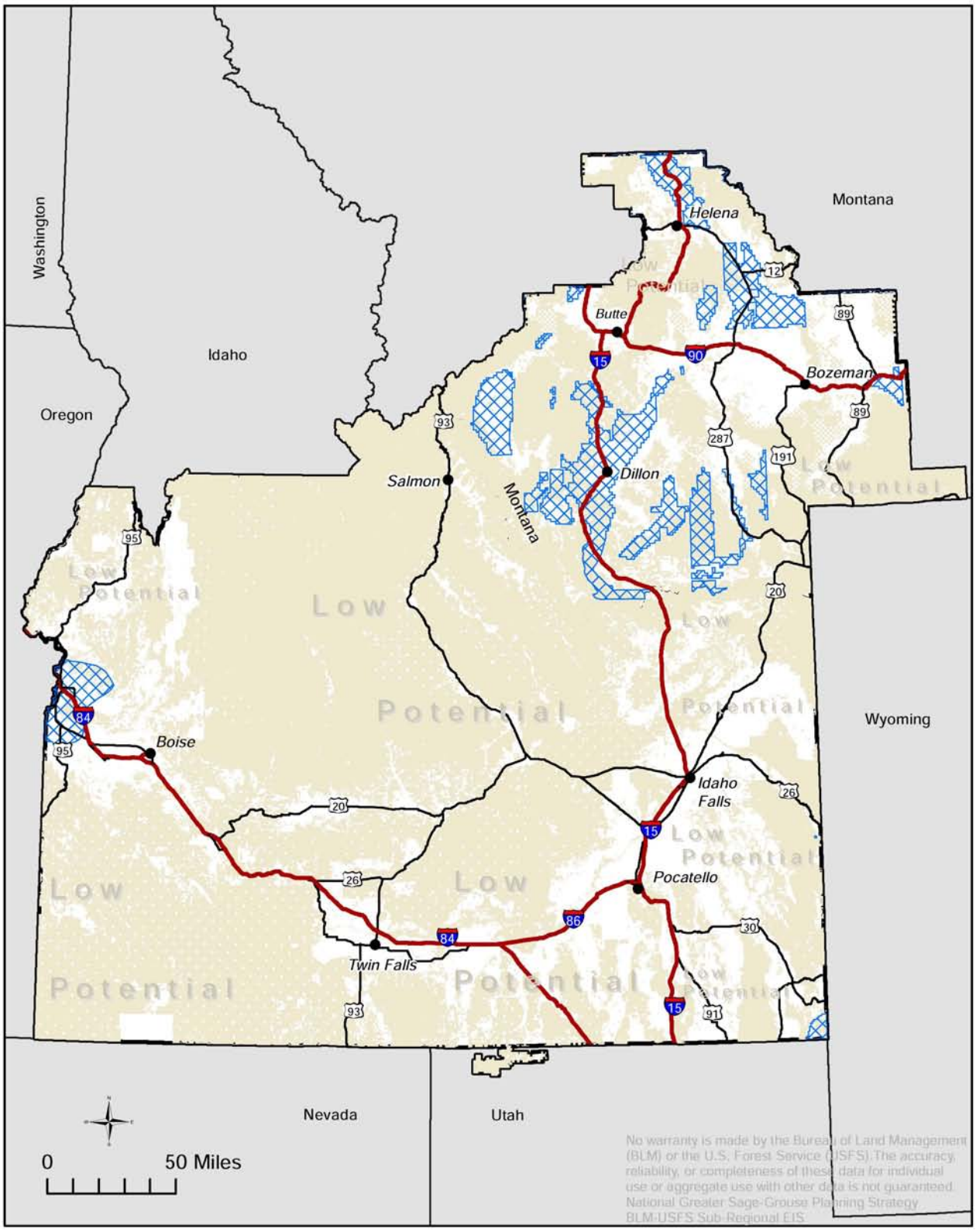
Figure 3-8 depicts the oil and gas potential within the planning area.

Geothermal

Idaho's prospects for development of geothermal resources are better than those for oil and gas. There are currently 19 federal leases in Idaho, covering approximately 48,000 acres; 13 of these acres are in GRSG habitat. Leases are scattered across southern Idaho, but are primarily located near Raft River, Crane Creek, and Parma, Idaho. There are no active leases currently in the Dillon Field Office. Seventeen of Idaho's 25 geothermal leases are located in GRSG habitat, and all have existing stipulations protecting GRSG habitat during critical seasons (as well as having stipulations to protect crucial habitat for other species):

- Each of the seven leases at Raft River have a stipulation restricting exploration and development work in GRSG strutting/brood-rearing habitat from April 1 through June 15.

Figure 3-8
Oil and Gas Potential of Federal Oil and Gas Mineral Estate



Medium Potential for Oil and Gas Resources

Federal Oil and Gas Mineral Estate

Idaho and SW Montana Sub-regional boundary

No High Potential for Oil and Gas Resources
in the Idaho-SW Montana Sub-region

- Each of the four leases at Crane Creek contain a stipulation requiring that a survey be conducted for the presence of active GRSG leks in key habitat, prior to authorization of surface disturbing activities. If active leks are present (defined as being used at least once in a five-year period), two stipulations will apply. One is a timing limitation precluding exploration or drilling activities between March 15 and May 1 from 6 pm to 9 am within two miles of an active lek. The other stipulation precludes construction of wells, geothermal plants, power lines, pipelines, or other such permanent structures that would fragment or degrade nesting habitat within two miles of an active lek.
- Both of the geothermal leases located west of Weiser have the following stipulations:
    - Controlled surface and timing limitation use near GRSG leks and/or nesting/early brood rearing habitat: Potentially disruptive major construction and maintenance activities (e.g., infrastructure/energy development and similar projects), shall be avoided within 4 miles (6.4 kilometers) of occupied or undetermined status GRSG leks from February 15 to June 30 to reduce disturbance to lekking birds, or April 15 to June 30 for nesting GRSG (and/or hens with early broods). Major construction and maintenance activity will be avoided in GRSG winter range from December 1 to February 15. Specific dates may be earlier or later, depending on local breeding chronology. The spatial buffer may be increased or decreased based on site-specific factors analyzed and documented in an environmental assessment or EIS and authorized via the appropriate decision document. Exceptions may be granted for activities involving only infrequent, short term disturbance (less than 1 hour within a 24-hour period in a specific area); or if there are intervening topographic features or line-of-site screening that buffer the lek or nesting habitat from disturbance; or if recent (within the past 5 years) site-specific studies or local expertise suggest that leks or nesting hens are unlikely to be present within the 4-mile zone surrounding the project activity.
    - For smaller-scale human disturbances, (e.g., water pipeline construction, routine fence maintenance, and facility maintenance), a 0.62 mile (1 kilometer) lek disturbance buffer will apply between approximately March 15 and May 1 in lower elevations and March 25 through May 15 in higher elevations, from 6 p.m. to 9 a.m. in a specific area to minimize disturbance to lekking GRSG.

Geothermal exploration and development activity on federal lands in Idaho has been sporadic, due largely to economic factors. Idaho now has one 10 megawatt geothermal power plant currently operating, as of 2007. It is located on private land at Raft River, south of Burley, Idaho. Nine federal leases surround the plant and extend up the southeast flank of Jim Sage Mountain. The BLM approved five geothermal drilling permits on a lease at Raft River in 2010; however no drilling has occurred to date. The drilling permits have several

Conditions of Approval attached to protect wildlife. These include fencing reserve pits and safeguarding migratory birds from hazards associated with pits and treatment facilities, including but not limited to pit screening or netting, and placing protective cones over vent stacks. In addition, drilling is prohibited during the GRSG strutting and brood-rearing season (lease stipulation).

Figure 3-9 depicts the geothermal potential of the federal mineral estate in the planning area.

Mineral Materials

Mineral materials include sand, gravel, most building and landscaping stone, pumice, and other common variety materials that are not subject to mineral leasing or location under the mining laws. The Materials Act of 1947, as amended (61 Stat. 681) authorizes disposal of mineral materials on BLM-administered lands through a sales system, and provides for free use of material by government agencies, municipalities or nonprofit organizations, if the material is not to be used for commercial purposes. Permitting the removal or extraction (i.e., disposal) of mineral materials on BLM-administered lands is a discretionary activity. The BLM will not authorize the disposal of mineral materials if it is determined that the aggregate damage to BLM-administered lands and resources would exceed the public benefits that the BLM expects from the proposed disposal; nor will the BLM dispose of mineral materials from areas identified in land use plans as not appropriate for mineral materials disposal (43 CFR 3601.11 and 3601.12). Disposal of mineral materials on National Forest System lands is covered by 36 CFR 228D.

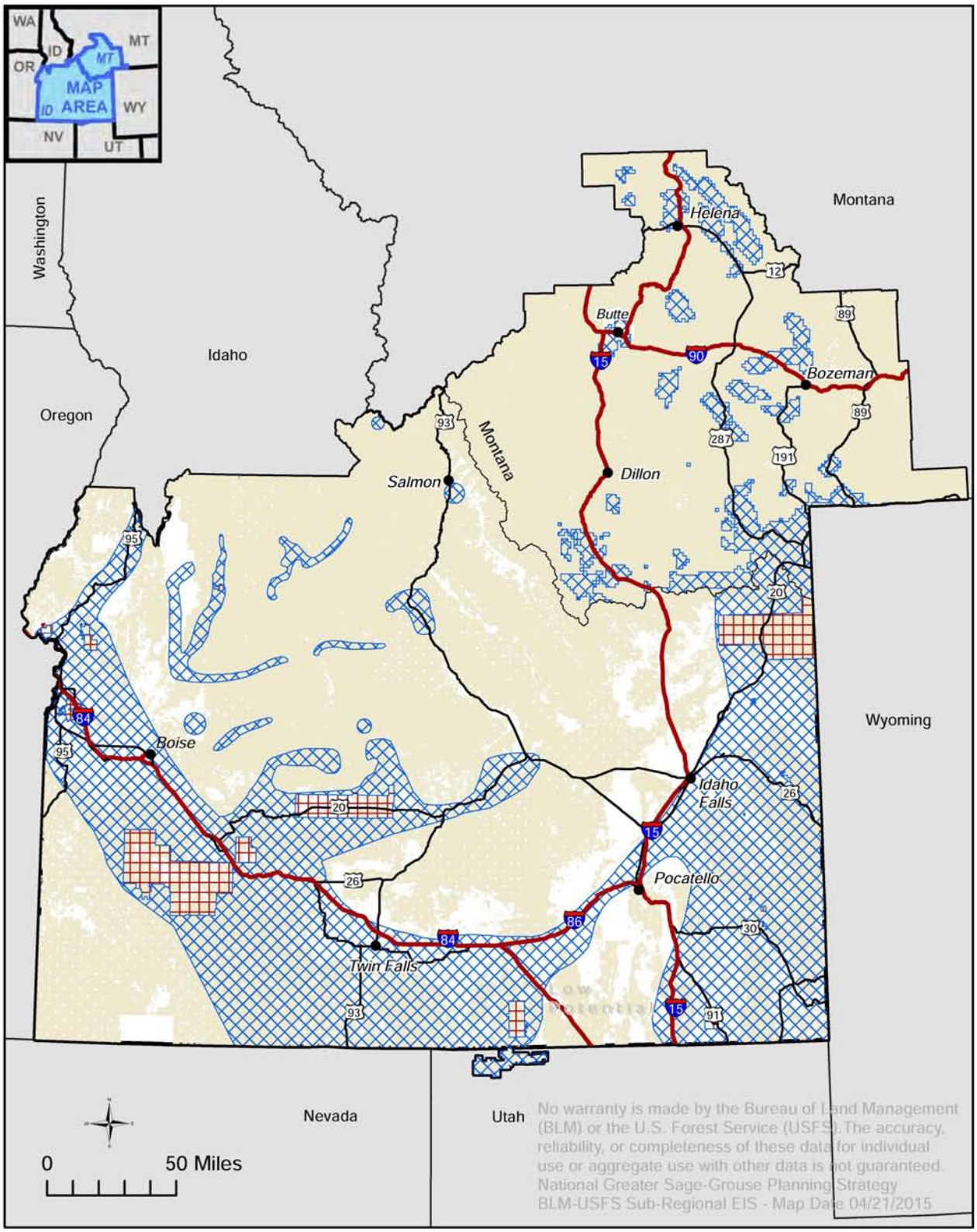
Most BLM-administered land in Idaho is available for consideration of mineral material disposal; however, existing guidance in many of the LUPs in the planning area encourages the use of existing disposal sites until the material is depleted. **Table 3-44** shows the numbers of mineral material disposal cases within the planning area. **Figure 3-10** shows the geographic distribution of mineral materials in the planning area.

Table 3-44
Existing Mineral Materials Cases

Field Office	# Community Pits	# Free Use Permits	# Negotiated Sales	Total # sites in GRSG Habitat
Owyhee	9	13	2	All
Bruneau	6	10	2	5
Four Rivers	6	27	4	2
Burley	12	37	2	7
Shoshone	17	18	0	9
Jarbidge	10	27	0	4
Pocatello	5	23	0	2
Challis	21	54	5	20
Salmon	6	11	3	All
Upper Snake	17	32	8	17
Dillon, Montana	4	0	0	2
Total	**33**	**252**	**26**	**120**

Source: BLM GIS 2015
[1]Data as of April 13, 2015

Figure 3-9
Geothermal Potential of Federal Geothermal Mineral Estate



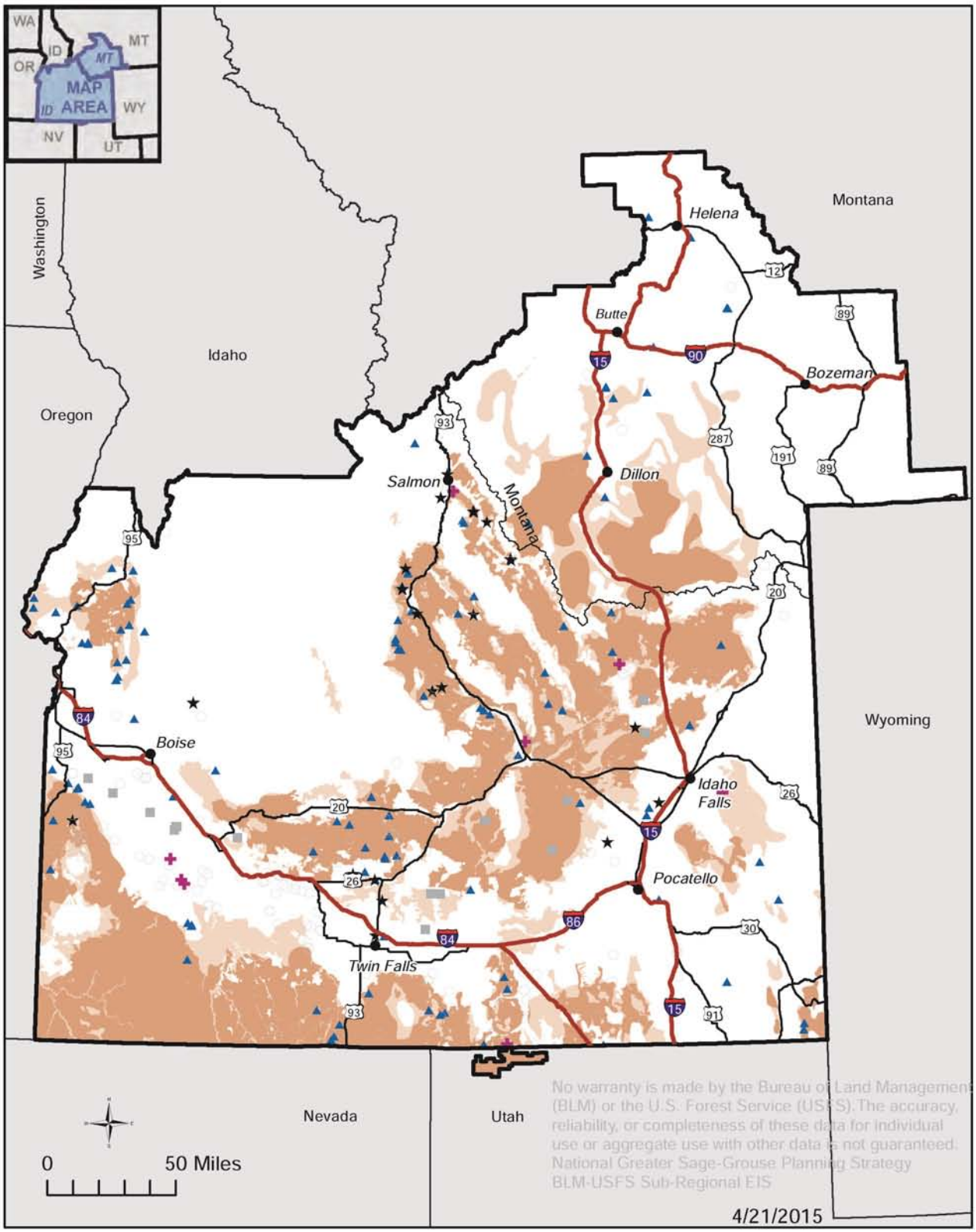
High Potential for Geothermal Resources

Moderate Potential for Geothermal Resources

Federal Geothermal Mineral Estate

Idaho and SW Montana Sub-regional boundary

Figure 3-10
Mineral Material Commodity Types in the Planning Area



- Stone
- Sand and Gravel
- Clay and Limestone
- Soil
- Pumice and Volcanic
- Preliminary Priority Management Atea
- Preliminary General Management Area
- Idaho and SW Montana Sub-regional boundary

Community pits are sites established by the BLM and Forest Service for the public to acquire mineral materials by purchasing a short-term permit over-the-counter at the field office. Free Use Permits are usually sand and gravel pits, and are requested by county highway districts and nonprofit organizations for road construction and maintenance of county roads. A negotiated sale is an exclusive site proposed by a single party, often commercial, as the party must now pay for the BLM to process the permit.

The number of sales out of a community pit varies by site, from less than one to more than 50 per year. Many of the most popular community pits are for landscaping rock and building stone that is simply picked up by hand from the ground surface or from a talus slope. Most of these sales are for less than one ton. Most Free Use Permit sites are used sporadically and may be scattered throughout a field office or ranger district office, so that when the county needs material it has a nearby source, thereby reducing haul costs. A pit may be inactive for several years before it is needed for a road project in the area.

A gravel pit is initially developed by scraping off the vegetation and topsoil, which is then stockpiled for future reclamation. Most gravel pits are 5 to 15 acres in size. No infrastructure other than an access road is needed for mineral materials disposals. Most mineral material removal activity occurs during the summer months and during daylight hours.

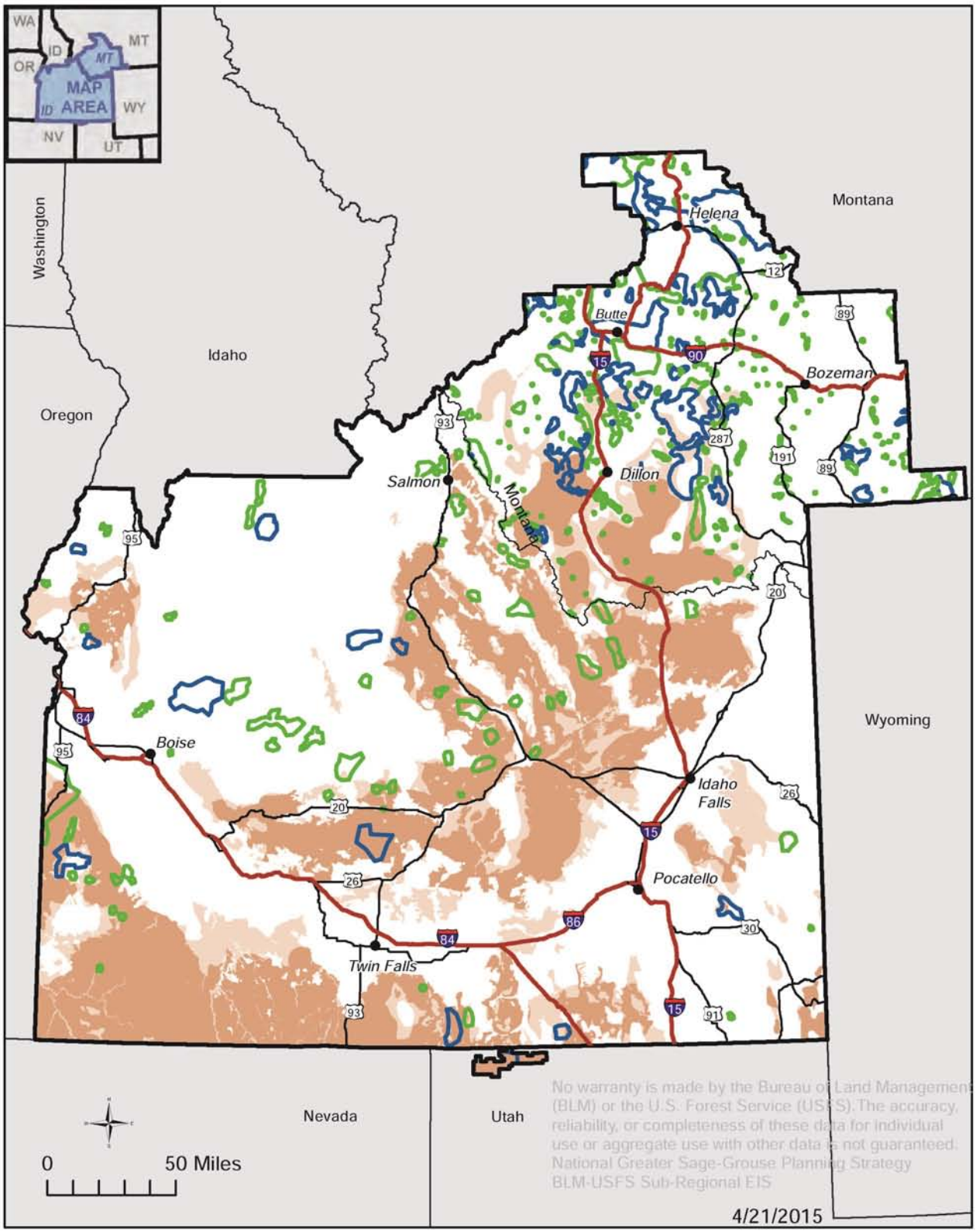
Very few mineral material sites have mitigation measures protecting GRSG habitat. One exception is the St. Anthony Sand Dune Community Pit, which has a provision stating "Proposals to remove sand between March 1st and June 15th will be evaluated to determine if breeding birds are utilizing the area."

Locatable Minerals

Under the General Mining Act of 1872 (17 Stat. 91), any US citizen, or person with the intent to become a citizen, may stake a mining claim for locatable minerals on federal lands (unless administratively withdrawn from mineral entry). This gives the claimant a possessory right to develop the locatable mineral resource. Lands withdrawn from mineral entry are Wilderness, ACECs, and other specially designated areas. The staking of a mining claim is a nondiscretionary activity: As long as the lands are open to locatable mineral entry, and as long as the claimant maintains the mining claim on an annual basis in accordance with regulations at 43 CFR 3830 through 3838, the mining claim is considered active. If the claimant fails to properly locate or maintain the claim on an annual basis, the claim is forfeited. The BLM's role is limited to recording and adjudicating the location notices and maintenance filings, and preventing undue or unnecessary degradation of the lands under FLPMA. **Figure 3-11** shows areas where locatable minerals are considered to be more likely to be found and **Figure 3-12** shows existing Surface Management Plans or Notices in the planning area.

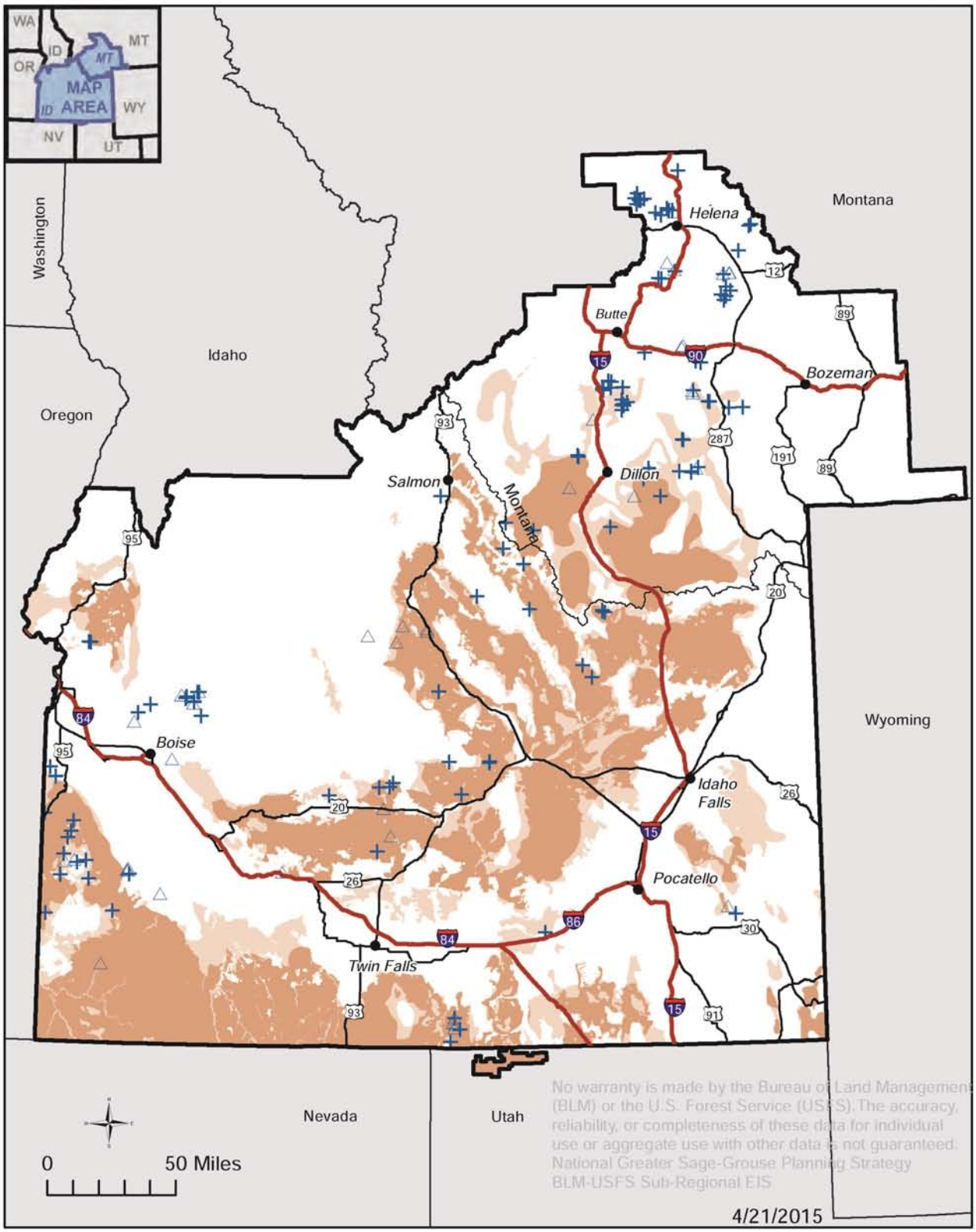
If a claimant wants to perform mining operations other than casual use on BLM-administered lands, a Notice or Plan, filed under 43 CFR 3809, must be filed with the BLM (or 43 CFR 3802, if the claim is located on lands under wilderness review). The Forest Service has similar locatable minerals management regulations at 36 CFR 228A. For

Figure 3-11
Locatable Mineral Potential in the Planning Area



High Locatable Mineral Potential
Moderate Locatable Mineral Potential
Preliminary Priority Management Atea
Preliminary General Management Area
Idaho and SW Montana
Sub-regional boundary

Figure 3-12
Existing Surface Management Plans or Notices in the Planning Area



△ SURFACE MGT- PLAN
\+ SURFACE MGT- NOTICE
Preliminary Priority Management Atea
Preliminary General Management Area
Analysis Boundary

operations on National Forest System lands, a Notice of Intent must be filed. In addition, a Plan of Operations is required if the proposed activities will cause "significant disturbance of surface resources" (36 CFR 228.4[a][4]). Where there is a reference to notices or plans, it means both notices or plans on BLM-administered lands and Notices of Intent or Plans of Operation on National Forest System lands. Later in this document, the terms Notice/Notice of Intent or Plan/Plan of Operation are roughly equivalent for the purpose of this analysis. The purpose of these regulations is to prevent unnecessary or undue degradation of surface resources by operations authorized by the mining laws. The subparts establish procedures and standards to ensure that operators and mining claimants meet their obligation to prevent undue or unnecessary degradation and to reclaim disturbed areas.

The existing land use plans identify areas that are closed to mineral entry but are silent on mitigation measures to be taken in GRSG habitat. **Table 3-45** shows the numbers of 3809 Plans and Notices that are authorized or pending in the planning area.

Table 3-45
Authorized or Pending 3809 Plans and Notices

District	3809 Plans of Operations		3809 Notices		GRSG Habitat?
	Authorized	Pending	Authorized	Pending	
Boise District	15	0	10	3	1 plan in PH
Twin Falls	7	5	4	3	5 plans in PH
Idaho Falls	8	1	2	2	4 plans in PH
Dillon Field Office	0	0	0	0	No plans in GRSG habitat
Total	**30**	**6**	**16**	**8**	**10 plans in GRSG habitat**

Source: BLM GIS 2015

The Boise District currently has three 3809 Plans in GRSG habitat (one plan in PPH) for mostly small operations for zeolite and bentonite along the Owyhee Front. Development has occurred or is underway in the Castle Creek drainage south of Oreana (zeolite, bentonite); close to the Oregon border near US Highway 95 (both for zeolite); and on the Owyhee Plateau near the Upper Deep Creek area.

The Twin Falls District currently has five 3809 Plans in GRSG habitat. Development has included building stone operations south of Oakley, and the Eskridge pumice pit north of Magic Reservoir. At least three companies operate quarries on Middle Mountain south of Oakley, extracting a variety of micaceous quartzite called Oakley Stone. Oakley Stone is highly prized as a building and flooring material, as it has very high tensile strength and can be split into large, thin sheets. Building stone quarry operations have been active on Middle Mountain for over sixty years in the vicinity of active GRSG leks.

The operations are confined to discrete quarries located at mid-elevation on the west slope of Middle Mountain. The quarries expand very slowly over the years, and no infrastructure such as power lines or pipelines are required. Very little mechanical equipment is used, as the

stone is split to the desired thickness using only small hand tools such as pry bars, hammers and chisels, and is then placed on pallets by hand. However, operators also use excavators, dump trucks, front end loaders, and other equipment in their daily operations, and blasting is used occasionally. Most of the quarry workers are employed seasonally and are housed on-site, thereby reducing traffic and dust. The quarries are strung out north-south along Middle Mountain such that each quarry has a separate road to access the Goose Creek road, an improved gravel road that leads to Oakley.

During the field season (roughly May to November), semi-truck traffic, hauling pallets of Oakley Stone, can be fairly intense on the Goose Creek road, making 10 to 20 round trips per day. One of the operations has a mill site adjacent to the Goose Creek Road where stone is split and palletized for shipping. All of the operations shut down in the winter, so in the fall pallets of stone are brought off the mountain and stockpiled in Oakley. Several of the quarries have been patented and are therefore privately owned. No stipulations pertaining to GRSG are currently applied to the Plans of Operations for any of these quarries. Altogether, the quarries employ approximately 100 people year-round and approximately 600 seasonal workers (Southern Idaho Living 2012).

The Eskridge pumice pit is located north of Magic Reservoir, on both sides of US Highway 20. The mining claimants have mined pumice for landscaping material since the 1940s. Current operations are located on the south side of the highway, where disturbance consists of 15 acres of quarry and staging area. A few years ago, the claimant moved the operation from the north side of the highway, and reclaimed (sloped and seeded) 34 acres of previous disturbance. The operation is active throughout the year, but activities rotate approximately every 3 years, depending on demand for the material. In the first year of the cycle, bulldozers are used to rip the material from the quarry face. In the second year, the material is classified based on size and color, and stockpiled. In the third year, the stockpiles are loaded into belly dump trucks and transported to Gooding, where it is loaded onto train cars and shipped to Rexburg, where it is sold.

The Idaho Falls District currently has six 3809 Plans in GRSG habitat, all in the Challis Field Office. Development has occurred or is underway for building stone (including Three Rivers Stone) and zeolite. The Three Rivers Stone quarry is a large building stone quarry operation situated along the south side of US Highway 93, east of the confluence of the East Fork and the Main Salmon rivers. The quarry is operated in a similar manner as those on Middle Mountain: The stone (a variegated argillaceous quartzite) is split into thin sheets using hand tools and is palletized at the quarry. The pallets are hauled to the mill site adjacent to the highway, from which they are shipped. At peak production in 2007, there were 99 people employed by the quarry's operator, L&W Stone. In January, 2013, however, the company announced that it would be shutting down production at the quarry while it undergoes bankruptcy proceedings.

In the Dillon Field Office, there are currently no 3809 Plans located in GRSG habitat.

On the Raft River division of the Sawtooth National Forest in Utah, there are several quarries of building stone. They are located on the southern slopes of the Raft River Range, in GRSG habitat.

Nonenergy Solid Leasable Minerals

As with fluid minerals, the right to develop nonenergy solid leasable mineral resources, such as phosphate, on federal lands may be acquired only through a mineral lease, offered and administered by the BLM in accordance with the Mineral Leasing Act of 1920, as amended and supplemented (30 USC, Section 181 et seq.). Lands that are known to have a valuable phosphate resource have been designated by the USGS as known phosphate leasing areas (KPLAs) and are leased through a competitive leasing process. Lands outside a KPLA may also be leased, but the existence of a valuable phosphate resource must be proven first, through prospecting. Idaho has 8 KPLAs, totaling 80,168 acres. Idaho BLM has 48 leases in KPLAs, totaling 31,670 acres. Therefore there are 48,498 acres of unleased KPLA in Idaho; there are 12,904 acres leased outside of KPLAs (38 leases).

The Pocatello Field Office in southeast Idaho has a large nonenergy solid leasable mineral program, as the phosphate resource in that field office is significant. The Middle Permian Phosphoria Formation is one of the largest resources of phosphate rock in the world; the richest phosphorite accumulations are found in southern Idaho, northern Utah, and western Wyoming. Compression during the Cretaceous Period resulted in major folding and thrust faulting of Paleozoic and Mesozoic sediments throughout the Rocky Mountain region. These sediments were folded on a regional scale into north-south trending anticlines and synclines, then thrust eastward 18 to 20 miles, exposing the phosphate resources of the Phosphoria Formation along steeply dipping fold limbs.

The thickest, richest accumulations of phosphate occur in southeast Idaho, centered around the Soda Springs area. The BLM manages these resources on behalf of the federal government. The goal in the Pocatello RMP is to manage the federal mineral estate while minimizing adverse impacts on resource values. The 2012 Pocatello RMP does not have any stipulations or minerals guidance for nonenergy leasable minerals that specifically address GRSG.

Phosphate has been mined commercially in southeast Idaho for over one hundred years, mostly east of Soda Springs, an area that has relatively little GRSG habitat. Of the 86 federal phosphate leases that the BLM administers in Idaho, only 10 are in GRSG habitat. Nine of these leases are north and west of Blackfoot Reservoir and Soda Springs, in or near PGH. None of those leases have been mined, nor is any mining planned on the leases in the next 5 to 10 years. Most of the leased acreage around Blackfoot Reservoir is split-estate (private or state-owned surface with federal minerals). The Trail Creek and Caldwell Canyon leases in PGH east of Conda Mountain are undergoing drilling. One additional lease is in PPH, northwest of Bear Lake near Paris, Idaho. Exploration drilling was conducted in 2012 on the lease and on the private lands and unleased split-estate lands surrounding the small lease. Timing restrictions for GRSG were applied to the approval for the drilling. If developed, this property would likely be developed as an underground mine, due to geologic factors.

In total, approximately half of the federal leases in Idaho have been mined, are being mined, or are proposed to be mined in the next 5 to 10 years. The remaining unmined leases have been held for many years and are subject to valid existing rights. The Dillon Field Office has one nonenergy solid leasable lease, for phosphate. It is not in GRSG habitat and is undeveloped.

Figure 3-13 shows gas potential within the planning area.

Coal

No economically viable coal resources have ever been discovered in Idaho, and most plans are silent on the subject. The Dillon RMP states its goal is to make coal resources available on a site-by-site basis. A plan amendment would be required to lease coal, along with the appropriate level of NEPA analysis. No specific mitigation measures for GRSG are identified in any of the land use plans. Coal mining is regulated in accordance with the Surface Mining Control and Reclamation Act of 1977 (30 USC 1201 et seq.). BLM's coal mining regulations are found at 43 CFR 3400. According to 43 CFR 3420.1-4 (e)(1), only those areas that have development potential may be identified as acceptable for further consideration for leasing. As there is no development potential in the planning area, the lands are determined to be unsuitable for leasing. For this reason, the impacts on GRSG from the development of a coal resource will not be discussed further in this document.

3.12.2 Trends

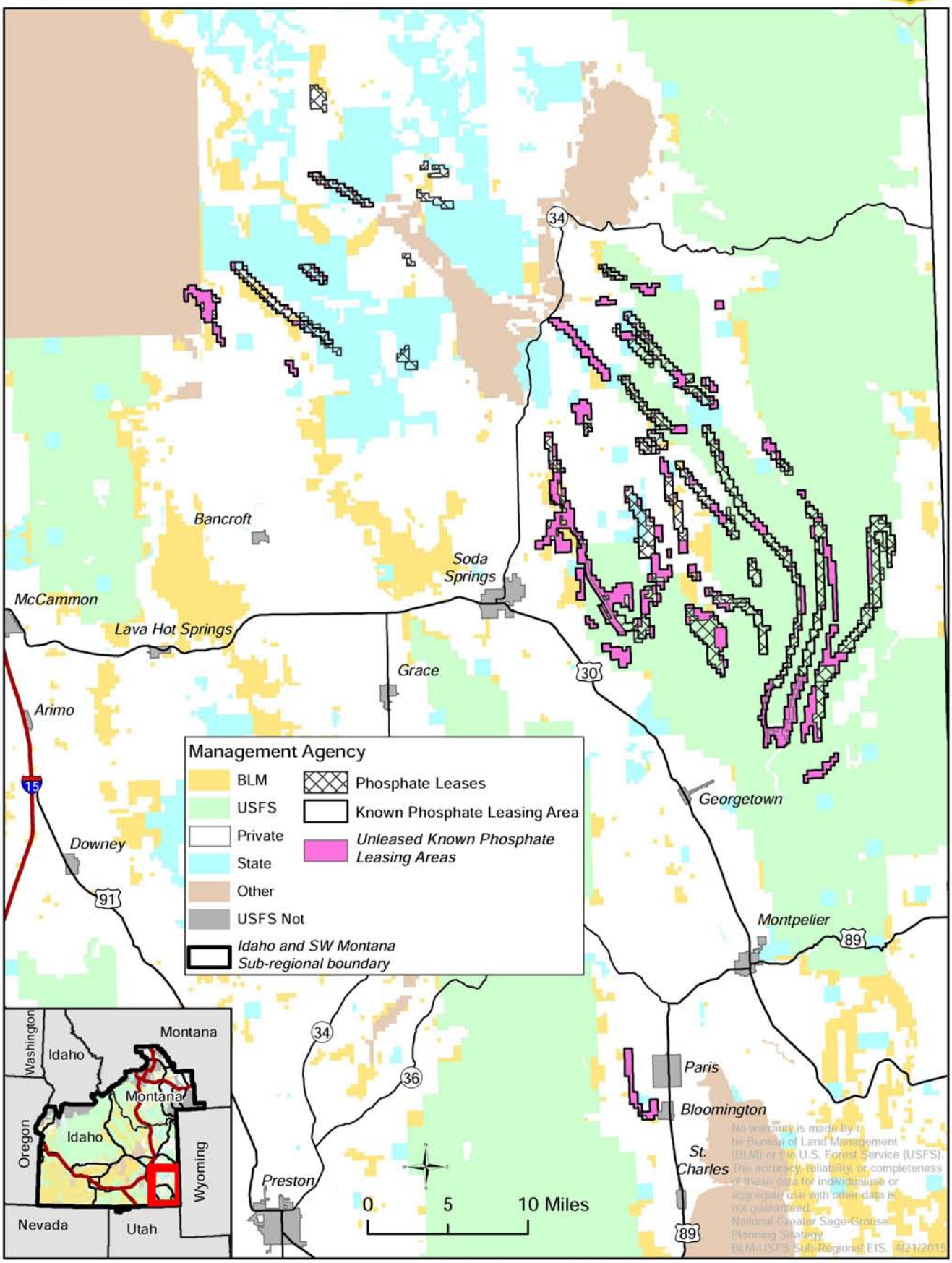
Oil and Gas

Interest in oil and gas leasing in Idaho has been sporadic over time, and it is expected to remain so. Many leases were held in the 1970s and 1980s throughout much of Idaho, when leasing was done under a noncompetitive system. After passage of the Federal Oil and Gas Royalty Management Act in the early 1980s, leasing became a competitive process, and BLM's standards for leasing became more rigorous. Lease nominations dropped dramatically in Idaho and for many years, BLM's oil and gas program in Idaho was nonexistent. With passage of the Energy Policy Act in 2005, Idaho BLM experienced an uptick in leasing interest, with over 400,000 acres of federal land nominated since that time[2].

Interest in leasing is currently high in the Payette area, due to the recent wildcat discovery of natural gas and planned development in that area (181,000 acres nominated for leasing, overlapping). Much of the land nominated for leasing is split estate, and only the northernmost nominated parcels are located in GRSG habitat. The Bear Lake area has been nominated for leasing by several parties, most recently in 2012 (59,700 acres, overlapping acreage). Interest in leasing the Bear Lake Plateau was at its highest in the early 1980s, when a discovery of gas was made 10 miles south of the Idaho/Utah state line, and in adjoining areas in Wyoming. Several wells were drilled in Idaho at that time, but were reported to be dry. Other areas that have been nominated for leasing recently include approximately 90,000

[2] Some of this acreage overlaps, due to multiple nominations for the same land

Figure 3-13
Unleased Known Phosphate Leasing Areas



acres in Twin Falls County, south of Rogerson, and approximately 60,000 acres in Clark County, on the Idaho-Montana border in the Targhee National Forest. All of these nominated lands have GRSG habitat.

Several geophysical surveys have been conducted recently in the Payette area (two-dimensional and three-dimensional seismic surveys). It is likely that additional geophysical surveys will be conducted in the planning area. Seismic reflection surveys are the most commonly used geophysical tool. Very little surface disturbance is associated with a seismic survey, as no excavating or drilling is involved. All that is required is a seismic energy source and an array of receptors. The most common type of survey seen in Idaho involves mechanically vibrating or "thumping" the ground using truck-mounted equipment. This creates seismic waves that are recorded by a series of receptors placed on the ground surface along a three- to five-mile line. This process requires a crew of about 10 to 15 people and 5 to 7 vehicles. No reclamation is usually required.

Despite the occasional interest in leasing in Idaho, no drilling permits have ever been filed on BLM-administered lands in Idaho. This trend is expected to continue, however, for the sake of this analysis, a description of the drilling process is included in this report, since the issuance of a lease commits those lands to the possibility of exploration and development of the oil and gas resource. Exploration drill holes for oil and gas range in depth from a few thousand feet to many thousands of feet, but in much of Idaho would probably be 7,000 to 11,000 feet deep. These wells are 30 inches in diameter or larger at the surface, then narrow (telescope) to 12 inches at the bottom of the well. In order to drill these deep, large-diameter holes, a large drilling rig would be utilized. The top of the drill rig derrick could be as much as 155 feet above the ground surface, and the rig floor could be at least 25 feet above the ground surface. These rigs are typically equipped with diesel engines, fuel and drilling mud storage tanks, mud pumps, and other ancillary equipment. Blow-out prevention equipment would be utilized while drilling to prevent uncontrolled flow at the surface if a pressurized hydrocarbon deposit is encountered.

Temporary roads would likely be needed to transport and maintain the drill rig and other heavy equipment. Either existing roads would be improved or new roads would be constructed to accommodate the traffic. Typically, roads are constructed with a 20-foot wide graveled running surface with adjacent ditches and berms, for a total disturbance width of about 40 feet. It may be necessary to haul in gravel to obtain a good road base, as well as a base for the well pad. Based on the road density in the planning area, it is assumed that access to the drill pads may require up to one mile of road construction or improvement. Surface disturbance from construction of one mile of road equals about five acres.

Getting the rig and ancillary equipment to the site may require 15 to 20 trips by full-sized tractor-trailers, with a similar amount for de-mobilizing the rig. There would be 10 to 40 daily trips for commuting and hauling in equipment. Drilling operations would likely occur 24 hours a day and 7 days a week. It takes approximately one month to drill one well. A drilling operation generally has from 10 to 15 people on-site at all times, with more people coming and going periodically with equipment and supplies.

During this exploratory or wildcat phase of drilling, it is likely that a drill pad, to accommodate the rig and equipment, would be required at each well location. A drill pad is usually 2.5 acres in size (300 feet by 350 feet), but it can vary considerably due to the depth of the target zone, surface topography, and equipment needs for various drilling methods. In order to obtain a level pad, cut and fill of the site may be required. Topsoil would first be removed from the well pad site and stored on site for reclamation. In addition to the drill rig, the well pad may house a reserve pit for storage or disposal of water, drill mud, and cuttings; several mud pits and pumps, a tool shed, drill pipe rack, a fuel tank, a water tank, a generator and several compressors, equipment storage, and several trailers for temporary lab and office quarters. Depending on the contents of the reserve pit and environmental sensitivity of the site, it may be lined or unlined.

Well drilling also requires water. As much water as possible is recycled on site, yet about 5,000 to 15,000 gallons of water may be needed each day depending on well conditions. Initially, water would need to be provided, either by wells or trucked in, to meet demands. Many oil or gas wells encounter water at depth when drilling for oil and/or gas and can be utilized when production is ongoing. Any water rights required would likely need to be filed in the name of the BLM.

Various tests are then run down the hole and data is collected to determine whether the well is capable of production. At the conclusion of well testing, if paying quantities of oil and gas are not discovered, the operator is required to plug the well according to federal and state standards. Cement plugs are placed above and below water-bearing units with drilling mud placed in the space between plugs. When abandonment is complete, the site is reclaimed, which includes pad and road recontouring, topsoil replacement, and seeding with approved mixtures. Erosion control measures would be incorporated into the reclamation design as needed.

The drilling site could be active for approximately 1 year, from the start of drill pad and access road construction; through drilling and well testing; to completion of production facilities or plugging the hole and reclamation of the surface, which usually involves removing all infrastructure, disposal of any waste generated, reshaping pads and roads, and re-seeding. The total surface disturbance expected from the drilling of a single exploratory well and the construction of one mile of access road is approximately eight acres.

If a producible quantity of oil or gas is discovered, additional development wells would be drilled to confirm the discovery, establish the limits of the field, and drain the field. Depending on the field characteristics, well spacing may be from 40 to several hundred acres per well.

The speed at which a field is developed is dependent on the anticipated productivity. It may take from 1 to 3 years to fully develop an oil or gas field. Large fields with several operators may be unitized to reduce surface impacts. In addition, directional drilling may allow for drilling more than one well per pad.

During field development, the road system may be greatly expanded. Temporary roads are usually improved to accommodate more traffic and increased duration of use. Improvements may include crowning, capping, and implementing additional erosion controls. New roads would also be constructed. Depending on well location and topography, a main access road is built with smaller secondary roads running to each pad. In addition to roads, other facilities may also be installed including power lines, tank farms, pipelines, oil/water separators, and injection wells.

Where oil and gas flow to the surface naturally, control valves and collection pipes are attached to the well head. Otherwise pumps are installed. Oil is typically produced along with water and gas. Separation facilities are constructed on site to remove water, carbon dioxide, and hydrogen sulfide. The oil and natural gas are then separated. Water, usually saline, is disposed of either through surface discharge, evaporation ponds or re-injection into the producing formation.

If gas is present in economic quantities and a pipeline is located within close proximity, a network of pipelines would likely be constructed to collect and transport the gas. If not, gas would likely be re-injected into the reservoir. Oil would be collected in a similar manner and stored in tanks in a central location. Well operators would likely have service operations (e.g., cementing, logging, bits, and testing) provided by established oil field service companies in Wyoming or Utah.

The producing life span of an oil or gas field varies depending on field characteristics. A field may produce for a few years to many decades. Commodity price, recovery technique, and the political environment also affect the life of a field. Well abandonment may begin as soon as it is depleted, or it may be rested for a period of time and put back into production.

Geothermal

Interest in geothermal is sporadic in Idaho, depending on factors such as the economy, political climate, government incentive programs, such as the renewable energy tax credit, and technological advances. It is anticipated that drilling will occur on federal leases at Raft River over the next 10 to 15 years, and that an additional power plant would be constructed, likely on private lands, but with wells on federal land.

Mineral Materials

Demand for mineral materials is expected to remain fairly steady, although the collapse of the housing industry in 2008 definitely resulted in fewer sales throughout the planning area. The implementation of full cost recovery for individual sales has caused a decline in that case type.

Locatables

While Idaho's mining claim numbers fluctuate with the price of gold, the number of plans and notices remains fairly steady. Production of building stone in the Middle Mountain area remains steady, however it was recently reported that L&W Stone's Three River Stone quarry near Clayton has been shut down due to bankruptcy. Several Plans of Operations are in the approval process on Middle Mountain.

Nonenergy Solid Leasable Minerals

Demand for phosphate remains high, and the companies that mine in southeast Idaho continue to develop new mines as old ones are reclaimed and remediated. There is no indication that the leases west of Soda Springs in GRSG habitat will be developed in the foreseeable future. It is anticipated that, over the next 10 years, new mines will be developed on phosphate leases at Dairy Syncline, Husky/Dry Ridge, Caldwell Canyon, and Trail Creek, as current mines are depleted of ore and are reclaimed. Only the Caldwell Canyon and Trail Creek leases are located in GRSG habitat. Both of these leases are located primarily on split estate lands: at Caldwell Canyon, the majority of the surface estate is privately owned (1,200 acres), with only 160 acres on BLM-administered lands; the Trail Creek lease is composed of a mix of state and private surface estate. In the spring of 2013 it was announced that a company plans to open an underground operation near Paris, Idaho, on patented lands in GRSG habitat. The announcement stated that initial development would not involve federal minerals; however, exploration drilling occurred on federal minerals in 2012.

The BLM has not offered a competitive phosphate lease since 2000 and does not have any pending requests for competitive leasing. However, as the remaining leases are developed, demand for leasing, particularly in the unleased portions of KPLAs, is expected to increase.

Coal

It is highly unlikely that any coal exploration or development will occur in the planning area.

3.13 Special Designations

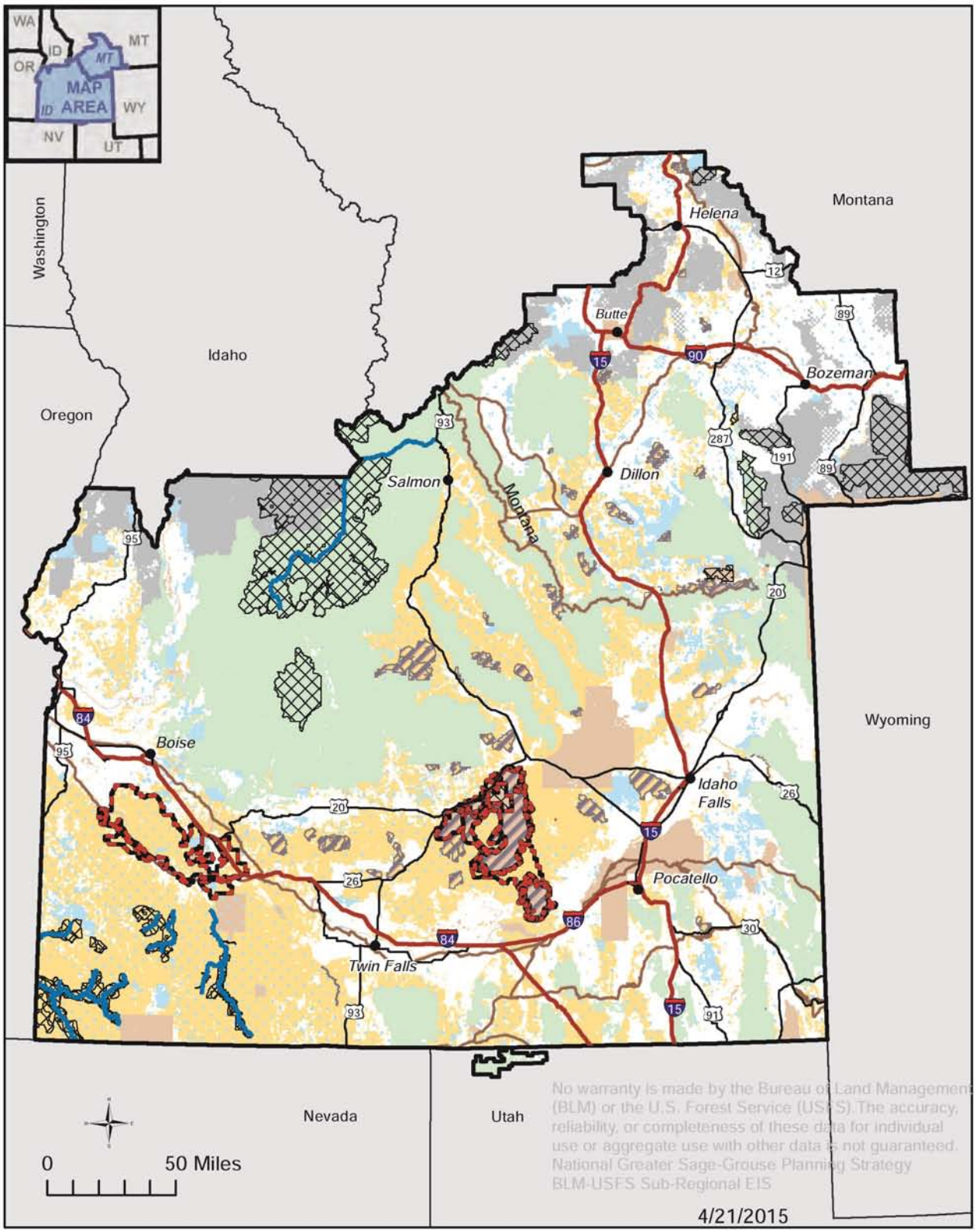
Within the planning area are a variety of lands set aside through congressional or administrative action to protect certain values, such as Wilderness, Wilderness Study Areas, National Scenic and Historic Trails, and Wild and Scenic Rivers (**Figure 3-14**).

3.13.1 Areas of Critical Environmental Concern (ACEC)

An ACEC is defined in FLPMA, Section 103(a), as an area on BLM-administered lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and ensure safety from natural hazards. BLM regulations for implementing the ACEC provisions of FLPMA are found in 43 CFR 1610.7-2(b).

ACECs differ from some other special management designations in that designation by itself does not automatically prohibit or restrict other uses in the area. The special management attention is designed specifically for the relevant and important values and, therefore, varies from area to area. Restrictions that arise from an ACEC designation are determined at the time the designation is made and are designed to protect the values or serve the purposes for which the designation was made. The BLM identifies goals, standards, and objectives for each proposed ACEC as well as general management practices and uses, including necessary constraints and mitigation measures. In addition, ACECs are protected by the provisions of 43 CFR 3809.1-4(b)(3), which requires an approved plan of operations for activities resulting in more than 5 acres of disturbance under the mining laws.

Figure 3-14
Special Designations in the Planning Area



- National Historic Trails
- Wild Scenic River
- National Monument & National Conservation Area
- Wilderness Study Areas
- Wilderness
- Analysis Boundary
- Bureau of Land Management
- United States Forest Service
- Private
- State
- Other
- USFS Not Analyzed

Research natural areas are areas where natural processes are allowed to predominate, and that are preserved for the primary purposes of research and education. Under current BLM policy, research natural areas must meet the relevance and importance criteria of ACECs and are, therefore, designated as ACECs. Under current guidelines, ACEC procedures also are used to designate outstanding natural areas.

There are portions of fifty two Idaho and 7 Montana ACECs in the planning area that overlap occupied GRSG habitat (see **Figure 3-15**). Refer to **Table 3-46** which summarizes the acres of ACECs within GRSG habitat and the identified relevant and important values for each. None of the existing ACECs were designated solely for the purpose of protecting GRSG habitat.

As part of this effort, the BLM called for and received nominations for ACECs to protect GRSG. A BLM interdisciplinary team reviewed nominations to determine which areas meet the relevance and importance criteria, as defined by 43 CFR 1610.7-2(a)(1), and 43 CFR 1610.7-2(a)(2), and guidance in BLM Manual 1613, Areas of Critical Environmental Concern. Details of the process and information on those areas found to meet the relevance and importance criteria can be found in **Appendix S**, BLM ACEC Evaluation and Forest Service Zoological Areas.

3.13.2 Wilderness

BLM

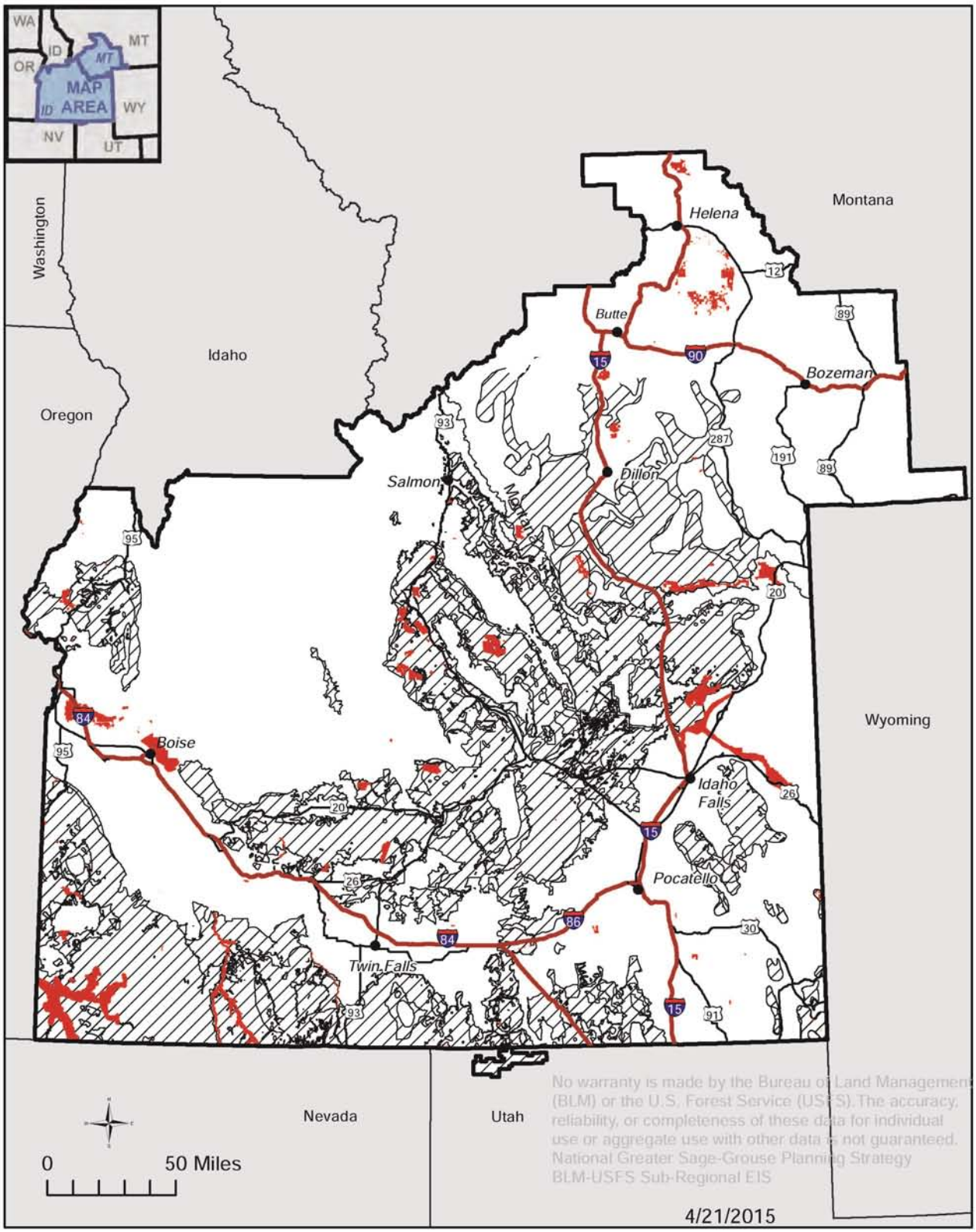
In 1964, the Wilderness Act (the Act) established the National Wilderness Preservation System to be managed by the Forest Service, National Park Service, and USFWS. In 1976, with the passage of the FLPMA, Congress made the BLM the fourth agency with wilderness management authority under the Wilderness Act.

Section 4(b) of the Act further sets forth the agencies' responsibilities in administering wilderness areas and states that the preservation of wilderness character is the primary management mandate. In the relevant part, the Act states: "Except as otherwise provided in this Act, each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area."

As set forth in Section 2(c) ("Definition of Wilderness") of the Wilderness Act, wilderness character is composed of four mandatory qualities and a fifth, optional, quality. These are:

i. Untrammeled. The Wilderness Act states that wilderness is "an area where the earth and its community of life are untrammeled by man." A "trammel" is literally a net, snare, hobble, or other device that impedes the free movement of an animal. Here, used metaphorically, "untrammeled" refers to wilderness as essentially unhindered and free from modern human control or manipulation. This quality is impaired by human activities or actions that control or manipulate the components or processes of ecological systems inside wilderness.

Figure 3.15
Existing Areas of Critical Environmental Concern with Preliminary Priority and General Habitat



Existing ACEC

Analysis Boundary

Table 3-46
BLM Areas of Critical Environmental Concern

ACEC Name	State	Acres in PGH	Acres in PPH	Total Acres	Values
Antelope Flat RNA	Idaho	0	590	590	Unusual and uncommon plant communities
Big Beaver	Idaho	6,700	0	6,780	Natural Features (Elk Habitat)
Birch Creek	Idaho	4,460	4,180	8,660	Crucial winter range and lambing habitat for bighorn sheep. Rare plants.
Block Mountain	Montana	550	0	8,630	Geologic Resources
Boulder Creek	Idaho	880	4,190	6,980	Scenic and multiple natural resource values
Bruneau/Jarbidge River	Idaho	33,300	35,400	73,900	Cultural, Geological, Scenic, and Natural Features (Big Horn Sheep Habitat)
Buckwheat Flats RNA	Idaho	0	190	190	Special Status Plants
Centennial Mountains	Montana	0	13,100	40,800	Wildlife Resources – grizzly bear, lynx & wolf
Centennial Sandhills	Montana	0	1,050	1,050	Geological and Botanical Resources
China Cup Butte RNA	Idaho	0	160	160	Geological values.
Cinnabar Mountain	Idaho	230	0	280	Valuable Range Reference Area, Scenic Values, Special Status Animals including GRSG
Coal Mine Basin	Idaho	0	1,610	1,610	Special Status Plants and animals (only mentions that GRSG are present), scenery, paleontological resources
Cottonwood Creek	Idaho	0	330	330	Riparian Vegetation, redband trout, bighorn sheep, and scenic quality
Cronk's Canyon	Idaho	0	1,220	1,220	Wildlife and botanical resources. Relict bighorn sheep population. Pristine natural plant communities.
Cronk's Canyon RNA	Idaho	0	370	370	Wildlife and botanical resources. Relict bighorn sheep population. Pristine natural plant communities.
Dairy Hollow RNA	Idaho	0	40	40	Geological and botanical resources.
Donkey Hills	Idaho	9,280	15,400	29,700	Wildlife resources – crucial elk habitat.
Dry Gulch RNA	Idaho	0	540	540	Botanical resources – unusual plant communities; several rare plant populations.

Table 3-46
BLM Areas of Critical Environmental Concern

ACEC Name	State	Acres in PGH	Acres in PPH	Total Acres	Values
East Fork Salmon River Bench RNA	Idaho	0	90	80	Botanical resources – remnant pristine vegetation.
Elk Mountain	Idaho	760	11,900	12,700	Natural Features (Elk Habitat)
Everson Creek	Montana	0	8,820	8,820	Archaeological Resources
Geoff Hogander/Stump Creek	Idaho	2,450	0	2,470	Exceptional ecological communities
Goodrich Creek RNA	Idaho	390	0	390	Exceptional ecological communities
Goose Creek Mesa	Idaho	0	100	100	Natural Features (Vegetation)
Granite Pass	Idaho	0	90	300	Historic and Cultural Features
Herd Creek Watershed	Idaho	990	13,400	16,900	Botanical, fish and visual resources. Riparian recovery and demonstration area. Presence of rare plants. Variety of high elevation range and forest plant communities. Known spawning and rearing habitat for special status steelhead trout, bull trout, and Chinook salmon. Roadless/primitive and scenic values.
Herd Creek Watershed RNA	Idaho	0	280	1,060	Same as Herd Creek Watershed.
Hixon Columbia Sharp-Tailed Grouse Habitat	Idaho	6,780	690	11,800	Wildlife resources - Columbia Sharp-Tailed Grouse habitat.
Humbug Spires	Montana	20	0	8,370	Outstanding scenic qualities and diverse upland and aquatic habitat for plants, animals and fish.
Jim Sage Canyon	Idaho	150	490	660	Natural Features (Vegetation)
Jump Creek Canyon	Idaho	340	100	610	Riparian Communities
King Hill Creek	Idaho	610	1,340	2,870	Scenic and Natural Features (Redband Trout and Riparian)
Lone Bird	Idaho	0	9,980	9,980	Cultural and botanical resources. Numerous and unique cultural resources. Rare plants.
Malm Gulch/Germer Basin	Idaho	1,070	4,400	5,640	Botanical, paleontological, geologic resources. Concentration of rare plants, unusual plant communities. Petrified forest. Fragile soils.
Malm Gulch/Germer Basin RNA	Idaho	324	1,862	2,186	Same as Malm Gulch/Germer Basin

Table 3-46
BLM Areas of Critical Environmental Concern

ACEC Name	State	Acres in PGH	Acres in PPH	Total Acres	Values
McBride Creek	Idaho	0	260	260	Special Status Plants
McKinney Butte	Idaho	0	2,210	3,760	Geological, Scenic, and Natural Features (Bats, Unusual plants, and invertebrates)
Muddy Creek/Big Sheep Creek	Montana	680	12,400	13,100	Cultural Resources
Nine Mile Knoll	Idaho	920	18,800	41,600	Big game wildlife values.
North Fork Juniper Woodland	Idaho	370	0	4,410	Montane Western Juniper and Special Status Plants and Animals
North Menan Butte	Idaho	150	630	780	Geological values.
North Menan Butte RNA	Idaho	20	330	340	Geological and botanical values.
Oregon-California Trail Junction	Idaho	520	0	520	Historic and Cultural Features
Owyhee River/Bighorn Sheep	Idaho	46,100	154,900	201,000	Wildlife resources - bighorn sheep habitat
Peck's Canyon RNA	Idaho	0	780	780	Botanical resources – excellent condition plant communities.
Pennal Gulch	Idaho	230	5,530	5,840	Botanical resources – rare plants; unique riparian area; unique and representative vegetation.
Pine Gap RNA	Idaho	0	240	240	Botanical resources – rare plant *Cryptantha caespitosa.*
Playas	Idaho	0	40	40	Natural Features (Davis Peppergrass)
Pleasant Valley Table	Idaho	1,470	0	1,470	Botanical resources - excellent examples of Owyhee sagebrush-Sandberg bluegrass and low sagebrush-Idaho fescue communities
Rebecca Sand Hill RNA	Idaho	340	0	340	Special Status Plants
Salmon Falls Creek Canyon	Idaho	890	570	5,130	Pristine, Scenic, and Natural Features
Sand Hollow RNA	Idaho	0	3,340	3,340	Geological and botanical resources – fragile watershed, rare plant populations; geological area of interest.
Sevenmile Creek	Idaho	0	960	1,040	Natural hazard due to unstable nature of the soils and considerable slumps that occur.

Table 3-46
BLM Areas of Critical Environmental Concern

ACEC Name	State	Acres in PGH	Acres in PPH	Total Acres	Values
Snake River	Idaho	4,040	5,780	127,300	Botanical, Wildlife, Fish, Recreation, Scenic Resources-Extensive cottonwood riparian-wetland ecosystems, multiple listed species, world class fishery, visual class 1 areas.
Sommercamp Butte	Idaho	170	270	440	Botanical resources - good ecological condition of Mountain Mahogany-bluebunch wheatgrass communities
Squaw Creek	Idaho	30	110	150	Low elevation Wyoming sagebrush-bluebunch wheatgrass communities
Summit Creek ACEC	Idaho	0	110	110	Botanical Resources-Unique wetland system; rare plants; special recreation values.
Summit Creek RNA	Idaho	0	190	190	Botanical and Recreational Resources -Unique wetland system; rare plants; special recreation values.
Tee-Maze	Idaho	110	10,500	10,800	Geological, Scenic, and Natural Features (Bats, Unusual plants, and invertebrates)
The Badlands	Idaho	850	980	1,830	Scenic Values and Diverse Botanical Features
The Tules RNA	Idaho	100	20	110	Outstanding Geologic Features and Special Status Plants
Thousand Springs	Idaho	150	440	600	Botanical and Wildlife Resources-Unique wetland ecosystem; high value for waterfowl.
Thousand Springs RNA	Idaho	0	230	230	Botanical and Wildlife Resources-Unique wetland ecosystem; high value for waterfowl.
Travertine Park	Idaho	0	180	180	Botanical resources.
Travertine Park RNA	Idaho	0	20	20	Botanical resources.
Triplet Butte	Idaho	300	0	310	Undisturbed vegetation communities, cultural resources, bighorn sheep, and scenic quality
Virginia City Historic District	Montana	240	0	510	Cultural Resources

Source: BLM GIS 2015

ii. Natural. The Wilderness Act states that wilderness is "protected and managed so as to preserve its natural conditions." In short, wilderness ecological systems should be as free as possible from the effects of modern civilization. Management must foster a natural distribution of native wildlife, fish, and plants by ensuring that ecosystems and ecological processes continue to function naturally. Watersheds, water bodies, water quality, and soils are maintained in a natural condition; associated ecological processes previously altered by human influences will be allowed to return to their natural condition. Fire, insects, and diseases are allowed to play their natural role in the wilderness ecosystem except where these activities threaten human life, property, or high value resources on adjacent lands that are not wilderness. Additional guidance on this is provided in section 1.6.C of this manual, which addresses the management of specific activities in wilderness. This quality may be affected by intended or unintended effects of human activities on the ecological systems inside the wilderness.

iii. Undeveloped. The Wilderness Act states that wilderness is an area "of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation," "where man himself is a visitor who does not remain," and "with the imprint of man's work substantially unnoticeable." Wilderness has minimal evidence of modern human occupation or modification. This quality is impaired by the presence of structures or installations, and by the use of motor vehicles, motorized equipment, or mechanical transport that increases people's ability to occupy or modify the environment. More detail on the activities that impair this quality is found in Section 1.6.B of this policy.

iv. Solitude or Primitive and Unconfined Recreation. The Wilderness Act states that wilderness has "outstanding opportunities for solitude or a primitive and unconfined type of recreation." Wilderness provides opportunities for people to experience: natural sights and sounds; remote, isolated, unfrequented, or secluded places; and freedom, risk, and the physical and emotional challenges of self-discovery and self-reliance. Any one wilderness does not have to provide all these opportunities, nor is it necessary that they be present on every acre of a given wilderness. Where present, however, the preservation of these opportunities is important to the preservation of wilderness character as a whole. This quality is impaired by settings that reduce these opportunities, such as visitor encounters, signs of modern civilization, recreation facilities, and management restrictions on visitor behavior.

v. Unique, Supplemental, or Other Features. The Wilderness Act states that wilderness areas "may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value." Though these values are not required of any wilderness, where they are present they are part of that area's wilderness character, and must be protected as rigorously as any of the four required qualities. They may include historical, cultural, paleontological, or other resources not necessarily considered a part of any of the other qualities. These

values are identified in a number of ways: in the area's designating legislation, through its legislative history, by the original wilderness inventory, in a wilderness management plan, or at some other time after designation.

Section 4(b) of the Wilderness Act states that: "Except as otherwise provided in this Act, wilderness areas shall be devoted to the public purposes of recreational, scenic, scientific, educational, conservation, and historical use." In most cases the public purposes reflect one or more qualities of wilderness character and are administered so as to preserve the wilderness character of the area.

Section 4(c) of the Wilderness Act lists uses and activities that are specifically prohibited in wilderness: "Except as specifically provided for in this Act, and subject to existing private rights, there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act and, except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area."

The BLM Wilderness Manual 6340 states: Wildlife management within wilderness is guided by all relevant laws, including the Wilderness Act, acts designating specific wilderness areas, the Endangered Species Act, the Migratory Bird Treaty Act, Native American treaty rights, 43 CFR 6300 (Management of Designated Wilderness Areas), 43 CFR 24 (Department of the Interior Fish and Wildlife Policy: State-Federal Relationships), and applicable State laws and policies regarding wildlife.

Many wilderness areas provide important habitat for federally listed threatened or endangered wildlife species. The BLM will manage wilderness areas to protect and recover known populations of federally listed threatened or endangered species and to aid in their recovery in previously occupied habitat. The wilderness restrictions can directly or indirectly influence GRSG and their habitat.

The BLM has seven wilderness areas within the planning boundary (**Table 3-47**). These seven areas are all within Owyhee County and were designated by Congress in 2009 through the Omnibus Public Lands Management Act.

A wilderness management plan for the seven BLM wilderness areas will be released in draft in February 2013. A final plan should be completed by mid to late 2013.

Table 3-47
BLM-Administered Wilderness Areas

BLM Wilderness Name	Wilderness Acres
Bear Trap Wilderness	6,350
Big Jacks Creek Wilderness	52,800
Bruneau-Jarbidge Rivers Wilderness	90,000

Table 3-47
BLM-Administered Wilderness Areas

BLM Wilderness Name	Wilderness Acres
Little Jacks Creek Wilderness	50,900
North Fork Owyhee Wilderness	43,400
Owyhee River Wilderness	267,300
Pole Creek Wilderness	12,500
Total BLM Wilderness	**523,250**

Source: BLM GIS 2013

Forest Service

The Forest Service, National Park Service, and BLM manage wilderness areas under the same legislation; the 1964 Wilderness Act. The agencies have similar objectives and policies related to wilderness. Below is text from the Forest Service wilderness manual.

Wilderness is a unique and vital resource. In addition to offering primitive recreation opportunities, it is valuable for its scientific and educational uses, as a benchmark for ecological studies, and for the preservation of historical and natural features.

Manage the wilderness resource to ensure its character and values are dominant and enduring. Its management must be consistent over time and between areas to ensure its present and future availability and enjoyment as wilderness. Manage wilderness to ensure that human influence does not impede the free play of natural forces or interfere with natural successions in the ecosystems and to ensure that each wilderness offers outstanding opportunities for solitude or a primitive and unconfined type of recreation. Manage wilderness as one resource rather than a series of separate resources (FSM 2300 Sec. 2320.6).

Objectives

- Maintain and perpetuate the enduring resource of wilderness as one of the multiple uses of National Forest System land.
- Maintain wilderness in such a manner that ecosystems are unaffected by human manipulation and influences so that plants and animals develop and respond to natural forces.
- Minimize the impact of those kinds of uses and activities generally prohibited by the Wilderness Act, but specifically excepted by the Act or subsequent legislation.
- Protect and perpetuate wilderness character and public values including, but not limited to, opportunities for scientific study, education, solitude, physical and mental challenge and stimulation, inspiration, and primitive recreation experiences.
- Gather information and carry out research in a manner compatible with preserving the wilderness environment to increase understanding of wilderness ecology, wilderness uses, management opportunities, and visitor behavior.

Policy

- Where there are alternatives among management decisions, wilderness values shall dominate over all other considerations except where limited by the Wilderness Act, subsequent legislation, or regulations.
- Manage the use of other resources in wilderness in a manner compatible with wilderness resource management objectives.
- In wildernesses where the establishing legislation permits resource uses and activities that are nonconforming exceptions to the definition of wilderness as described in the Wilderness Act, manage these nonconforming uses and activities in such a manner as to minimize their effect on the wilderness resource.
- Cease uses and activities and remove existing structures not essential to the administration, protection, or management of wilderness for wilderness purposes or not provided for in the establishing legislation.
- Because wilderness does not exist in a vacuum, consider activities on both sides of wilderness boundaries during planning and articulate management goals and the blending of diverse resources in forest plans. Do not maintain buffer strips of undeveloped wildland to provide an informal extension of wilderness. Do not maintain internal buffer zones that degrade wilderness values. Use the Recreation Opportunity Spectrum (FSM 2310) as a tool to plan adjacent land management.
- Manage each wilderness as a total unit and coordinate management direction when they cross other administrative boundaries.
- Use interdisciplinary skills in planning for wilderness use and administration.
- Gather necessary information and carry out research programs in a manner that is compatible with the preservation of the wilderness environment.
- Whenever and wherever possible, acquire non-federal lands located within wildernesses, as well as non-federal lands within those areas recommended for inclusion in the system.

The Forest Service manages eight wilderness areas; either all or portions of the areas are in the planning area (**Table 3-48**).

Table 3-48
National Forest System Wilderness Areas

Forest Service Wilderness Name	Wilderness Acres
Sawtooth	217,100
Frank Church River of No Return	2,366,900
Anaconda Pintler	158,600
Gates of the Mountains	28,600
Lee Metcalf	264,600
Red Rock Lakes	32,400

Table 3-48
National Forest System Wilderness Areas

Forest Service Wilderness Name	Wilderness Acres
Absaroka Beartooth	943,600
Total Forest Service Wilderness	2,709,100

Source: BLM GIS 2013

National Park Service

The following is from the National Park Service Wilderness Management Policy 2006: The National Park Service will manage wilderness areas for the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness. Management will include the protection of these areas, the preservation of their wilderness character, and the gathering and dissemination of information regarding their use and enjoyment as wilderness. The purpose of wilderness in the national parks includes the preservation of wilderness character and wilderness resources in an unimpaired condition and, in accordance with the Wilderness Act, wilderness areas shall be devoted to the public purposes of recreational, scenic, scientific, educational, conservation, and historical use.

Craters of the Moon National Monument manages one wilderness area within the planning boundary (**Table 3-49**).

Table 3-49
National Park Service Wilderness Areas

National Park Service Wilderness Name	Wilderness Acres
Craters of the Moon National Wilderness	43,200
Total National Park Service Wilderness	**43,200**

Source: BLM GIS 2013

3.13.3 Wilderness Study Areas

Section 603 of FLPMA directed the BLM to carry out a wilderness review of the BLM-administered lands. The wilderness inventory was conducted from 1978 to 1980. The original inventory focused on roadless areas of BLM-administered lands of 5,000 acres or more and on roadless islands, but also included areas of less than 5,000 acres that had wilderness characteristics in association with contiguous roadless lands managed by another agency, and areas of less than 5,000 acres that had wilderness characteristics and could practicably be managed to keep those characteristics in an unimpaired condition. Additional WSAs were designated through the BLM land use planning process under the authority of Sections 201, 202, and 302 of FLPMA after the reports to Congress were completed in 1993.

The inventory phase identified areas that were found to have the characteristics of wilderness enumerated by Congress in Section 2 (c) of the Wilderness Act of 1964:

"A wilderness…(1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities

for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value." When these characteristics were found within a defined boundary, the presence of the wilderness resource was documented and the area was classified as a WSA.

During the study phase, all values, resources, and uses occurring within each WSA were analyzed, pursuant to the NEPA, through legislative environmental impact statements. When the study was completed, recommendations as to the suitability or unsuitability of each WSA for designation as wilderness were submitted to the President through the Secretary of the Interior, and then from the President to Congress.

Consistent with BLM Manual 6330 and FLPMA Section 603(c), the BLM currently manages approximately 770,000 acres of WSAs within the planning boundary. This includes 10 WSAs in the Dillon Field Office and 34 WSAs in the Idaho Field Offices. **Table 2-9** identifies acres of WSAs that contain GRSG habitat in the decision area for this LUPA/EIS.

3.13.4 National Landscapes, Monuments, and Conservation Areas

National Landscape Conservation System

The National Landscape Conservation System (NLCS) was created in 2000 through an order signed by Interior Secretary Babbitt. The concept of the NLCS was for the BLM to manage a system of lands with a dominant conservation mission. In the order, Secretary Babbitt included lands, rivers, and trails designated by acts of Congress or presidential proclamations under the 1906 Antiquities Act as units in the NLCS. In 2009, Congress passed the Omnibus Public Lands Management Act, which permanently established the NLCS "… to conserve, protect and restore nationally significant landscapes that have outstanding cultural, ecological, and scientific values for the benefit of current and future generations."

Since the creation of the NLCS, the BLM has promoted understanding of the system. As a way to help the public recognize the NLCS, the BLM has developed a brand and logo: National Conservation Lands.

Within the planning area, there are multiple units representing the National Conservation Lands. These include a National Monument, a National Conservation Area, Wilderness Areas, Wilderness Study Areas, Wild and Scenic Rivers, and National Scenic and Historic Trails.

National Monuments and National Conservation Areas

National Monuments are areas either designated by Congress or by presidential proclamation (under the authority of the Antiquities Act of 1906) to protect unique historic landmarks, historic and prehistoric structures, or other objects of historic or scientific interest. Within the planning area, the BLM and the National Park Service jointly administer the Craters of the Moon National Monument and Preserve (737,700 acres). The BLM portion of the monument was designated in 2000 to protect *kipukas* (small areas surrounded

by lava). These are some of the last undisturbed vegetation communities on the Snake River Plain and the surrounding sagebrush (*Artemisia* spp.) steppe ecosystem. They consist of diverse communities of grasses, sagebrush, and shrubs that provide habitat for a variety of wildlife. This area also includes lava tube caves, older volcanic formations, and volcanic buttes. Craters of the Moon is managed to protect and preserve the objects and values for which it was designated.

National Conservation Areas (NCAs) are designated by Congress to conserve, protect, enhance, and manage public land areas for the benefit and enjoyment of present and future generations. NCAs feature exceptional natural, recreational, cultural, wildlife, aquatic, archaeological, paleontological, historical, educational, and scientific resources. Within the planning area, the BLM manages the Morley Nelson Snake River Birds of Prey National Conservation Area (485,000 acres). Congress established the NCA in 1993 to protect a unique environment that supports one of the world's most dense concentrations of nesting birds of prey. Falcons, eagles, hawks, and owls are found here in exceptional profusion and variety. The NCA is managed to conserve, protect, and enhance raptor populations and their associated habitats.

The BLM manages National Monuments and National Conservation Areas in accordance with the direction provided in BLM Manual 6220. This policy will be adhered to during any site-specific NEPA analyses that are conducted within either of these areas.

National Scenic and Historic Trails

A National Historic Trail (NHT) is congressionally designated as an extended long-distance trail, not necessarily managed as continuous. It follows as closely as possible and practicable the original trails or routes of travel of national historic significance. The purpose of an NHT is to identify and protect the historic route and the historic remnants and artifacts for public use and enjoyment. An NHT is managed to protect the nationally significant resources, qualities, values, and associated settings of the areas through which such trails may pass, including the primary use or uses of the trail.

While National Scenic and Historic Trails cross lands managed by different agencies, trails and trail segments that cross BLM-administered lands are managed in accordance with BLM Manual 6280, Management of National Scenic and Historic Trails and Trails Under Study or Recommended as Suitable for Congressional Designation. This manual mandates that the BLM establish NHTs Management Corridors to assist in the management of the resources, qualities, values, and associated settings and the primary use or uses for which the NHT was designated. The designation of NHTs Management Corridors in the future may encompass lands that include GRSG habitat and may include management decisions and actions that likely will have positive effects on GRSG populations.

Table 3-50 lists the NHTs in the planning area, by planning district.

Table 3-50
National Historic Trails

Planning District	National Historic Trail
BLM	
Dillon Field Office	Lewis and Clark National Historic Trail Oregon National Historic Trail
Burley Field Office	California National Historic Trail
Four Rivers Field Office	Oregon National Historic Trail
Owyhee Field Office	Oregon National Historic Trail
Pocatello Field Office	Oregon National Historic Trail California National Historic Trail
Salmon Field Office	Lewis and Clark National Historic Trail
Shoshone Field Office	Oregon National Historic Trail
Upper Snake Field Office	Oregon National Historic Trail Nez Perce National Historic Trail
Forest Service	
Beaverhead-Deerlodge National Forest	Nez Perce National Historic Trail Oregon National Historic Trail
Caribou-Targhee National Forest	Nez Perce National Historic Trail

3.13.5 Wild and Scenic Rivers

The National Wild and Scenic Rivers System was created by Congress in 1968 (Public Law 90-542; 16 USC 1271 et seq.) to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. The Act is notable for safeguarding the special character of these rivers, while also recognizing the potential for their appropriate use and development. It encourages river management that crosses political boundaries and promotes public participation in developing goals for river protection.

> *It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations. The Congress declares that the established national policy of dams and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes.* (Wild & Scenic Rivers Act, October 2, 1968)

Rivers may be designated by Congress or, if certain requirements are met, the Secretary of the Interior. Each river is administered by either a federal or state agency. Designated segments need not include the entire river and may include tributaries. For federally administered rivers, the designated boundaries generally average one-quarter mile on either

bank in the lower 48 states and one-half mile on rivers outside national parks in Alaska in order to protect river-related values.

River Classification

Rivers are classified as wild, scenic, or recreational.

- Wild River Areas – Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.
- Scenic River Areas – Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.
- Recreational River Areas – Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

Regardless of classification, each river in the National System is administered with the goal of protecting and enhancing the values that caused it to be designated. Designation neither prohibits development nor gives the federal government control over private property. Recreation, agricultural practices, residential development, and other uses may continue. Protection of the river is provided through voluntary stewardship by landowners and river users and through regulation and programs of federal, state, local, or tribal governments. In most cases not all land within boundaries is, or will be, publicly owned, and the Act limits how much land the federal government is allowed to acquire from willing sellers. Visitors to these rivers are cautioned to be aware of and respect private property rights.

The Act purposefully strives to balance dam and other construction at appropriate sections of rivers with permanent protection for some of the country's most outstanding free-flowing rivers. To accomplish this, it prohibits federal support for actions such as the construction of dams or other instream activities that would harm the river's free-flowing condition, water quality, or outstanding resource values. However, designation does not affect existing water rights or the existing jurisdiction of states and the federal government over waters as determined by established principles of law.

The Forest Service manages two designated rivers within the planning boundary (**Table 3-51**). The Middle Fork of the Salmon is wholly within the planning boundary whereas only a portion of the Salmon River is within the planning boundary.

The BLM manages 16 designated rivers that are wholly within the planning boundary (**Table 3-52**). All of the 16 rivers are within wilderness areas. Where the wilderness policy is more restrictive than the Wild and Scenic Rivers policy regarding actions within wilderness, the wilderness policy takes precedence; however, Wild and Scenic Rivers must be administered so as to protect and enhance the values that caused it to be designated.

Table 3-51
National Forest System Wild and Scenic Rivers

Name	Classification	River Miles
Salmon River	Wild Recreational	79 46
Middle Fork of the Salmon River	Wild Scenic	103 1

Table 3-52
BLM-Administered Wild and Scenic Rivers

Name	Classification	River Miles
Battle Creek	Wild	23.4
Big Jacks Creek	Wild	35
Bruneau River	Recreational Wild	0.6 39.3
West Fork Bruneau River	Wild	0.35
Cottonwood Creek	Wild	2.6
Deep Creek	Wild	13.1
Dickshooter Creek	Wild	9.25
Duncan Creek	Wild	0.9
Jarbidge River	Wild	28.8
Little Jacks Creek	Wild	12.4
North Fork Owyhee River	Recreational Wild	5.7 15.1
Owyhee River	Wild	67.3
South Fork Of The Owyhee River	Recreational Wild	1.2 31.4
Red Canyon	Wild	4.6
Sheep Creek	Wild	25.6
Wickahoney Creek	Wild	1.5

3.13.6 Regional Context

Table 3-53 displays special designations data for GRSG habitat in the planning area. Data are presented by surface management agency and their occurrence within occupied GRSG habitat in the planning area and the MZs that overlap the planning area.

Table 3-53
Acres of Conservation Areas within GRSG Habitat

Surface Management Agency	Acres within PGH[1]			Acres within PPH[1]		
	Planning Area	MZ II/VII[2]	MZ IV	Planning Area	MZ II/VII[2]	MZ IV
BLM	231,000	511,100	741,400	904,200	241,300	1,510,700
Forest Service	400	46,800	3,000	500	2,500	26,600

Table 3-53
Acres of Conservation Areas within GRSG Habitat

Surface Management Agency	Acres within PGH[1]			Acres within PPH[1]		
	Planning Area	MZ II/VII[2]	MZ IV	Planning Area	MZ II/VII[2]	MZ IV
Tribal and Other Federal	240,100	105,700	254,800	67,900	93,300	76,000
Private	108,800	358,900	164,300	120,400	217,100	124,800
State	16,500	41,400	16,600	22,300	44,000	22,500
Other	1,500	4,400	1,500	21	26,500	21

Source: Manier et al. 2013
[1]Includes Areas of Critical Environmental Concern, USFWS refuges, National Conservation Easements, National Park Service units, National Landscape Conservation System Units, congressionally designated Wilderness areas, and conservation areas on private and state land.
[2]BER combined acres for MZs II and VII

3.14 Soil Resources

Many resources and resource uses, including livestock grazing, wildlife habitat, riparian habitat, special status species, fisheries, recreation, water quality and forestry, depend on suitable soils. Consequently, soil attributes and conditions are important to BLM and Forest Service management direction.

Soils are defined by the processes that form them. Through time, these processes form unique soil types and influence what plants may grow upon them. Soil surveys indicate that climate and topography are the primary influences on soil formation. Soil development processes, such as rock weathering, decomposition of plant materials, accumulation of organic matter, and nutrient cycling, are controlled largely by climate. Soil moisture and temperature strongly affect the rates of addition, removal, translocation, and transformation of material within the soil. Topography influences site conditions such as precipitation amounts and effectiveness, drainage, runoff, erosion potential, and temperature.

Soils play an integral part in vegetation community development. Plants use soil as an anchor, a means to provide water for growth, and a storehouse for the nutrients needed for growth. Plant communities are most noticeably influenced where soil texture and thickness of soil horizons change, depth to restrictive layers including abrupt soil horizon boundaries exist, and by soil drainage, moisture holding capacity, or depth to water table. Native plant communities require management considerations that include the ability of the soil to produce a healthy ecosystem over the long term. Reducing the risk of erosion from water and air processes, limiting compaction from traffic source or grazing, and allowing the water to infiltrate at a normal rate for the given soil texture will allow vegetative communities to thrive and further protects the soil resources.

The NRCS provides soil mapping across the United States. Soil information and mapping from the NRCS are provided below under existing conditions to describe soil resources.

Land uses strive to conform to Standards for Public Land Health on BLM-administered lands, which describe conditions needed to sustain public land health and relate to all uses of the BLM-administered lands.

3.14.1 Conditions within the Planning Area

Soil Productivity

Soil productivity within the planning area varies widely due to the diversity of soils and site characteristics, specifically differences in elevation and slope gradient. The planning area landscape varies greatly from broad valleys to mountains.

The average annual precipitation and temperature in the project area vary greatly by elevation and aspect. Some of the most productive soils are found in well drained valley bottoms, toe-slopes, benches, and broad ridge topes. On uplands where rainfall is moderate to low, medium-textured soils may produce favorable conditions, depending on land uses such as livestock grazing. Soils that feature shallow clay pans, hardpans, or salts pose substantial constraints to land use and land use management.

Management practices affect the ability of soils to maintain productivity by influencing disturbances such as displacement, compaction, erosion, and alteration of organic matter and soil organism levels. When soil degradation occurs in semiarid, high desert regions, natural processes are slow to return site productivity. Prevention of soil degradation is far more cost-effective and time effective than remediation or waiting for natural processes. Management practices, such as proper stocking rates for livestock, rotation of grazing, periodic rest from grazing, improved design, construction and maintenance of roads, selective logging, rehabilitation of unneeded surface disturbance, restricting vehicles to roads and trails, rehabilitating mined areas, and control of concentrated recreational activities, have reduced erosion effects and improved soil conditions.

Soil Erosion

Erosion is a continuing natural process that can be accelerated by human disturbances. Factors that influence soil erosion include soil texture, structure, length and percent of slope, vegetative cover, and rainfall or wind intensity. Soils most susceptible to erosion by wind or water are typified by bare or sparse vegetative cover, incohesive soil particles with slow infiltration rates, and moderate to steep slopes. Wind erosion processes are less affected by slope angle but are highly influenced by wind intensity.

The semi-arid planning area has a low percentage of natural plant community ground cover, allowing the soils to erode naturally in wind and during infrequent rain events. In addition, management actions affect the rate at which soil erodes. Activities that remove vegetative cover increase the erosion rate. Some soils are particularly vulnerable to soil erosion.

NRCS soil map unit descriptions rate soils in the planning area according to their susceptibility to water and wind erosion. Wind erosion is particularly a hazard when surface litter and vegetation are removed by fire or other disturbances. Soils in the planning area

were screened based on several relevant characteristics that indicate potentially fragile soils or high erosion hazards. These characteristics include:

- soils rated as highly or severely erodible by wind or water, as described in NRCS soil survey reports
- landslide areas as identified in NRCS soil survey reports
- soils on slopes greater than 35 percent

Soil Types

When making land management decisions based on soil related hazards or limitations, the BLM evaluates soil surveys available from the NRCS. Soils mapped according to the boundaries of major land resource areas, which are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses. Each soil survey describes the specific properties of soils in the area surveyed and shows the location of each kind of soil on detailed maps. The BLM evaluates soil map units to make management decisions that would likely affect soils. Each soil survey applicable to the planning area describes soil map units by the individual soil or soils that make up the unit. These descriptions indicate the limitations and hazards inherent in each unit. Descriptions include soil depth, range of elevation, origin, climate, physical properties, runoff capabilities, erosion hazard, associated native vegetation, wildlife habitat use, and capability for community development and other uses.

Soil can be classified in many ways according to a whole host of parameters. For the generalization of soils in the planning area, the taxonomy of soil order is a convenient starting place. Most of the soils in the planning area are part of the largest soil order, Mollisols. The remaining areas are composed of similar young developmental soils in the Inceptisol, Entisol, and Andisol orders, with a very small amount of Histisols and Vertisols that have particular properties that may be of importance.

Soil properties can provide information as to why certain plants may grow in one area and not another, or why erosion occurs by wind and not water. The NRCS provides a suite of risk ratings, interpretations, and basic soil data that describes soils resources. The soil texture for most soils across the planning area is a loam as composed of the representative percent of sand, silt and clay. Some greater or lesser amounts of these percentages produce clayey loams and silty loams for the most part. The soils have very low amounts of organic matter (2 percent), low available moisture content in the top 10 inches (25.4 cm) and are considered well drained. The risk of erosion by water is slight, except in those very steep canyons and exposed bedrock ridges that have a severe to very severe rating. The overall majority of the planning area is considered to be of slight risk for erosion. The soils are prone to degradation when soil is removed in excess of the ability to rebuild it. In this area of the state, the amount of loss can be significant with wind exposure or increased erosion from water. Only 1 to 2 tons of soil per acre per year needs to be removed in approximately half of the planning area to have a loss of long term productivity.

The amount of sand, silt and clay in the soil alters the water infiltration. Soils with higher amounts of silt and clay infiltrate water more slowly than soils with higher amounts of sand. For most of the planning area water infiltrates rapidly into the soil resulting in little standing water.

Hydric (wet) soils and unique biological soil crusts are key soil resources in the planning area.

Hydric Soils. Hydric soils constitute only a small portion of the planning area. Hydric soils are associated with riparian areas and wetlands. Riparian-wetland soils are found throughout the planning area along water courses, near springs, seeps, playas, and adjacent to reservoirs. Because of the presence of water, riparian-wetland soils have properties that differ from upland areas.

Biologic Soil Crusts. Biologic soil crusts are made up of tiny living plants and bacteria that grow together on the soil surface. They help keep the soil from washing or blowing away, fix nitrogen from the atmosphere into the soil, help keep out weeds, and promote the health of plant communities. Loss of biological soil crusts is a contributing factor in the replacement of native vascular plants by invasive species such as cheatgrass or medusa head.

Based on research throughout the west, parameters for the ecology and management of biological soil crusts have been developed by the Department of the Interior. Factors found affecting presence, density, cover, and species diversity of macrobiotic crusts include elevation, soils, and topography, disturbances, timing of precipitation, vascular plant community, ecological gradients and microhabitats.

Biological Soil Crusts

Biological soil crusts are an important component of a broad range of ecological sites in the Intermountain West. They function as a living mulch by retaining soil moisture, increasing organic matter, and discouraging annual weed growth (Eldridge and Greene 1994; Belnap and Gillette 1997, 1998; Belnap 2001; McKenna-Neumann et al. 1996; Rosentreter et al. 2007). Biological soil crust communities are more prevalent at lower elevations, compared to higher elevations with greater precipitation, where vascular plant growth precludes biological crust development (Belnap 2001). Specific to soil erosion, biological soil crusts protect interspatial surface areas by occupying open areas between larger plants (Belnap et al. 1997). Biological crust condition and cover is also a direct function of the ecological health of the plant community. The NRCS *National Range and Pasture Book* identifies biological soil crusts as a critical ecological attribute to be used as an indicator of rangeland health (USDA 2003). Human disturbances have been documented to impact the diversity and function of these communities (Robinson et al. 2013; Peterson 2013).

3.14.2 Trends

Soil resources change slowly unless catastrophic or larger scale disturbance events such as landslides, floods, volcanoes, or wildfires occur. Then, erosion or deposition would change the ground cover at one point or many. Thus, the degree of change in the planning area would be considered low or insignificant, with the direction of change being the most likely

to occur naturally over time. There have been larger wildfire events and to some degree restoration activities that have altered the vegetation communities where juniper has been invading sagebrush communities.

The overall guidance for soil resources is to maintain or improve the ability of the soil to support vegetation and allow water and nutrients to be cycled by either macro or microorganisms, all of which promote and improve the health of the land. Degradation by excessive grazing, erosion, or land developments will cause a reduction in soil function as one or perhaps many of the soil properties are changed thereby affecting the functions necessary for healthy soils. In the planning area, impacts on soil resources have resulted from energy development, grazing, recreation, natural processes, and other activities. The potential for maintaining or restoring these communities and conserving the soil resource depends on the specific soil types and how resource programs are managed.

3.15 Water Resources

Water on BLM-administered and National Forest System lands is regulated by the Clean Water Act, Safe Drinking Water Act, Public Land Health Standards, and other laws, regulations, and policy guidance at the federal, state, and local levels. Water resources in Idaho are regulated by the EPA, US Army Corps of Engineers, and the Idaho Department of Environmental Quality.

The Idaho Department of Environmental Quality has granted designated management agency status to the BLM. As a designated management agency, the BLM must: (1) implement and enforce natural resource management programs for the protection of water quality on federal lands under its jurisdiction; (2) protect and maintain water quality where it meets or exceeds applicable state and Tribal water quality standards; (3) monitor activities to assure that they meet standards and report the results to the State of Idaho; and (4) meet periodically to recertify water quality BMPs. BMPs include methods, measure, or practices to prevent or reduce water pollution, including but not limited to structural and nonstructural controls, operations, and maintenance procedures. BMPs are applied as needed to projects.

3.15.1 Existing Conditions

The discussion of existing conditions includes a description of water resources for the planning area, regardless of landownership. Where appropriate, it also includes a more detailed description of water resources for just BLM-administered lands within the planning area. For this, the description is limited to describing water resources associated with GRSG and their habitat. Wetlands and livestock water developments are important sources of water that can influence GRSG and their habitat.

3.15.2 Conditions within the Planning Area

The BLM is the overwhelming land manager in the planning area. The Forest Service, USFWS, Bureau of Indian Affairs, and State of Idaho all have lands within the planning area that also contain a suite of water resources.

Within the planning area, the major water features are streams, lakes, wetlands, playas, and dry lakes. Streams can be ephemeral, intermittent, or perennial. Ephemeral streams do not flow during an average water year, but do flow in response to large precipitation events. Intermittent streams flow during spring runoff for an average water year, but generally dry up later in the summer. Perennial streams contain some water all year for an average water year. Lakes can be permanent or temporary. Wetlands and floodplains vary in extent and depth throughout the year. Permanent waters can also be in the form of ponds and reservoirs developed for human or livestock consumption.

Stream channels and floodplains are important because their shape and condition affect how rapidly water flows through a river system, how much water is stored within the basins, the quality of the water, and how much erosion occurs. These functions, in turn, affect fish and wildlife habitat, agriculture, recreation, and the susceptibility of local communities and landowners to floods.

As early land management reduced vegetation in the watershed, overland flow of water increased, and stream channels deepened to match the increased supply of water and sediment. Major flood events in the late 1800s were the likely immediate cause of the deepening channels. Channel incisions eventually lead to bank failures and subsequent channel widening. As channel widening and bank failures continued, new low flow channels began to form in the debris from bank failure. Many of the stream channels in the planning area were in the process of this initial buildup in the 1980s. The result of this process is that new channels are usually lower than pre-disturbance channels, and the old floodplain now functions primarily as a terrace. Some terraces may be the result of climatic variations and associated changes in flow and sediment supply. The final stage of channel evolution results in a new bankfull channel and active floodplain at a new, lower elevation. Many stream channels in the planning area have new, lower elevation channels and floodplains.

Surface Water

The United States is divided and sub-divided into successively smaller hydrologic units called regions, sub-regions, accounting units (basins), and cataloging units (sub-basins). Each hydrologic unit is identified by a unique hydrologic unit code consisting of two to eight digits. The fourth level of classification (sub-basin) is represented by an eight-digit hydrologic unit code.

The historic scarcity of stream flow in the planning area has led to increased flow regulation by the State of Idaho. Projects for irrigation, livestock, human use, and flood control have significantly altered natural flow regimes. This has changed habitat conditions, channel stability and timing of sediment and organic material transport. Stream flow has been altered by management activities such as water impoundments, water withdrawals, road construction, vegetation manipulation, grazing, fire suppression, and timber harvesting.

Most surface runoff in the planning area is from snowmelt or rainfall producing peak discharges in the spring and early summer. Many of the streams in the lower elevation semi-arid areas are either intermittent, with segments of perennial flow near springs, or ephemeral, with flow only during spring runoff and intense summer storms.

Riparian Areas and Wetlands

Riparian areas are ecosystems that occur along rivers, streams or water bodies. These area exhibit vegetation or physical characteristics reflective of a permanent surface or subsurface water influence. Typical riparian areas include lands along, adjacent to, or contiguous with perennially and intermittently flowing rivers, streams, and shores of lakes and reservoirs with stable water levels. Excluded are sites such as ephemeral streams or washes that do not exhibit vegetation dependent on free water in the soil. Wetlands are areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and which under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands include marshes, swamps, lake shores, lakeshores, sloughs, bogs, wet meadows, and riparian areas. Even through riparian and wetlands areas occupy only a small percentage of the planning area, these areas provide a wide range of functions critical to many different wildlife species, improve water quality, provide scenery, and recreational opportunities.

The BLM uses proper functioning condition (PFC) assessments for evaluating riparian-wetland areas and uses it to supplement existing stream channel and riparian area evaluations and assessments. Each riparian-wetland has to be judged against its capability and potential. The capability and potential of natural riparian-wetland areas are characterized by the interaction of hydrology, vegetation, and erosion/deposition. PFC is defined separately for lotic (moving water systems, such as rivers, streams, and spring and lentic (standing water systems, such as lakes, ponds, seeps, and wet meadows). If a riparian or wetland area is not in PFC, it is placed into one of three other categories; functional at risk, nonfunctional, or unknown.

The majority of BLM stream channels and floodplains within the planning area are not meeting the BLM standard of PFC. However relatively few stream channels are nonfunctioning. More intermittent stream channels are in nonfunctioning condition than perennial streams but they also have more miles of stream at potential and PFC.

Water Quality

Water quality as defined by the Clean Water Act, includes all the physical, biological, and chemical characteristics which affect existing and designated beneficial uses. The state of Idaho is required to identify which beneficial uses a water body currently supports or could support in the future. Water quality standards are established to protect the beneficial uses of the State's waters. Beneficial uses in planning area are public and private domestic water supplies, industrial water supply, irrigation, livestock watering, fish and aquatic life, and recreation.

The State of Idaho is required by section 303(d) of the Clean Water Act to identify waters which are water quality impaired because of failing to meet their designated beneficial uses. Section 303(d) requires that each state develop a list of water bodies that fail to meet water quality standards and delineate stream segments and listing criteria for all streams. The Section 303(d) list of impaired waters is updated biannually, and the state is required to develop a total maximum daily load allocation for each pollutant of concern.

Water quality is evaluated based on the ability of a water body to support beneficial uses of the water. Generally, key water qualities are those that support native fish and wildlife and support human uses such as agriculture, recreation, and domestic water supply.

The major water quality concern for streams in the planning area has been water temperature. These water temperature concerns correlate to the beneficial use of fish spawning and rearing habitat. Conditions that affect stream temperature can be summaries as amount of near stream vegetation, channel shape, and hydrology. Many of these conditions are interrelated, and many conditions vary considerably across the landscape. For example, channel width measurements can change greatly over even small distances along a stream. Some conditions vary daily and or seasonally. Stream orientation from a north-south to an east-west can change solar heating considerably when stream width and vegetation type remain the same.

Removal of riparian vegetation and the shade it provides contributes to elevated stream temperatures. Channel widening can similarly increase solar loading. The principal source of heat energy delivered to the water column is solar energy striking the stream surface directly. Exposure to solar radiation can cause an increase in stream temperature. The ability of riparian vegetation to shade the stream throughout the day depends on aspect and vegetation height, width, density, and position relative to the stream, as well as aspect the stream flows.

Causes of stream degradation are removal of riparian vegetation and destabilization of streambanks. The land use most commonly associated with these problems in the planning area is livestock grazing. Other land uses associated with degraded streams include roads, trails, water withdraw, reservoir storage and release, altered physical characteristics of the stream and wetlands alteration.

Groundwater

Groundwater is used for irrigation, domestic use, and livestock use. The quality of the groundwater is a function of the chemical makeup of the underground formation containing the water. Most of the planning area contains good quality water but the water is usually hard and contains moderate amounts of dissolved minerals.

Springs and seeps occur in areas where water from aquifers reaches the surface. Many springs begin in stream channels and others flow into small ponds or marshy areas that drain into channels. Some springs and seeps form their own channels that reach flowing streams, but other springs lose their surface expression and recharge alluvial fill material or permeable stratum.

Springs and seeps are important to aquatic habitats because of the perennial base flow they provide to a stream. The outflow from springs in summer usually helps to maintain lower water temperatures. In winter, especially in small streams, base flow helps to maintain an aquatic habitat in an otherwise frozen environment.

Water Quantity
Water balance across the United States is approximately 30 percent runoff and 70 percent evaporation. This may be different across the planning area due to higher temperatures and lower relative humidity in some areas.

Peak flows are connected with the spring runoff and snow melt with a decrease to near base flow during the month of July. Seasons and years of low water yield are particularly crucial periods for most of the planning area's beneficial uses.

The annual flow patterns may have changed since the 19th century. Historical descriptions indicate that streams were relatively stable with good summer streamflow and good water quality and heavy riparian cover. Streambanks were covered with dense growths of aspen, poplar, and willow; cottonwood galleries were thick and wide; and beaver were abundant. Now peak flows are greater and late season flows are diminished. This may be the normal condition of larger flowing streams in the planning area. It is suspected that these effects are due to reduced rates of soil infiltration, reduced capacity for groundwater/riparian storage, and loss of in channel storage in beaver ponds.

3.15.3 Trends

Demands on water resources have increased over the past few decades. Although most early water rights were established for irrigation and mining, today's demand includes municipal water supplies, commercial and industrial supplies, and maintenance of adequate streamflow for fish, recreation, and water quality.

The availability of water in much of the planning area is limited and may hamper additional developments that depend on water. Future water development for wildlife, recreation, and livestock would require a State of Idaho water right before project implementation could occur.

3.16 Cultural Resources

In this section the term "cultural resources" is used to encompass the broad scope of resources that must be considered by the BLM and Forest Service and as further defined below. A cultural resource is a definite location of human activity, occupation, or use identifiable through field survey, historical documentation, or oral evidence (BLM Manual 8100). The term cultural resources is inclusive and has been adopted and widely used to refer to the diverse human record found in sites, structures, objects and places created and/or used by people. These may comprise archaeological, historic, or architectural sites, structures, objects, or places, and may include locations of traditional cultural or religious importance to a particular social and/or cultural group, often referred to as Traditional Cultural Properties. The term includes "historic properties," as defined in the National Historic Preservation Act of 1966, as amended (NHPA), and the implementing regulations found at 36 CFR Part 800. Historic properties are cultural resources determined to be eligible for listing on the National Register of Historic Places (NRHP). The term also includes "archaeological resources" as defined in the Archaeological Resources Protection Act of 1979, and other sites, structures, objects, items and places as addressed in other

statutes/regulations (e.g., American Indian Religious Freedom Act of 1978, the Antiquities Act of 1906, NEPA, and the Native America Graves Protection and Repatriation Act of 1990).

Cultural resources are represented by the full temporal range of human occupation of the continent, from the first peoples' arrival and settlement in the region over 13,000 years ago and subsequent tribal groups expansion and use throughout all of the sub-region and other parts of the West to more recent incursions of fur trappers, homesteaders and miners and ranchers of the last 200 years. Cultural resources can include surface and buried artifacts and cultural features made and left by human cultures in archaeological sites; items built by past cultures (e.g., houses/house remains and activity areas); and places associated with traditional cultural uses.

3.16.1 Considering Effects on Cultural Resources Pursuant to Section 106 of the NHPA

Cultural resources are most frequently identified and recorded through federal compliance with Section 106 of the NHPA and subsequent consultation with Native American tribes and State Historic Preservation Offices (SHPO). Section 106 requires that federal agencies that fund, approve, authorize, license, or permit actions or undertakings to consider effects on "historic properties" that could occur due to the proposed undertakings. It is important to emphasize again that the term "historic property" has a specific meaning under the NHPA, referring only to those properties determined to be eligible for or listed in the NRHP regardless of property type or period of use (e.g., traditional cultural property or archaeological site, and historic or prehistoric).

Federal regulations define specific criterion for NRHP eligibility and provide the measures for evaluating cultural resources for their eligibility. These criteria are found at 36 CFR 60.4. Once a cultural resource has been determined to be eligible for the NRHP the agency must consider the potential effects of the proposed action on the historic property and provide measures to either reduce or mitigate any adverse effects. Consequently, compliance with Section 106 provides a primary mechanism for federal agencies to assess and take into account the effects of proposed federal actions or undertakings on cultural resources during NEPA reviews.

The BLM follows alternative procedures, defined in state specific protocols, for meeting its Section 106 obligations allowed for and pursuant to the implementing regulations of the NHPA (36 CFR 800.14). In collaboration with the Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers, the BLM developed alternative procedures that define the manner in which the agency will comply with Section 106 of the NHPA. These procedures are defined in a national Programmatic Agreement, revised in 2012, between the three parties. The national Programmatic Agreement procedures are implemented by the state specific protocol agreements with each state's SHPO. The protocols further define how the BLM will coordinate with the SHPO in each state to fulfill Section 106 responsibilities.

Prior to initiating proposed actions for protection and enhancement of GRSG and GRSG habitat, the responsible manager shall determine the area of potential effect; review existing information on known and anticipated historic properties that could be affected; seek information (in coordination with environmental review and land use planning processes) from Native American tribes and other parties likely to have knowledge of or concern with historic properties (including places of traditional cultural and religious significance); determine the need for field surveys or other actions to identify historic properties; make a good faith effort to identify and evaluate historic properties; assess and determine effects on historic properties; and identify measures to avoid, lessen or mitigate adverse effects on historic properties.

As the various types of GRSG/habitat improvement projects are identified, effects on cultural resources can be assessed on a case by case or programmatic level; however, given current information, it is assumed that all future actions will require separate NHPA analyses. Any programmatic procedures not covered by the BLM's national Programmatic Agreement or state protocols will require either (a) separate NHPA analysis, or (b) a separate Section 106 agreement.

3.16.2 Conditions of the Planning Area

The planning area includes federal lands administered by the BLM Boise, Twin Falls, and Idaho Falls Districts in Idaho and the Dillon Field Office of the Western Montana District in Montana. National Forest System lands include lands administered by the Boise, Sawtooth, Salmon-Challis, and Caribou-Targhee National Forests in Idaho, and the Beaverhead-Deerlodge National Forest in Montana. A majority of the habitat is sagebrush steppe on BLM-administered land, with upland sagebrush steppe and sub-alpine habitat or ecotones located on National Forest System lands. The Snake and Salmon Rivers, and the headwaters of the Missouri river, are three major watershed systems within the planning area.

In general, and as extrapolated from BLM survey and site location data, on average 15 percent of BLM-administered lands within the planning area have been inventoried, resulting in the recordation of 17,801 archaeological resources (**Table 3-54**), including prehistoric and historic sites. These data indicate that, on average, six to eight sites occur per square mile on BLM-administered lands within the planning area. Formal determinations of eligibility have not been completed for most sites in the planning area; however, recorded resources are treated as eligible until determined otherwise. Based on logged eligibility determinations for known sites on BLM-administered lands, roughly 14 percent of recorded sites have been determined to be eligible for listing on the NRHP. These data indicate that over 2,492 of the recorded sites on BLM-administered lands are eligible for the NRHP (**Table 3-54**).

The total extent of the cultural resource base is unknown for the National Forests in PPH or PGH, as the entire land base has not been inventoried. Survey coverage of GRSG habitat on the National Forests in the sub-region varies between 5 and 15 percent on most of the National Forests, with most surveys conducted for range allotment plans, wildlife habitat improvement projects, and commercial activities. The exact number of cultural resource

Table 3-54
Recorded Cultural Resource Surveys and Sites within GRSG Habitat in the Planning Area

Habitat	Idaho BLM Surveys	Idaho BLM Resources	Montana BLM Surveys	Montana BLM Resources	Planning Area Totals
PPH	2,057 surveys	12,517	596 surveys	723	718,292 acres
	692,778 acres		25,514 acres		13,240 Resources
PGH	1,226 surveys	4,561	538 surveys	564	763,170 acres
	739,277 acres		23,893 acres		5,125 Resources
Totals	**1,432,055 acres**	**17,078**	**49,407 acres**	**1,287**	**1,481,462 acres**
					18,365 Resources

Source: BLM GIS 2013

surveys and sites located on the National Forests changes as new surveys are conducted; therefore, providing exact numerical information would not be accurate.

Several well-known historic properties and districts occur in the planning area, as listed by field office in **Table 3-55**. These historic properties along with other eligible properties in the planning area would need evaluation for the effects of proposed undertakings for GRSG habitat improvement prior to implementation. Areas not previously inventoried would be subjected to full cultural resources analysis for ground-disturbing actions.

Table 3-55
Well Known Historic Properties within the Planning Area

Field Office	Key National Register Listed or Eligible Properties
Dillon	The Bannack National Historic Landmark Big Hole National Battlefield Everson Creek/Black Canyon Quarry District Muddy Creek Archaeological District Historic mining districts, including Argenta, Bannack, Blue Wing, Ermont, Melrose, Rochester, Silver Star, Utopia, and Virginia City
Burley	Castle Rocks Traditional Cultural Property City of Rocks National Historic Landmark Kelton Road
Bruneau	Camas and Pole Creeks Archaeological District Shoofly Rock Alignments Little Blue Table complex Five Fingers & Y "Buffalo" Jumps Hole in Rock Pictographs
Challis	Challis Springs Historic District Ima Mine White Knob Mining District Crystal City Double Springs Challis Bison Jump Bayhorse Mining District Donkey Hills horse trap

Table 3-55
Well Known Historic Properties within the Planning Area

Field Office	Key National Register Listed or Eligible Properties
Jarbidge	Toana Freight Wagon Road Devil Creek Complex Bruneau River/DryLakes Complex Browns Bench Obsidian Complex
Owyhee FO	Silver City Historic District Delamar Historic District
Salmon FO	Jaguar Cave Rag Town Buckhorn Mine Elmira Mine
Shoshone FO	Wilson Butte Cave Richfield Pumphouse
Upper Snake FO	Birch Creek Rockshelters Bobcat Cave Jackknife Cave Black Canyon Rock Art Sites

Source: BLM GIS 2013

The Forest Service identifies their significant historic properties through identification of Priority Heritage Assets (**Table 3-56**). These are, in essence, the most significant sites on the forest.

Table 3-56
Forest Service Priority Heritage Assets and Listed Properties within the Planning Area

National Forest	Number of Priority Heritage Assets	Listed Properties
Boise NF	34	Atlanta Ranger Station Rocky Bar Townsite
Beaverhead – Deerlodge NF	45	Historic Resources of Pony. Montana Canyon Creek Charcoal Kilns Butte Anaconda and Pacific Railway Historic District Birch Creek Civilian Conservation Corps Camp Lemhi Pass National Historic Landmark
Sawtooth NF	32	Pole Creek Guard Station Oregon National Historic Trail
Caribou-Targhee NF	10	Salt River Hydroelectric Plant Bishop Mountain Lookout Squirrel Meadow Guard Station Mesa Falls Lodge Hudspeth's Cutoff Oregon Trail
Salmon – Challis NF	58	Leesburg Townsite and Cemetery Lemhi Pass National Historic Landmark Custer Townsite

Cultural Use of the Planning Area

Three cultural areas are located within the planning area. Cultural areas have often been correlated to physiographic regions, with the planning area falling within the northern Great Basin, southeastern Plateau and western Plains regions. These cultural areas roughly correspond to distinctly different indigenous groups with different languages and moderately different resource-based economic systems and social structures. While these areas are associated to cultural groups and distinct tribes, cultural boundaries are fluid and overlapping. The main homelands and cultural traits of tribal groups that inhabit the region are generally defined by the cultural areas. Tribes that inhabit the region today and in the past include Great Basin groups such as the Shoshone-Paiute Tribes, Shoshone-Bannock Tribes, and the Eastern Shoshone; the Plateauan Nez Perce, Coeur d'Alene, Pend d'Oreille, Confederated Salish-Kootenai Tribes, Confederated Tribes of the Colville Reservation, Confederated Tribes of the Umatilla Reservation; and Plains groups including the Blackfeet Tribe, Chippewa Cree Tribes, and the Crow.

Tribal members actively use BLM-administered and National Forest System lands for traditional resource procurement. The planning area contains populations of economically important plant and animal resources to tribal groups and individuals with certain species dominating depending on the region and the particular preferences of tribes or individuals. The sagebrush steppe and rocky upland flats are likely to support populations of plants such as bitterroot, biscuit root, Indian carrot, Indian rice grass and needle grass and other important root plants, such as camas in wetland areas. Modern traditional food plant gathering focuses almost entirely on root crops and wild fruits especially if they are found near the various reservations. Other types of cultural food plants such as seeds are not collected today to the degree they were collected in former times. Cultural plants for weaving appear to be collected wherever they are found. Medicinal cultural plants are undoubtedly collected today but practitioners of indigenous healing methods may not share the types of species used as readily as those collecting plants for subsistence and weaving. Rabbits, deer, elk, and fish are also important animal resources in the planning area.

The most common type of prehistoric site or cultural resource in Idaho and southwestern Montana is the lithic scatter. These types of sites contain mainly flaked stone (debitage) and/or stone tools left during the process of creating or repairing bifacial tools, such as arrow points, spear points, dart points, knives or scrapers. Lithic scatters often represent the remnants of prehistoric tool manufacturing/maintenance, locales created during subsistence pursuits, including hunting camps, animal butchering sites, or quarries. The lithic scatter comprises approximately 70 percent or more of recorded prehistoric sites in the planning area. Other site types may include habitation sites with remnants of house pits, house rings and hearths, as well as milling and storage equipment, such as pottery and basketry, and stone circles and wickiups in far eastern Idaho and Montana. Ceremonial sites may also exist in the planning area, but only a few may leave an archaeological signature, such as cairns, pits (e.g., eagle catching and fasting) or stacked rock of a vision quest site, or medicine wheels, and may require tribal consultation with practitioners and elders to identify. Other site types include trails, such as the Oregon National Historic Trail (NHT) and Nez Perce NHT, petroglyphs and pictographs, hunting drivelines and blinds, rock shelters, and caves.

While researchers in Idaho and Montana have developed varying cultural chronologies for prehistoric human use of the region, the general periods of use are similar and are discussed in very general terms here to outline prehistoric use of the planning area. The prehistoric cultural chronology for both Idaho and Montana include five general periods, the Early Prehistoric (Paleo-Indian), circa 13,500 to 8,000 years before the present, three sub-periods of the Middle Prehistoric 8,000 to 300 years before the present and the Protohistoric/Early Historic 300 to 150 years before the present. General overviews of archeological research in the region are provided in studies by Butler (1978, 1986), Meatte (1990), and Plew (2008), for southern Idaho, and Deaver and Deaver (1990), and Foor (1996) in southwestern Montana.

The most common type of historic cultural resource in the planning area relates to the mining of gold, silver, lead, and copper during the latter part of the 19th century and the early part of the 20th century. Such properties include mining camp remnants, ghost towns, miner's cabins, mining shafts, adits, mills, smelters, and an assortment of other mining related buildings, structures, and landscape features. Several comprehensive overviews of historic metal mining in Idaho and Montana have been produced in recent years, and provide the important context with which to evaluate such properties (McKay 2011; Godfrey 2003; Warhank 1999; Herbort 1995a, 1995b). Other historic period sites include transportation networks, trails, including the Oregon and California NHTs and associated side trails (e.g., Goodale's and Hudspeth Cutoffs) and the Lewis and Clark NHT, notable Lewis and Clark campsites, lumber mills, fur trapping shelters and cabins, homesteads, historic cemeteries, irrigation ditches, cow/sheep camps, sheepherder cairns, stage stops and trash dumps.

3.16.3 Trends

Federal lands will continue to be managed for the protection and preservation of cultural resources pursuant to regulation and policy. More concerted government-to-government consultation with tribes is occurring to address tribal resources and concerns. Prehistoric and historic resources are nonrenewable and overtime have been diminished by unauthorized collection, looting and cumulative project impacts. However, efforts have increased in public education and outreach creating awareness about our nation's cultural heritage and tribal interests. These efforts have improved public understanding and awareness, resulting in increased preservation of cultural resources.

3.17 Tribal Interests

The federal government has a unique and distinctive relationship with federally recognized Native American tribes as set forth in the Constitution of the United States, treaties, statutes, Executive Orders, judicial decisions, and agreements. This relationship is different from the federal government's relationship with state and local governments or other entities. The United States government has a trust responsibility to federally recognized Native American tribes that covers lands, resources, money, or other assets held by the federal government in trust and the ability of those tribes to exercise their tribal rights. The United States recognizes Native American tribes as sovereign nations. The tribes maintain active interests in the planning area. Tribal members use BLM-administered lands to gather plants or other native materials (e.g., stone for flint-knapping), hunt animals, and fish.

Native American treaties are negotiated contracts made pursuant to the Constitution of the United States and are considered the "supreme law of the land." They take precedence over any conflicting state laws because of the supremacy clause of the Constitution (Article 6, Clause 2). Treaty rights are not gifts or grants from the United States, but are bargained for concessions. These rights are grants-of-rights from the tribes rather than to the tribes. The reciprocal obligations assumed by the federal government and Native American tribes constitute the chief source of present-day federal Native American law.

The BLM, Forest Service, and other federal agencies have the responsibility to identify and consider potential impacts of project alternatives identified for GRSG planning on Native American trust resources, including fish, game, and plant resources, and on off-reservation, treaty-reserved fishing, hunting, gathering, and similar rights of access and resource use on BLM-administered lands. This also includes rights of access and use for ceremonial and other traditional cultural practices. The BLM, as lead federal agency, also has the responsibility to ensure that meaningful consultation and coordination concerning GRSG planning is conducted on a government-to-government basis with federally recognized tribes to consider tribal treaty rights and trust resources. BLM-administered lands retain social, economic, and traditional value for tribal people, as well as contemporary and ongoing spiritual and cultural uses. Through consultation with the tribes, the BLM is aware of their treaty and trust obligations and the tribes' desire to capitalize on opportunities that maintain or enhance resources critical to the exercise of treaty rights, traditional customs, subsistence, and cultural uses of the land.

BLM and Forest Service consultation with Native American tribes, as it pertains to tribal interests, treaty rights and trust responsibilities, is conducted in accordance with the following direction:

- Executive Order No. 13175 – Consultation and Coordination with Indian Tribal Governments, November 6, 2000
- Secretarial Order 3317 – Department of Interior Policy on Consultation with Indian Tribes, December 1, 2011
- Bureau Manual Handbook H-8120-1 – Guidelines for Conducting Tribal Consultation (Transmitted 12/03/04)
- The National Historic Preservation Act of 1966 as amended (PL 89-665; 80 Stat. 915; 16 USC 470
- Archaeological Resources Protection Act of 1979 (PL 96-95; 93 Stat. 721; 16 USC 47Oaa et seq.) as amended (PL 100-555; PL 100-588)
- American Indian Religious Freedom Act of 1978 (PL 95-431; 92 Stat. 469; 42 USC 19960
- Native American Graves Protection and Repatriation Act of 1990 (PL 101-601; 104 Stat. 3048; 25 USC 3001)

- Executive Order No. 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, February 11, 1994
- Executive Order No. 13007 – Indian Sacred Sites, May 24, 1996
- Executive Order No. 13084 – Consultation and Coordination with Indian Tribal Governments, May 14, 1998
- Government-to-Government Relations with Native American Tribal Governments (Memorandum signed by President Clinton; April 29, 1994)
- Order No. 3175 – Departmental Responsibilities for Indian Trust Resources (Section 2 of Reorganization Plan No. 3 of 1950 – 64 Stat. 1262; November 8, 1993)
- USDA Department Regulations 1340-007 and 1350-002
- Forest Service Manual Direction FSM 1500
- Forest Service Handbook Direction FSH 1509

The planning area is within the traditional and historical use area of the Blackfeet Tribe, Chippewa Cree Tribe, Confederated Salish-Kootenai Tribes, Confederated Tribes of the Colville Reservation, Confederated Tribes of the Umatilla Reservation, Crow Tribe, Eastern Shoshone Tribe, Nez Perce Tribe, Shoshone-Bannock Tribes, and the Shoshone-Paiute Tribes. These tribes lived, hunted, fished, gathered plant foods, buried their dead, and conducted religious ceremonies on lands within the planning area.

During the 1850s and 1860s, the United States negotiated treaties with some tribes in order to acquire lands for homesteading. The treaties that apply to the project area include the Crow Treaty, Fort Benton Treaty, Fort Bridger Treaty, Hell Gate Treaty, Nez Perce Treaty, and Walla Walla, Cayuse, and Umatilla Treaty. More information on these specific treaties is presented below. No tribal treaties were afforded to the Chippewa Cree and the Confederated Tribes of the Colville Indian Reservation. The Shoshone-Paiute Tribes of the Duck Valley Indian Reservation assert aboriginal rights to their traditional homelands; however, the Boise Valley Treaty of 1864 and the Bruneau Valley Treaty of 1866 were never ratified. The Shoshone-Paiute Tribes believe that title to these lands was not relinquished and they continue to claim title, rights, and interests associated with these lands.

On May 7, 1868, the Crow Tribe and the United States signed the Treaty with the Crows, 1868, referred to as the Crow Treaty (15 Stat. 649). In the Crow Treaty, the tribes relinquished ownership of thousands of acres of land to the United States. The treaty also guaranteed a permanent homeland for the Crow Tribe in southeastern Montana, which became known as the Crow Reservation. Article 4 of the treaty also states the tribe's right to "hunt on the unoccupied lands of the US so long as game may be found thereon."

On October 17, 1855, the Blackfeet and the United States signed the Blackfeet Treaty of Fort Benton, 1855, referred to as the Fort Benton Treaty (11 Stat. 657). In the Fort Benton Treaty, a great majority of the land was designated as common hunting ground for the

Blackfeet and neighboring tribes. In 1888, lands were set aside in north-central Montana for the Blackfeet Indian Reservation.

On July 3, 1868, the Eastern Band Shoshone and Bannock Tribes and the United States signed the Treaty with the Eastern Band Shoshoni and Bannack, 1868, referred to as the Fort Bridger Treaty (15 Stat. 673). In the Fort Bridger Treaty, the tribes relinquished ownership of approximately 20 million acres to the United States. The Eastern Band Shoshone were guaranteed a permanent homeland in western Wyoming, which has become known as the Wind River Indian Reservation. The Bannock and other bands of Shoshone were guaranteed a permanent homeland as well which ended up being in southeast Idaho, known as the Fort Hall Indian Reservation. Article 4 of the treaty also retains the tribes' rights to hunt, fish, and gather natural resources (including timber), and provides other associative rights necessary to effectuate these rights on the unoccupied lands of the United States.

On July 16, 1855, the confederated tribes of the Flathead, Kootenay (sic), and the Upper Pend d'Oreille Indians and the United States signed the Treaty with the Flatheads, etc., 1855, referred to as the Hell Gate Treaty (12 Stat. 975). The treaty guaranteed a permanent homeland for the confederated tribes in northwestern Montana, which has become known as the Flathead Reservation. Article 3 of the treaty also retains the tribes, "privilege of hunting, gathering roots, and berries, and pasturing their horses and cattle upon open and unclaimed lands."

On June 11, 1855, the Nez Perce Tribe and the United States signed the Treaty with the Nez Perces, 1855, referred to as the Nez Perce Treaty (12 Stat. 957). In the Nez Perce Treaty, the tribes relinquished ownership of millions of acres of land to the United States. The treaty also guaranteed a permanent homeland for the Nez Perce Tribe in northern Idaho, which became known as the Nez Perce Reservation. Article 3 of the treaty also asserts the tribe's right to "take fish at all usual and accustomed places in common with citizens of the [Washington] Territory; and of erecting temporary buildings for curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed land."

On June 9, 1855, the Walla Wallas, Cayuses, and Umatilla tribes and the United States signed the Treaty with the Walla Walla, Cayuse, etc., 1855 (12 Stat. 945). In the treaty, the tribes relinquished 6.4 million acres of land to the United States. The treaty also guaranteed a permanent homeland for the Walla Walla, Cayuse, Umatilla, and other tribes in northeastern Oregon, which became known as the Confederated Tribes of the Umatilla Indian Reservation. Article 1 of the treaty also retained the tribes' right to "hunt, gather roots and berries, and pasture stock on unclaimed lands of the US."

The BLM manages portions of these "unoccupied or unclaimed lands." Members of the tribes affected by this proposed action exercise their hunting, fishing, and gathering rights on federal lands outside of the boundaries of their reservations. Currently, there is little specific information available on the exact animal species hunted, plant species gathered, or locations

used by Native Americans exercising their treaty rights within the boundaries of the project area.

As described in **Section 3.11.1**, lands are retained in federal ownership unless, as a result of land use planning, is the BLM determines that disposal of certain parcels would serve the national interest. Land exchanges require site-specific NEPA analyses, at which time tribes are consulted to address their concerns and requests regarding specific parcels.

3.18 Visual Resources

Visual quality of western landscapes is an increasingly sensitive issue. Impacts on visual resources are identified as a significant issue to address in RMPs, Forest Plans, and major EISs such as the renewable energy and transmission programmatic environmental impact statements. The general public's increasing awareness of the vertical scale, footprint, character and visible prominence associated with utility scale renewable energy and transmission line development has increasing the need for Visual Resource Management (VRM).

3.18.1 Conditions on BLM-Administered Lands

The BLM manages scenic values using the VRM program. VRM policy was initially launched in 1976 in response to both NEPA requirements placed on federal land management, and FLPMA requirements for scenery resource inventory and management. The BLM developed the current VRM policy manual (M-8400) and handbooks (H-8410-1, H-8431-1) in the mid-1980s to guide the field offices through an objective and systematic program for managing scenery resources.

VRM requires that the BLM field offices complete a visual resource inventory of the lands under their management control. The visual resource inventory is a systematic process for determining the visual values on the BLM-administered lands. The inventory process has three parts: scenic quality evaluation, sensitivity level analysis and delineation of distance zones. Based on the combinations of the three, BLM-administered lands can then be categorized as Class I (most valued and highest quality of scenery) down to Class IV (areas of low scenic quality and sensitivity at most or all distance zones). These inventory classes represent the existing visual resources.

VRM provides a way to inventory and classify visual resources, describe characteristic landscapes, determine contrasts from proposed actions, and potential mitigation from impacts on visual resources.

BLM Handbook 8410 describes the three basic landscape characteristics used to indicate visual resources in VRM: 1) scenic quality; 2) sensitivity levels; and 3) distance zones. Scenic quality is a measure of the visual appeal of a tract of land. Areas can be sub-divided into Scenic Quality Rating Units of similar visual character on the basis of like physiographic characteristics, similar visual patterns, texture, color, and variety; and areas which have similar impacts from man-made modifications. The size of the Scenic Quality Rating Units may vary from several thousand acres to 100 or less, depending on landscape feature

similarities, and the desired inventory detail. Seven key factors determine the scenic quality of a unit: landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications. Resource specialists consider these factors when ranking units for scenic quality (A = high, B = medium, C = low).

Visual sensitivity is a measure of public concern for scenic quality. BLM-administered lands are assigned high, medium, or low sensitivity levels by analyzing various indicators of public concern, such as: type of user, amount of use, public interest, adjacent land uses, and special areas.

Sensitivity level rankings are not available for the planning area.

Landscapes can be divided into three distance zones based on relative visibility from travel routes or observation points. They are foreground-middleground, background, and seldom seen. The foreground-middleground zone includes areas seen from highways, rivers, or other viewing locations that are less than five miles away. The background zone is generally between 5 and 15 miles away. The seldom-seen zone includes areas usually hidden from view.

During the resource management planning process, the BLM determines how the visual landscape will be managed in the future. The VRM decisions that are made in the planning process result in areas being assigned a VRM class. VRM classes determine how much change will be allowed in the landscape. VRM Class I areas are managed to preserve the existing character of the landscape and allow for limited management activity. Class II allows for low levels of landscape change that do not attract attention of the casual observer. Class III allows for moderate changes to the landscape that may attract attention but are not dominant and Class IV areas allow for high levels of landscape change.

The BLM uses a VRM contrast rating system that addresses form, line, color and texture of the landscape to determine if proposed projects are in compliance with the designated visual resource management class.

These management classes are separate from the visual resource inventory classes and guide management irrespective of the underlying visual resource (i.e., areas that have an inventory Class II could be designated and managed as a VRM Class IV to allow for major changes in the landscape).

In the past, especially in older management framework plans, BLM field offices would often adopt the VRM inventory classes as the management class (**Table 3-57**). In some plans, the BLM did not make any decisions regarding the VRM classes. In such cases, the VRM inventory class has generally been used as the VRM class. A majority of the BLM-administered lands within the planning area do not have a current visual resource inventory.

Table 3-57
BLM Visual Resource Management Class Acres
(approximate for offices with designated VRM classes)

VRM Class	Class I	Class II	Class III	Class IV
Acres	510,924	2,058,432	3,983,572	2,052,936

Source: BLM GIS 2013

3.18.2 Conditions on National Forest System Lands

Forest Service Manual 2380.3 requires the agency to "inventory, evaluate, manage, and, where necessary, restore scenery as a fully integrated part of the ecosystems of National Forest System lands through the land and resource management and planning process." Scenery must be treated equally with other resources. The Forest Service developed a visual management system to provide a mechanism for inventory and analysis of landscape resources and the effects of land management activities on those resources.

The Forest Service established the Visual Management System in 1974 to inventory, evaluate, and manage scenic resources. The Visual Management System is described in Agriculture Handbook No. 462, National Forest Landscape Management. Using an established physiographic character type as a frame of reference, the Visual Management System determines the inherent scenic quality based on the different degrees of landscape variety within an area.

Inherent scenic quality is a measure of the natural landscape's scenic beauty based on attributes, such as landform, vegetation, water features, and rock formations. The basic assumption of the Visual Management System is that all landscapes have some inherent value, but those with the most variety and diversity have the greatest potential for "high scenic value." Three variety classes, designated A, B, and C, represent inherent scenic quality.

Sensitivity levels are identified in the Visual Management System and are defined as the measure of people's concern for the scenic quality of the landscape. Basically, all viewed landscape is rated for a level of sensitivity. Sensitivity levels are overlaid with distance zones to identify all the viewed and unseen landscape within a given area. The Visual Management System defines distance zones—that is, the distance from which a landscape is viewed—as foreground, middleground, and background. Distance zones are important in evaluating how change is perceived in the landscape because the closer the features in the landscape are to the viewer, the more pronounced they appear and the more detail is observed.

Visual quality objectives are determined in the Visual Management System by combining the sensitivity levels and scenic quality. Visual quality objectives are assigned to the landscape to describe the degree of acceptable alteration of the natural landscape. The Visual quality objectives classifications are Preservation, Retention, Partial Retention, Modification, and Maximum Modification. Preservation allows for ecological changes only, while Maximum Modification allows for landscape changes that may dominate the natural landscape character.

Scenery Management System

The Visual Management System process has been updated as the Scenery Management System, which is being incorporated into respective Forest Management Plans. The Scenery Management System is described in Landscape Aesthetics: A Handbook for Scenery Management (Forest Service 1995). Adoption of the Scenery Management System is to occur as each National Forest revises its LUP. For National Forests not currently undergoing the forest-plan revision process, or for those requiring extensive time for revision, application of the Scenery Management System will occur at the subforest or project level.

In general, the Scenery Management System differs from the Visual Management System in that it is integrated with ecosystem management and addresses landscape character, constituent preferences, scenic integrity, and landscape visibility as key aesthetic considerations. Landscape character describes the visual patterns of form, line, color, texture, dominance, scale, and diversity of elements in the landscape and the cultural attributes that make the landscape identifiable and give it a "sense of place." Constituent preferences convey the aesthetic experience of forest visitors, communities, and tourists and the significance of scenic quality to these user groups.

The Scenery Management System entails identifying the landscape character, visual sensitivity, and scenic integrity. The Scenery Management System provides an overall framework for the orderly inventory, analysis, and management of scenery. It is a tool for integrating the benefits, values, desires, and preferences regarding aesthetics and scenery for all levels of land management planning. The Scenery Management System also considers Concern Levels, which are a categorization of the importance of scenic resources to forest visitors.

Three concepts of the Scenery Management System are of key importance: (1) Scenic Attractiveness, (2) Landscape Character, and (3) Scenic Integrity. These concepts and landscape character are defined below:

Scenic Attractiveness is the primary indicator of the scenic importance of a landscape based on human perceptions of the intrinsic beauty of landforms, rock outcrops and forms, waterforms, vegetation patterns, and cultural features. It reflects varying visual perception attributes of variety, unity, vividness, intactness, coherence, uniqueness, harmony, balance, and pattern. The frame of reference for scenic attractiveness (generally at the section scale) is landscape character.

Three levels of scenic attractiveness are identified during the scenery inventory process: (A) Distinctive, (B) Common or Typical, and (C) Undistinguished (FSM 2380, Landscape Management).

Landscape character is a combination of physical, biological, and cultural images that gives an area its visual and cultural identity and helps to define a sense of place. Landscape character provides a frame of reference from which to determine scenic attractiveness and to measure scenic integrity (FSM 2380, Landscape Management).

Scenic Integrity Objectives define the degrees of deviation from the landscape character that occur at any given time by using the process described in Agriculture Handbook 701, Landscape Aesthetics: A Handbook for Scenery Management (FSM 2380, Landscape Management). When discussing Scenic Integrity Objectives, the degree of alteration is measured in terms of visual contrast with the surrounding natural landscape. The objectives of each Scenic Integrity Objectives classification are included below:

- Very High – Management activities, except for very low visual-impact recreation facilities, are prohibited. Allows for ecological changes only. The existing landscape character and sense of place is expressed at the highest possible level.
- High – Management activities are not visually evident to the casual observer. The landscape character appears intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident. Changes in the qualities of size, amount, intensity, direction, pattern, etc., should not be evident.
- Moderate – Management activities remain visually subordinate to the characteristic landscape being viewed. Activities may repeat form, line, color, or texture common to the characteristic landscape but may not change in their qualities of size, amount, intensity, direction, pattern, etc.
- Low – Management activities begin to visually dominate the original characteristic landscape. However, activities of vegetative and landform alteration must borrow from naturally established form, line, color, or texture so completely and at such a scale that its visual characteristics are those of natural occurrences within the surrounding area or character type. Structures must remain visually subordinate to the proposed composition.
- Very Low – Management activities of vegetative and landform alterations may dominate the characteristic landscape. While alterations may not borrow from attributes such as size, shape, edge effect, and pattern of natural openings, vegetative type changes, or architectural styles within or outside the landscape being viewed, they must be shaped and blended with the natural terrain so that elements such as unnatural edges, roads, landings, and structures do not dominate the composition.

Visual Management Classes

For both the BLM and Forest Service, where management decisions have been made to preserve and protect the visual characteristics of the landscape, these areas are likely to provide better habitat and protection for GRSG.

3.19 Lands with Wilderness Characteristics

The purpose and need of the National GRSG Planning Effort is limited to providing LUP guidance specific to the conservation of GRSG habitats. No decisions related to the management of lands with wilderness characteristics will be made as part of this planning effort; therefore, management of lands with wilderness characteristics is considered outside

the scope of this plan amendment process. Impacts on lands with wilderness characteristics from the alternatives being analyzed for this planning effort are presented in **Section 4.14**.

Section 201 of FLPMA and BLM Manual Section 6310 require the BLM to maintain on a continuing basis an inventory of all BLM-administered lands and their resources and other values, which includes wilderness characteristics. It also provides that the preparation and maintenance of the inventory shall not, of itself, change or prevent change of the management or use of BLM-administered lands. Regardless of past inventory, the BLM must maintain and update as necessary, its inventory of wilderness resources on BLM-administered lands. In some circumstances conditions relating to wilderness characteristics may have changed over time, and an area that was once determined to lack wilderness characteristics may now possess them. The BLM determines when it is necessary to update its wilderness characteristics inventory.

Under the following circumstances, the BLM considers whether to update a wilderness characteristics inventory or conduct a wilderness characteristics inventory for the first time:

1. The public or the BLM identifies wilderness characteristics as an issue during the NEPA process.
2. The BLM is undertaking a land use planning process.
3. The BLM has new information concerning resource conditions, including wilderness characteristics information submitted by the public that meets the BLM's minimum standard described in the Wilderness Characteristics Inventory Process section of this policy.
4. A project that may impact wilderness characteristics is undergoing NEPA analysis.
5. The BLM acquires additional lands.

There also may be other circumstances in which BLM will find it appropriate to update its wilderness characteristics inventory.

The original FLPMA Section 603 mandated inventories that were conducted during past RMP revisions and amendments and through other lands with wilderness characteristics inventory updates that have recently taken place. Inventories for wilderness characteristics were conducted between 2009 and 2013 and reflect the most up-to-date lands with wilderness characteristics baseline information for this planning area. For inventories that were conducted after 2011, findings were documented following guidance in BLM IM 2011-154, Requirement to Conduct and Maintain Inventory Information for Wilderness Characteristics and to Consider Lands with Wilderness Characteristics in Land Use Plans, which is now encompassed in BLM Manuals 6310 and 6320. Lands with wilderness characteristics inventories will be updated for any site-specific NEPA analyses that are conducted in the planning area. This will be to determine if a project will have impacts on lands with wilderness characteristics identified through previous or updated inventories.

The primary function of an inventory is to determine the presence or absence of wilderness characteristics. The BLM has completed lands with wilderness characteristics inventories in the Bruneau, Jarbidge, Salmon, Pocatello and Dillon Field Offices. Upper Snake has a draft inventory, and partial inventories have been completed in the Owyhee, Shoshone, and Burley Field Offices. The Pocatello Field Office found that it has no lands with wilderness characteristics. The Bruneau, Salmon, Owyhee, Burley, Shoshone, Dillon, and Jarbidge Field Offices found areas that do contain lands with wilderness characteristics.

Currently no Field Offices have taken their lands with wilderness characteristics through a complete planning process to determine how they will be managed. There are 390,800 acres of lands with wilderness character within the planning area boundary (**Table 3-58**).

Table 3-58
Lands with Wilderness Characteristics within the Planning Area

BLM Field Office	Acres
Bruneau	152,400
Burley	30,600
Dillon	65,100
Jarbidge	87,800
Owyhee	51,200
Salmon	2,620
Shoshone	580
Total	**390,800**

Source: BLM GIS 2015

Figure 3-16 shows BLM Lands with Wilderness Characteristics and Forest Service Roadless Areas in the planning area.

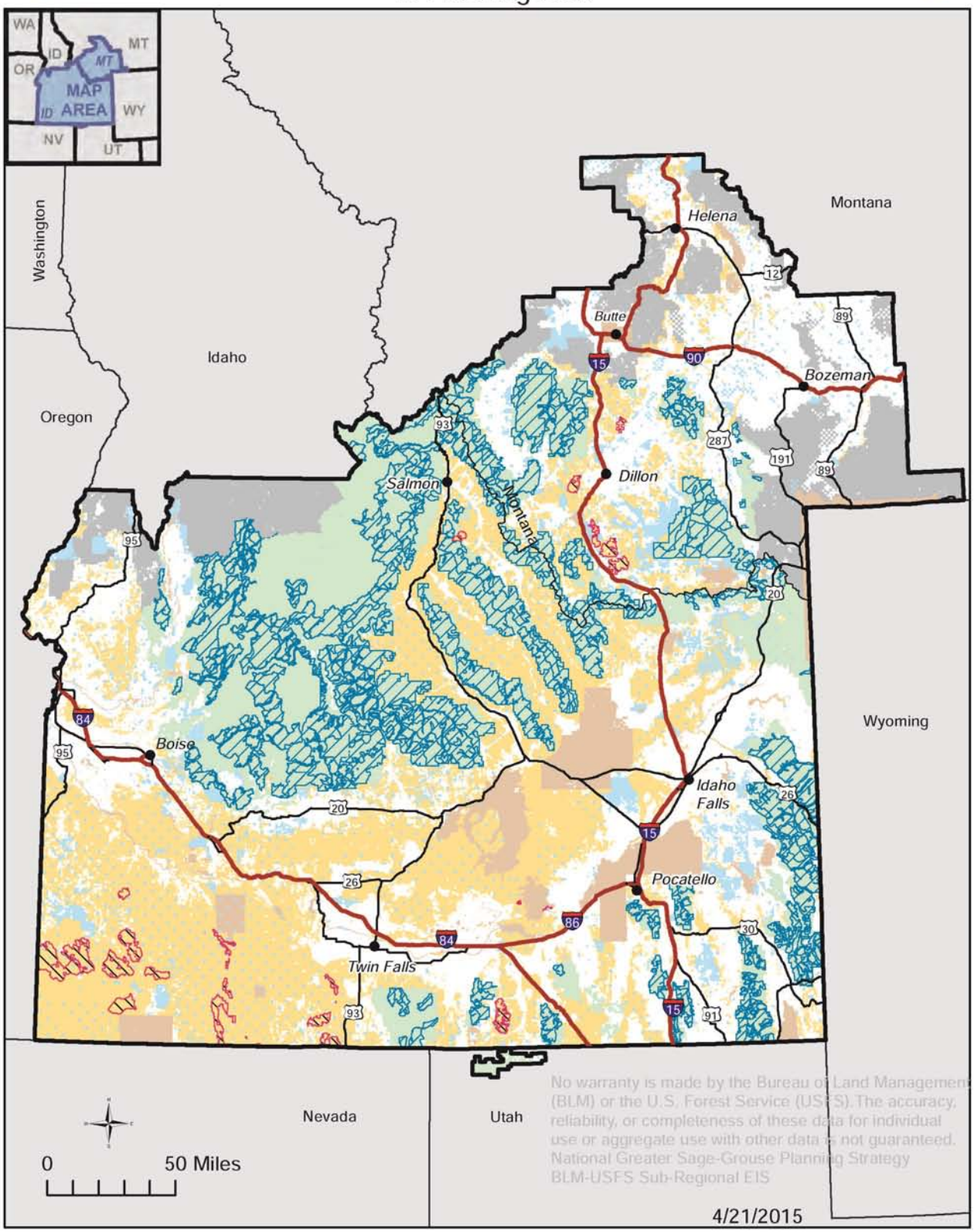
3.20 Forest Service Roadless Areas

Under 36 CFR 294, the Forest Service designated Roadless Areas in Idaho (**Figure 3-16**). The purpose of designating Roadless Areas is to conserve areas with wilderness attributes.

The Forest Service organizes Roadless Areas into five management classifications. These management classifications are; 1. Wild Land Recreation, 2. Special Areas of Historic or Tribal Significance, 3. Primitive, 4. Backcountry/Restoration, and 5. General Forest, Rangeland, and Grassland. Management of Roadless Areas is impacted by the management classification into which a Roadless Area falls. The Forest Service restricts activities such as road construction and reconstruction, timber cutting, and mineral activities to various degrees under each management classification in order to protect Roadless Areas (36 CFR 294).

There are approximately 1,695,900 acres of Roadless Areas on National Forest System lands.

Figure 3-16
Lands with Wilderness Characteristics and Roadless Areas in Planning Area



3.21 Air Quality and Climate Change

Air resources include air quality, air quality related values, and climate change. As part of the decision-making process, the BLM and Forest Service consider and analyze the potential effects of agency and agency-authorized activities on air resources.

The US Environmental Protection Agency (USEPA) has the primary responsibility for regulating air quality, including seven criteria air pollutants subject to National Ambient Air Quality standards (NAAQS). Pollutants regulated under NAAQS include carbon monoxide (CO), lead, nitrogen dioxide (NO_2), ozone, particulate matter with a diameter less than or equal to 10 microns (PM_{10}), particulate matter with a diameter less than or equal to 2.5 microns ($PM_{2.5}$), and sulfur dioxide (SO_2). Two additional pollutants, nitrogen oxides (NOx) and volatile organic compounds (VOCs), are regulated because they form ozone in the atmosphere. Air quality is determined by pollutant emissions and emission characteristics, atmospheric chemistry, dispersion meteorology, and terrain. Air quality related values include effects on soil and water, such as sulfur and nitrogen deposition and lake acidification, and aesthetic effects, such as visibility.

In addition to USEPA regulations, air quality is also regulated by the Idaho Department of Environmental Quality, Air Quality Division. This agency develops state-specific regulations and issues air quality permits to emission sources.

Climate is the composite of generally prevailing weather conditions of a particular region through the year, averaged over a series of years. Climate change includes both historic and predicted climate shifts that are beyond normal weather variations.

3.21.1 Conditions within the Planning Area

Air Quality

Human Health. The USEPA classifies areas of the United States according to whether they meet the NAAQS. Areas that violate air quality standards are designated as nonattainment areas for the relevant criteria air pollutants. Areas that comply with air quality standards are designated as attainment areas for the relevant criteria air pollutants. Areas that have been reclassified from nonattainment to attainment are considered maintenance areas. The majority of the planning area is in attainment for all of the NAAQS.

The Air Quality Index is an USEPA health index that normalizes the various air pollutants in order to report one health level. The Air Quality Index is reported on a scale of 0 to 300, with 0 to 50 indicating good air quality; 51 to 100 indicating moderate air quality; 101 to 150 indicating air quality unhealthy for sensitive groups; 151 to 200 indicating unhealthy air quality; and 201 to 300 indicating very unhealthy air quality. Idaho Department of Environmental Quality publishes annual data summaries of Idaho's air quality that describe the Air Quality Index for all areas where air quality is monitored. The Air Quality Index is computed using the 24-hour average for $PM_{2.5}$ and the eight hour average for ozone.

Visibility and Regional Haze. There are no mandatory Class I areas on BLM-administered lands in the planning area; all designated wilderness areas on BLM-administered lands are Class II.

Climate Change

Climate change is defined by the Intergovernmental Panel on Climate Change (IPCC) as "a change in the state if the climate that can be identified (e.g., using statistical tests) by changes in the mean and/or the variability of its properties, and persist for an extended period, typically decades or longer. It refers to any change in climate over time whether due to natural variability to as a result of human activity (IPCC 2007)." Climate change is generally described on a global, national, or regional scale (state or multi-state), while greenhouse gas emissions in the United States are generally reported on a national or statewide scale.

Climate change is manifested in several ways, of which the most commonly analyzed are precipitation, temperature, and snowpack. Temperature and precipitation data for the planning area were retrieved form WestMap, a climate analysis and tracking tool that uses hydrologic basins as the mapping unit.

Greenhouse Gas Emissions

There are six greenhouse gases tracked by the IPCC, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydroflourocarbons (HFCs), perflourocarbons, and sulfur hexafluoride (SF_6; US Department of State 2010). Hydroflourocarbons, perflourocarbons, and sulfur hexafluoride are also known as high global warming potential due to their warming effectiveness (140 to 23,900 times the warming potential compared to carbon dioxide, depending on the compound) and their essential permanence in the atmosphere (remaining over 3,000 years; US Department of State 2010; USEPA 2012). Carbon dioxide, methane, and nitrous oxide have both natural and human generated sources, while high global warming potential gases are strictly human generated from various industrial processes. Greenhouse gas emissions are tracked as carbon dioxide equivalents (CO_2e) with one gram of carbon dioxide molecule counting as one and other molecules some multiple. Emissions are usually reported in teragrams or million metric tonnes, which are equivalent measures (USEPA 2010).

In the United States, USEPA tracks and reports greenhouse gas emissions; the Department of State also reports emissions.

Greenhouse gas emissions in the United States and in Idaho are similar in terms of percentages and in the main sources of the different gases. Idaho's greenhouse gases have remained about 1 percent of the US emissions from 1990 to 2010. Carbon dioxide is the primary greenhouse gas, comprising 83 to 85 percent of total emissions in the United States and in Idaho, with fossil fuel combustion for energy the primary sources of carbon dioxide. Methane production accounts for 7 to 10 percent of greenhouse gas emissions. In the United States, the primary source is natural gas systems, while in Idaho the primary source is enteric fermentation from domestic livestock. Nitrous oxide production accounts for 4 to 6 percent of the total emissions, slightly more in Idaho than in the United States with agricultural soil management the primary sources.

The high global warming potential gas comprises 1 to 3 percent of total emissions, more in Oregon than in the United States. The primary sources of hydroflourocarbons are the production of substitutes for ozone-depleting compounds, while aluminum production and semiconductor manufacturing are the primary sources of perflourocarbons and electricity transmission and distribution are the primary sources of sulfur hexafluoride.

The USEPA also estimates greenhouse gas sinks arising from land use, land use changes, and forestry. These sinks effectively reduce total greenhouse gas emissions by 15 to 16 percent nationally (USEPA 2010). The proportion in Idaho may be somewhat higher due to the productivity of Idaho forests.

3.21.2 Conditions on BLM-Administered and National Forest System Lands

Air Quality

Air quality conditions on BLM-administered and National Forest System lands are generally as described for the planning area.

3.21.3 Trends

Air Quality

Human Health. There are no clear long term trends in particulate emissions or the number of unhealthy days in the planning area; the lack of trends maybe due to a number of factors. There are no trends in the number of wildfires of acres burned or in the prescribed burning programs of BLM districts or National Forests; there are also no documented trends in the other particulate emitting sectors. The recent downturn in the economy may have resulted in temporary or permanent changes in the number or types of particulate emitters. The 2010 Clean Air status and trends network report indicates that 2009 was the lowest year on the 15 year recorded for several criteria pollutants, with increases in 2010 (USEPA 2012). That trend would be consistent with the recent downturn and slow recovery. In the western states as a whole, mean annual sulfur dioxide and particulate sulfur concentrations, total nitrate levels, total nitrogen deposition, and ozone concentrations have declined between 1996 and 2010 (Hand et al. 2011; USEPA 2012).

Climate Change

Certain precipitation, temperature, and snowfall trends within the planning area are similar, while others differ. The reasons for the observed differences are not clear. In the Oregon closed basins, precipitation has increased annually and in all four season, with the greatest seasonal increase in spring. Temperatures are also increasing, with greater increases in minimum temperature in winter and summer, consistent with observed national and global trends. Even temperatures are warming, above a threshold elevation that varies by mountain range; temperatures are still cold enough for winter precipitation to fall as snow. The combination of warmer temperatures and increased water vapor means that either more snow, snow with a higher moisture content, or some combination of these two factors will occur.

Projections

Karl et al. (2009) summarize the observed trends and projections in climate for the United States, with an updated report due in 2013. In the United States, average temperature has risen 2 degrees Fahrenheit (°F) in the last 50 years, compared to the 1961 to 1979 baseline, and is projected to increase by 2 to 3°F by the 2020s. Precipitation has increased by 5 percent in the last 50 years. Summers are expected to become drier over most of the United States, and winters are expected to become wetter. Spring is expected to become drier in the southern tier of the United States. The amount of rain falling in the heaviest storms has increased by 20 percent. This trend is expected to continue, with the greatest increase in the wettest places. In contrast, the amount of rain falling in the lightest storms has decreased, with the trend expected to continue. Extreme weather events such as heat waves and drought have become more frequent and more intense. Heat event frequency is expected to increase from 1 every 20 years to 1 every 2 to 3 years, with the number of days above 90°F increasing as well. Snowpack is expected to decrease, especially in the western United States. Cold season storm tracts should continue to shift northward, and the strongest winter storms are expected to become stronger and more frequent.

For the Pacific Northwest (Oregon, Washington, Idaho, and western Montana) the projections are somewhat different than for the United States as a whole (Mote and Salathe 2010). Most climate models tend to over predict precipitation as compared to observed means in the Pacific Northwest, so must be corrected in any projections. In the Pacific Northwest, temperatures are expected to increase by about 1 to 3 degrees by the 2020s, 1.5 to 5 by mid-century, and 3 to 10 by the end of the century. The greatest warming is expected in summer, and least is expected in spring. Annual precipitation is expected to change little, but summers should become drier and all other seasons possibly wetter. As with the United States as a whole and globally, the frequency of extreme precipitation events, heat waves, and droughts are expected to increase, and snowpack is expected to decrease.

Greenhouse Gas Emissions

Between 1990 and 2010, total us greenhouse gas emissions increased by 10.5 percent, averaging 0.5 percent per year (USEPA 2012). Carbon dioxide emissions, particularly those associated with energy production and use, are the dominant factor in United States trends. Emissions from fossil fuel combustion increased by 13.7 percent between 1990 and 2010, and increased by 3.5 percent between 2009 and 2010. Emissions tend to decline during economic slowdowns and increase during economic recoveries. Emissions in Idaho followed similar trends as the United States as a whole. The State Department (2010) projected greenhouse gas emissions for 2015 and 2020 based on data through 2007. Carbon dioxide emissions are expected to increase only slightly from 2007 levels, although the projected increase is considerably lower than the observed trend. All other emissions are expected to increase as well, with the least increase in methane and the most increase in the high global warming potential gases.

3.22 Social and Economic Conditions (Including Environmental Justice)

Due to the nature of social, economic, and environmental justice conditions, the social and economic analysis is based on a somewhat different area for analysis than is used for other

resources. Specifically, the Socioeconomic Study Area is made up of counties within the Idaho-Southwestern Montana sub-region that contain GRSG habitat and within which social and economic conditions might reasonably be expected to change based on alternative management actions. In addition, the BLM reviewed the need to include additional counties within a secondary study area that may not contain GRSG habitat but are closely linked from an economic and/or social perspective to counties that do contain habitat. This latter category includes what are sometimes called "service area" counties, or counties from which businesses operate that regularly provide critical economic services, such as recreational outfitting or support services for the livestock grazing sector, within the counties that contain habitat (METI Corp/Economic Insights of Colorado 2012). Including service area counties is important because a change in economic activity in a county containing habitat may result in changes in economic activity within service area counties as well.

The Primary Socioeconomic Study Area contains 27 counties in Idaho: Adams, Bear Lake, Bingham, Blaine, Bonneville, Butte, Camas, Caribou, Cassia, Clark, Custer, Elmore, Fremont, Gem, Gooding, Jefferson, Jerome, Lemhi, Lincoln, Madison, Minidoka, Oneida, Owyhee, Payette, Power, Twin Falls, and Washington; and two counties in Montana: Beaverhead and Madison. Each of these counties contains GRSG habitat. A secondary study area is included that contains an additional four counties in Idaho: Ada, Bannock, Boise, and Canyon; and two counties in Montana: Gallatin and Silver Bow. All of these counties are included in the secondary study area because of identified links to the primary area based on commuter patterns (OMB 2009; US Census Bureau 2012a).[3]

Table 3-59 shows the share of workers employed in a given county of the Primary and Secondary Socioeconomic Study Areas and that reside in the same county. It also shows other counties that provide labor to the selected primary or secondary study area.

Because any effects on the secondary study area would be indirect and sometimes focused on specific sectors, this chapter focuses primarily on the social and economic conditions of the Primary Socioeconomic Study Area and provides what is necessary to convey appropriate context for the impact analysis. The impact analysis in the next chapter will document potential effects on both the primary and the secondary study areas.

[3] Other counties considered but excluded from the secondary area were: (a) Valley County, Idaho, which has its main commuter tie to Ada County, Idaho, a secondary area county; (b) Franklin County, Idaho, which has its main commuter tie to Cache County, Utah, a county outside of the Socioeconomic Study Area; (c) Teton County, Idaho, which has its main commuter tie to Teton County, Montana, a county outside of the Socioeconomic Study Area; (d) Jefferson and Broadwater Counties, Montana, both of which have their main commuter ties to Lewis and Clark County, Montana, a county outside of the Socioeconomic Study Area; (e) Ravalli County, Montana, which has its main commuter tie outside the primary study area, is linked to the Salmon Challis National Forest or the Beaverhead Deerlodge National Forest, but is less likely to be affected by GRSG habitat management alternatives because GRSG habitat is concentrated in the southeast of Lemhi County, Idaho, at a distance from Ravalli County; (f) Deer Lodge and Park counties in Montana, whose main ties are to Silver Bow and Gallatin, counties of the secondary area; and (g) the counties of Missoula, Granite, and Powell (all in Montana) were not included in the secondary study are because the Beaverhead Deerlodge National Forest areas potentially affected by GRSG habitat management alternatives are located considerably to the south of those counties.

Table 3-59
Commuter Patterns in the Socioeconomic Study Area, 2010

Geographic Area of Employment	Live in Same Area of Employment	Other Counties Where Considerable Share of Workers Live
Primary Socioeconomic Study Area		
Adams County, Idaho	69.4%	Valley (7.3%), Idaho (6.7%), Washington (3.5%)
Bear Lake County, Idaho	77.2%	Ada (2.7%), Bannock (2.4%)
Bingham County, Idaho	64.3%	Bannock (10.2%), Bonneville (9.5%), Ada (2.0%)
Blaine County, Idaho	70.9%	Ada (6.7%), Lincoln (3.6%), Canyon (2.6%), Twin Falls (2.6%)
Bonneville County, Idaho	61.0%	Bingham (8.7%), Jefferson (8.3%), Bannock (6.3%), Madison (3.3%), Ada (2.5%)
Butte County, Idaho	21.5%	Bonneville (40.9%), Bingham (14.2%), Bannock (7.6%), Jefferson (6.5%), Custer (2.1%), Madison (2.0%)
Camas County, Idaho	58.5%	Gooding (10.9%), Blaine (8.3%), Twin Falls (5.7%), Jerome (3.0%), Ada (2.6%), Elmore (2.6%)
Caribou County, Idaho	56.8%	Bannock (11.4%), Bear Lake (9.8%), Ada (2.8%), Bonneville (2.8%), Franklin (2.8%)
Cassia County, Idaho	49.9%	Minidoka (23.8%), Twin Falls (6.8%), Ada (3.0%), Jerome (2.5%), Bonneville (2.1%)
Clark County, Idaho	51.4%	Bonneville (18.3%), Jefferson (18.3%), Bannock (2.2%), Madison (2.2%)
Custer County, Idaho	65.7%	Lemhi (13.6%), Butte (2.8%), Bonneville (2.7%), Ada (2.6%)
Elmore County, Idaho	69.7%	Ada (11.3%), Canyon (4.2%), Twin Falls (2.3%)
Fremont County, Idaho	70.5%	Madison (10.3%), Bonneville (6.2%), Jefferson (2.9%)
Gem County, Idaho	60.0%	Ada (15.4%), Canyon (10.7%), Payette (2.7%)
Gooding County, Idaho	48.5%	Twin Falls (17.3%), Jerome (10.7%), Lincoln (2.5%), Ada (2.3%)
Jefferson County, Idaho	51.6%	Bonneville (23.7%), Madison (8.4%), Bingham (2.4%)
Jerome County, Idaho	42.8%	Twin Falls (26.1%), Gooding (8.8%), Ada (3.3%), Cassia (2.4%), Minidoka (2.2%)
Lemhi County, Idaho	88.1%	Bonneville (2.1%)
Lincoln County, Idaho	49.7%	Twin Falls (14.2%), Gooding (12.4%), Jerome (7.0%), Minidoka (3.3%), Blaine (2.0%)
Madison County, Idaho	49.6%	Bonneville (12.9%), Fremont (12.2%), Jefferson (9.5%), Bannock (3.2%), Bingham (2.3%)
Minidoka County, Idaho	54.9%	Cassia (19.7%), Twin Falls (7.2%), Ada (2.3%), Bannock (2.2%)
Oneida County, Idaho	78.3%	Bannock (7.0%), Bonneville (2.5%), Box Elder, UT (2.1%)
Owyhee County, Idaho	42.2%	Canyon (31.5%), Ada (8.2%), Elmore (4.3%), Malheur, OR (2.4%),
Payette County, Idaho	51.3%	Canyon (14.4%), Malheur, OR (10.4%), Ada (8.0%), Washington (4.6%), Gem (3.4%)
Power County, Idaho	45.5%	Bannock (24.2%), Bingham (6.5%), Twin Falls (5.0%), Ada (2.7%)

Table 3-59
Commuter Patterns in the Socioeconomic Study Area, 2010

Geographic Area of Employment	Live in Same Area of Employment	Other Counties Where Considerable Share of Workers Live
Twin Falls County, Idaho	64.8%	Jerome (7.0%), Ada (5.2%), Gooding (2.6%), Cassia (2.6%), Canyon (2.5%), Minidoka (2.5%)
Washington County, Idaho	63.4%	Payette (6.3%), Ada (4.7%), Malheur, OR (4.5%), Canyon (4.5%)
Beaverhead County, Montana	62.1%	Lewis and Clark (6.9%), Yellowstone (6.7%), Silver Bow (5.7%), Gallatin (3.6%), Missoula (3.2%), Cascade (2.8%)
Madison County, Montana	67.8%	Gallatin (17.3%), Jefferson (3.0%)
Secondary Socioeconomic Study Area		
Ada County, Idaho	71.9%	Canyon (14.9%)
Bannock County, Idaho	68.6%	Bonneville (6.5%), Bingham (6.5%), Ada (2.8%), Twin Falls (2.2%)
Boise County, Idaho	77.0%	Ada (12.2%), Gem (3.4%), Canyon (2.5%)
Canyon County, Idaho	60.2%	Ada (24.7%), Owyhee (2.7%)
Gallatin County, MT	77.6%	Yellowstone (3.1%), Park (2.8%), Lewis and Clark (2.9%)
Silver Bow County, MT	64.8%	Missoula (5.8%), Deer Lodge (4.4%), Lewis and Clark (4.4%), Gallatin (3.5%), Jefferson (2.3%), Cascade (2.1%), Yellowstone (2.0%)

Source: US Census Bureau 2012a

Table 3-60 shows the planning documents that may be altered by the Idaho-Southwestern Montana sub-region planning process and the counties containing GRSG habitat within the area encompassed by those plans.

Table 3-60
BLM and Forest Service Plans, Management Units, and Counties within the Socioeconomic Study Area

Agency	Plan or Document	Management Unit	Counties
BLM	Birds of Prey National Conservation Area RMP (2008)	Four Rivers Field Office	Ada, Canyon, Elmore, Owyhee (Idaho)
	Bruneau RMP revision	Bruneau Field Office	Owyhee (Idaho)
	Challis RMP (1999)	Challis Field Office	Custer, Lemhi (Idaho)
	Craters of the Moon National Monument RMP (2006)	Shoshone Field Office	Blaine, Butte, Lincoln, Minidoka, Power (Idaho)
	Dillon RMP (2006)	Dillon Field Office	Beaverhead, Madison (Montana)
	Four Rivers RMP revision	Four Rivers Field Office	Ada, Adams, Boise, Canyon, Elmore, Gem, Payette, Valley, Washington (Idaho)

Table 3-60
BLM and Forest Service Plans, Management Units, and Counties within the Socioeconomic Study Area

Agency	Plan or Document	Management Unit	Counties
	Jarbidge RMP revision	Jarbidge Field Office	Elmore, Owyhee, Twin Falls (Idaho); Elko (Nevada)
	Lemhi RMP (1987)	Salmon Field Office	Lemhi (Idaho)
	Owyhee RMP (1999)	Owyhee Field Office	Owyhee (Idaho)
	Pocatello RMP revision	Pocatello Field Office	Bannock, Bear Lake, Bingham, Bonneville, Caribou, Cassia, Franklin, Oneida, Power (Idaho)
	Shoshone-Burley RMP revision	Shoshone Field Office, Burley Field Office	Blaine, Camas, Elmore, Jerome, Minidoka, Power (Idaho)
	Upper Snake RMP revision	Upper Snake Field Office	Blaine, Bingham, Bonneville, Butte, Clark, Fremont, Jefferson, Madison, Power, Teton (Idaho)
Forest Service	Beaverhead-Deerlodge National Forest Plan (2009)	Dillon, Wise River, Wisdom, Butte, Jefferson, Pintler, and Madison Ranger Districts	Granite, Powell, Jefferson, Deer Lodge, Silver Bow, Madison, Gallatin, Beaverhead (Montana)
	Boise National Forest Plan, as amended in 2010	Cascade, Lowman, Emmett, Mountain Home, and Idaho City Ranger Districts	Valley, Boise, Elmore, Gem, Ada (Idaho)
	Caribou National Forest Revised Forest Plan (2003)	Montpelier, Soda Springs, and Westside Ranger Districts	Caribou, Bonneville, Bannock, Bear Lake, Oneida, Franklin, Power (Idaho); Lincoln (Wyoming); Box Elder, Cache (Utah)
	Challis National Forest Plan (1987)	Challis, Lost River, Middle Fork, and Yankee Fork Ranger Districts	Custer, Lemhi, Butte, Valley, Blaine, Clark (Idaho)
	Curlew National Grassland Management Plan (2002)	Westside Ranger District	Oneida, Power (Idaho)
	Salmon National Forest Plan (1988)	Cobalt, Leadore, North Fork, and Salmon Ranger Districts	Idaho, Lemhi, Valley (Idaho)
	Sawtooth National Forest Revised Forest Plan (2003)	Fairfield, Ketchum, Minidoka, and Sawtooth National Recreation Area Ranger Districts	Blaine, Boise, Cassia, Camas, Custer, Elmore, Oneida, Power, Twin Falls (Idaho); Box Elder (Utah)
	Targhee National Forest Plan (1997)	Ashton/Island Park, Dubois, Palisades, and Teton Basin Ranger Districts	Bonneville, Butte, Clark, Fremont, Jefferson, Lemhi, Madison, Teton (Idaho); Lincoln, Teton (Wyoming)

Because of the nature of the Socioeconomic Study Area, the socioeconomic resources section has a slightly different format than the other resource analyses in the EIS. Rather than proceeding by field office and National Forest, the section provides information for the entire Socioeconomic Study Area except where the relevant information or data is tabulated for the specific geographic area of Field Office or National Forest. In addition, the analysis presents information about existing conditions and trends within the same section, because that is the common practice for analysis of social and economic conditions.

3.22.1 Indicators

Many of the indicators used to characterize social and economic conditions are quantitative, including population, demographics (e.g., age and gender breakouts), local industry (e.g., recreation and mineral development), employment, personal income, and presence of minority and low-income populations. Other indicators, especially for social conditions, are qualitative.

3.22.2 Existing Conditions and Trends

Social Conditions

Social conditions concern human communities, including towns, cities, and rural areas, and the custom, culture, and history of the area as it relates to human settlement, as well as current social values.

Population and Demographics

Table 3-61 shows current and historic populations in the Socioeconomic Study Area.

Table 3-61
Population Growth, 1990-2010

Geographic Area	1990	2000	2010	Percent Change (1990-2010)	Population as Percentage of Study Area Total (2010)
Adams County, Idaho	3,254	3,476	3,976	22.2	0.6
Bear Lake County, Idaho	6,084	6,411	5,986	-1.6	0.9
Bingham County, Idaho	37,583	41,735	45,607	21.4	6.6
Blaine County, Idaho	13,552	18,991	21,376	57.7	3.1
Bonneville County, Idaho	72,207	82,522	104,234	44.4	15.2
Butte County, Idaho	2,918	2,899	2,891	-0.9	0.4
Camas County, Idaho	727	991	1,117	53.6	0.2
Caribou County, Idaho	6,963	7,304	6,963	0.0	1.0
Cassia County, Idaho	19,532	21,416	22,952	17.5	3.3
Clark County, Idaho	762	1,022	982	28.9	0.1
Custer County, Idaho	4,133	4,342	4,368	5.7	0.6
Elmore County, Idaho	21,205	29,130	27,038	27.5	3.9
Fremont County, Idaho	10,937	11,819	13,242	21.1	1.9
Gem County, Idaho	11,844	15,181	16,719	41.2	2.4
Gooding County, Idaho	11,633	14,155	15,464	32.9	2.3
Jefferson County, Idaho	16,543	19,155	26,140	58.0	3.8

Table 3-61
Population Growth, 1990-2010

Geographic Area	1990	2000	2010	Percent Change (1990-2010)	Population as Percentage of Study Area Total (2010)
Jerome County, Idaho	15,138	18,342	22,374	47.8	3.3
Lemhi County, Idaho	6,899	7,806	7,936	15.0	1.2
Lincoln County, Idaho	3,308	4,044	5,208	57.4	0.8
Madison County, Idaho	23,674	27,467	37,536	58.6	5.5
Minidoka County, Idaho	19,361	20,174	20,069	3.7	2.9
Oneida County, Idaho	3,492	4,125	4,286	22.7	0.6
Owyhee County, Idaho	8,392	10,644	11,526	37.3	1.7
Payette County, Idaho	16,434	20,578	22,623	37.7	3.3
Power County, Idaho	7,086	7,538	7,817	10.3	1.1
Twin Falls County, Idaho	53,580	64,284	77,230	44.1	11.2
Washington County, Idaho	8,550	9,977	10,198	19.3	1.5
Beaverhead County, Montana	8,424	9,202	9,246	9.8	1.3
Madison County, Montana	5,989	6,851	7,691	28.4	1.1
Socioeconomic Study Area	420,204	491,581	562,795	33.9	100.0
Idaho	1,006,734	1,293,953	1,567,582	55.7	-
Montana	799,065	902,195	989,415	23.8	-
United States	248,790,925	281,421,906	308,745,538	24.1	-

Sources: US Census Bureau 1990, 2000, 2010a

Since 1990, the population in Idaho has increased by 55.7 percent, more than doubling the United States population growth rate (24.1 percent) during the same time period. In contrast, Montana's population has grown 23.8 percent, closer to the rate of the United States as a whole. Both states experienced a higher percentage of population growth from 1990 to 2000 than they did from 2000 to 2010. The Socioeconomic Study Area population growth also outpaced the United States, growing 36 percent between 1990 and 2010.

The "Communities of Place" section below provides more information about the character and history of the counties in the Socioeconomic Study Area. **Table 3-62** shows age and gender characteristics of the population in each county of the Socioeconomic Study Area.

The Socioeconomic Study Area, Idaho, Montana, and the United States all generally follow the same trend in gender, with approximately half of the population being female. Of the counties within the Socioeconomic Study Area, Clark County, Idaho (44.7 percent) and Custer County, Idaho (46.9 percent) have the lowest percentages of women. And only one county, Madison County, Idaho (51.6 percent) has a higher percentage of women than the nation.

Table 3-62
Demographic Characteristics, Share in Total Population (Percent), 2010

Geographic Area	Women	20 to 64 Years of Age	Under 20 Years of Age	65 Years of Age or Older
Adams County, Idaho	48.7	58.2	21.0	20.8
Bear Lake County, Idaho	50.4	52.1	29.5	18.4
Bingham County, Idaho	49.8	52.8	35.8	11.4
Blaine County, Idaho	49.1	62.4	26.0	11.6
Bonneville County, Idaho	50.1	55.2	33.9	10.9
Butte County, Idaho	48.6	52.5	30.0	17.5
Camas County, Idaho	47.9	61.1	23.0	15.9
Caribou County, Idaho	49.6	53.3	30.9	15.8
Cassia County, Idaho	49.4	51.1	36.0	12.9
Clark County, Idaho	44.7	53.7	33.2	13.1
Custer County, Idaho	46.9	60.1	21.2	18.7
Elmore County, Idaho	48.3	58.9	31.1	10.0
Fremont County, Idaho	47.4	52.2	33.9	13.9
Gem County, Idaho	50.5	54.4	27.0	18.6
Gooding County, Idaho	48.3	52.6	32.3	15.1
Jefferson County, Idaho	49.8	52.2	38.2	9.6
Jerome County, Idaho	48.9	54.7	34.1	11.2
Lemhi County, Idaho	49	56.1	21.7	22.2
Lincoln County, Idaho	48.3	53.9	35.1	11.0
Madison County, Idaho	51.6	59.1	35.3	5.6
Minidoka County, Idaho	49.4	53.0	32.2	14.8
Oneida County, Idaho	48.9	51.1	32.2	16.7
Owyhee County, Idaho	48.9	54.1	31.9	14.0
Payette County, Idaho	50.5	53.3	31.4	15.3
Power County, Idaho	48.5	53.9	34.0	12.1
Twin Falls County, Idaho	50.6	55.7	30.4	13.9
Washington County, Idaho	50.8	52.4	27.1	20.5
Beaverhead County, Montana	48.8	58.9	24.2	16.9
Madison County, Montana	48	59.6	19.4	21.0
Socioeconomic Study Area	49.5	56.7	30.8	12.5
Idaho	49.9	57.2	30.4	12.4
Montana	49.8	59.9	25.3	14.8
United States	50.8	60.1	26.9	13.0

Source: US Census Bureau 2010b

Idaho and the Socioeconomic Study Area have a younger population than the nation: each having 57 percent of the population between 20 and 64 years of age compared to 60 percent of the national population, and more than 30 percent of the population less than 20 years of age compared to only 27 percent of the national population. In contrast, Montana has a slightly older population than the nation, having nearly 15 percent of the population being 65 years or older compared to only 13 percent of the national population. Of the counties within the Socioeconomic Study Area, Bingham County, Idaho; Cassia County, Idaho;

Jefferson County, Idaho; Jerome County, Idaho; Lincoln County, Idaho; Madison County, Idaho; and Power County, Idaho, have the highest percentages of residents under the age of 20, all at least 7 percentage points higher than the national average (60.1 percent). In contrast, Adams County, Idaho; Lemhi County, Idaho; Washington County, Idaho; and Madison County, Montana, have the highest percentages of residents over the age of 65, all at least 7 percentage points higher than the national average (13 percent).

Interest Groups and Communities of Place

There is a range of interest groups in the Socioeconomic Study Area, including groups that focus advocacy on resource conservation and others that focus advocacy on resource uses such as livestock grazing. There are also groups that represent coalitions of interest groups. A list of interest groups that have requested to receive a copy of the LUPA/DEIS are provided in Chapter 5. The types of interest groups identified within the Socioeconomic Study Area include the following: federal agencies, state agencies, county agencies, local agencies, congressional representatives, local representatives, academic institutions, civic organizations, local chambers of commerce, environmental groups, land conservation groups, outdoors groups, local school boards, farm associations, Native American groups and Tribal Governments, and various business groups. Specific types of business interest groups identified include the following: real estate, tourism, mineral extraction, farms/ranches, textile manufacturers, livestock growers, and news media.

The Socioeconomic Study Area includes various communities of people who are bound together because of where they reside, work, visit, or otherwise spend a continuous portion of their time. Stakeholder groups currently benefitting from BLM-administered and National Forest System lands within the Socioeconomic Study Area include those associated with agriculture and livestock production; forest products; mining; travel, tourism, and recreation; and local residents (see, for example, BLM 2006a and 2008; Forest Service 2003).

A common perception is that there is a dichotomy of values and attitudes between stakeholder groups in the Socioeconomic Study Area between individuals or groups who feel that resource conservation and nonconsumptive uses of BLM-administered lands are more important than benefits derived from consumptive type uses, such as livestock grazing, timber harvesting, and mining. At a more nuanced scale, however, personal attitudes, interests, and values are quite complex, and these groupings are not mutually exclusive. The high value that residents and visitors place on small town character, private property rights, low population density, scenery and landscape, outdoors and open space, the rural lifestyle, fishing, and hunting are commonly held throughout the Socioeconomic Study Area (BLM 2006a and 2008; Forest Service 2003). These values are commonly expressed within individual county land use plans, and were also expressed by attendees at both scoping meetings and the Economic Strategies Workshop that BLM and Forest Service held in Twin Falls, Idaho, in June 2012.

A unifying theme expressed by residents of the Socioeconomic Study Area – including in previous planning processes – is the concern for the preservation of rural characteristics and values. For example, a shift toward larger, more mechanized agricultural operations, as well as the increasing diversification of local economies, have challenged traditional ways of life in

many communities. These changes are evident in the declining number of mid-sized farms and the number of workers employed in agriculture and agriculture-based industries (Blaine County 1994; Power County 2009; Headwaters Economics 2012; US Department of Commerce 2012a). Nevertheless, farming and ranching remain important parts of the economy, society, and culture across the Socioeconomic Study Area.

In some areas, particularly those with scenic and recreational amenities, farmlands and ranches are being sold and used for recreation purposes or subdivided for homesites. This phenomenon is part of a larger trend in which many rural communities in the western United States have witnessed "migration turnaround," a reversal of the rural-to-urban migration that characterized much of the United States prior to the 1970s. Many rural areas are now experiencing a significant increase in population after decades of stability or decline (BLM 2006a). In response to recent commercial and industrial expansion and the associated demand for affordable, diversified housing, many counties are encouraging infill development and other strategies to prevent the loss of agricultural lands and maintain the rural character of their communities (Caribou County 2006).

Despite population increases across most of the study area, some rural areas continue to lose population (Idaho Department of Labor 2011). This is due, in part, to the out-migration of young people and aging of the population (Idaho Commerce & Labor 2005). In contrast to communities where in-migration is occurring, residents of these communities may be more concerned about the economic survival of their communities. Multiple use management of and access to BLM-administered lands, which comprise a large portion of lands in many counties, are cited as paramount concerns in these areas (BLM 2006a). Residents expressed some similar themes during public scoping and the June 2012 Economic Strategies Workshop for this planning effort (BLM and Forest Service 2012; BLM 2012b). Comments received from these outreach efforts came from nonprofit or citizen groups; local, state and federal agencies; the commercial sector and members of the general public. These comments strongly supported maintaining or expanding access to BLM-administered lands for grazing and recreational purposes. Many expressed concern that placing additional constraints on these activities might create economic hardship within their communities and alter traditional cultural values and lifestyles. Additionally, some argued that constraints on livestock grazing would exacerbate existing trends of conversion of ranch lands to agricultural and residential uses, perhaps with the unintended consequence of decreasing open space and wildlife habitat. Other issues of concerns cited by residents include the management of invasive species, fire and fuels, and whether BLM-administered lands should be opened to wind energy development.

Economic activity and land use patterns in the Socioeconomic Study Area have been strongly influenced by the region's dramatic geography. Agriculture, timber harvesting, and mining have historically defined the character and lifestyle of much of the Study Area. Within the past two decades, however, increasing urbanization and the growth of service sector industries, including retail trade, local government, and health care, have been powerful agents of change on the landscape and local cultures (Headwaters Economics 2012; US Department of Commerce 2012a).

The rolling hills and valleys of the Northern Basin and Range, which stretches across much of southern Idaho, provide ample opportunities for livestock grazing with occasional croplands, and contains all or substantial parts of Caribou, Cassia, Oneida, Owyhee, Power, and Twin Falls Counties (McGrath et al. 2002). The region is still heavily dependent on agriculture and agriculture-based industries, despite stagnant or declining employment in these sectors (Headwaters Economics 2012; US Department of Commerce 2012a). Twin Falls is the most populous city in the Socioeconomic Study Area and the seventh largest city in the State of Idaho, and serves as the major commercial and industrial hub of south-central Idaho's Magic Valley region, so named due to the transformation of the basin into productive farmland through the construction of extensive irrigation systems in the early 1900s. Twin Falls is also the principal city of the Twin Falls, Idaho Micropolitan Statistical Area, which includes Jerome and Twin Falls Counties.

The broad Snake River Plain that arcs just north of Idaho's Basin and Range region contains all or substantial parts of Ada, Adams, Bingham, Canyon, Elmore, Gem, Gooding, Jefferson, Jerome, Lincoln, Madison, Minidoka, Payette, and Washington Counties. Potatoes, sugar beets, alfalfa, grains, and vegetables are grown in areas where irrigation and soil depth are suitable for crop production (McGrath et al. 2002). Other prominent land uses include livestock grazing, cattle feedlots, and dairy operations. The barren, lava-field landscape of Craters of the Moon National Monument is a popular visitor attraction showcasing the region's unique geologic history. Upward trends in population growth, fueled by expansion in the retail trade and small manufacturing sectors over the past decade, have left some school districts and governmental service struggling to provide maintain adequate levels of service (Jefferson County 2005).

Butte, Camas, Clark, Custer, and Lemhi Counties are located in Idaho's Rocky Mountain region, which rises sharply from the northern edge of the Snake River Plain. Here, timber harvesting, grazing, and recreation are the predominant land uses (McGrath et al. 2002). The counties of Bonneville, Butte, Caribou, and Fremont in Idaho and Beaverhead, and Madison in southwestern Montana also offer abundant opportunities for outdoor recreation. Popular activities include fishing, hunting, hiking, horseback riding, off-highway vehicle use, skiing, and sightseeing, which attract residents, as well as visitors from all areas of the United States (BLM, 2005b, 2008). In many communities, growth in tourism and recreation industries has largely outpaced historical land uses. The in-migration of residents who purchase smaller ranches or farms, but do not depend on the economic return from these activities as their primary source of income, has created conflict with long-time rural residents (BLM 2008).

Bear Lake County, which occupies the far southeastern corner of Idaho and the Wasatch and Uinta Range, has remained largely rural but serves also as an important destination for tourists and recreationists.

County Land Use Plans

BLM-administered, National Forest System, and other federal lands in the Socioeconomic Study Area are intermingled with state and private lands. County governments have land use planning responsibility for the private lands located within their jurisdictions. County-level LUPs (also referred to as Comprehensive plans or Growth Policies) were identified for 26 of

the 29 counties within the Socioeconomic Study Area (Adams County, 2006; Bingham County, 2005; Blaine County, 1994; Bonneville County, 2004; Camas County, 2006; Caribou County, 2006; Cassia County, 2006; Clark County, 2010; Custer County, 2006; Elmore County, 2004; Fremont County, 2008; Gem County, 2010; Gooding County, 2010; Jefferson County, 2005; Jerome County, 2006; Lemhi County, 2007; Lincoln County, 2008; Madison County, 2008; Minidoka County, 2001; Owyhee County, 2010; Payette County, 2006; Power County, 2009; Twin Falls County, 2008; Washington County, 2010; Beaverhead County, 2009; Madison County, 2006). Of the counties with identified LUPs, all had some form of economic development component, such as promotion of specific industrial sectors and natural resource use.

Economic Conditions

Economic analysis is concerned with the production, distribution, and consumption of goods and services. This section provides a summary of economic information, including trends and current conditions. It also identifies and describes major economic sectors in the Socioeconomic Study Area that can be affected by management actions. Most likely affected would be those economic activities that rely or could rely on BLM-administered lands, such as recreation and livestock grazing.

Economic Sectors, Employment, and Personal Income

The distribution of employment and income by industry sector within the Socioeconomic Study Area is summarized in **Table 3-63** below. See **Appendix Z** for equivalent data by county.

Table 3-63
Employment by Sector within the Socioeconomic Study Area

	Absolute			Percentage of Total		Percent Change 2001-2010
Socioeconomic Study Area	**2001**	**2010**	**Change 2001-2010**	**2001**	**2010**	
Total Employment (number of jobs)	**281,346**	**309,620**	**28,274**	**100.00**	**100.00**	**10.05**
Non-services related	**72,614**	**67,772**	**-4,842**	**25.81**	**21.89**	**-6.67**
Farm	28,028	25,639	-2,389	9.96	8.28	-8.52
Forestry, fishing, & related activities	2,613	2,938	325	0.93	0.95	12.44
Mining (including oil and gas)	777	960	183	0.28	0.31	23.55
Construction	19,432	18,913	-519	6.91	6.11	-2.67
Manufacturing	21,764	19,322	-2,442	7.74	6.24	-11.22
Services related	**142,525**	**171,386**	**28,861**	**50.66**	**55.35**	**20.25**
Utilities	374	762	388	0.13	0.25	103.74
Wholesale trade	11,080	11,115	35	3.94	3.59	0.32
Retail trade	31,535	32,653	1,118	11.21	10.55	3.55
Transportation and warehousing	5,787	9,361	3,574	2.06	3.02	61.76

Table 3-63
Employment by Sector within the Socioeconomic Study Area

Socioeconomic Study Area	Absolute			Percentage of Total		Percent Change 2001-2010
	2001	2010	Change 2001-2010	2001	2010	
Information	2,973	3,761	788	1.06	1.21	26.51
Finance and insurance	7,325	10,547	3,222	2.60	3.41	43.99
Real estate and rental and leasing	7,906	12,986	5,080	2.81	4.19	64.25
Professional and technical services[1]	16,507	19,380	2,873	5.87	6.26	17.40
Management of companies and enterprises	480	361	-119	0.17	0.12	-24.79
Administrative and waste services	10,062	9,350	-712	3.58	3.02	-7.08
Educational services	1,273	1,792	519	0.45	0.58	40.77
Health care and social assistance	14,042	19,239	5,197	4.99	6.21	37.01
Arts, entertainment, and recreation	3,593	5,247	1,654	1.28	1.69	46.03
Accommodation and food services	16,691	18,404	1,713	5.93	5.94	10.26
Other services, except public administration	12,897	16,428	3,531	4.58	5.31	27.38
Government	**42,027**	**43,854**	**1,827**	**14.94**	**14.16**	**4.35**
Federal	10,984	10,670	-314	3.90	3.45	-2.86
State	3,484	3,425	-59	1.24	1.11	-1.69
Local	27,559	29,759	2,200	9.80	8.6	7.98

Sources: US Department of Commerce 2012a

[1]Professional and technical services activities require a high degree of expertise and training. Example activities include: legal advice and representation; accounting, bookkeeping, and payroll services; architectural, engineering, and specialized design services; computer services; consulting services; research services; advertising services; photographic services; translation and interpretation services; and veterinary services.

Table 3-64
Labor Income by Sector within the Socioeconomic Study Area (2010 dollars)

Socioeconomic Study Area	Absolute (Millions)			Percentage of Total[1]		Percent Change 2001-2010
	2001	2010	Change 2001-2010	2001	2010	
Total Labor Earnings[2]	**10,272**	**$11,793**	**$1,521**	**100.00**	**100.00**	**14.81**
Non-services related	**$2,990**	**$2,947**	**-$43**	**29.11**	**24.99**	**-1.44**
Farm	$1,081	$1,215	$134	10.52	10.30	12.40
Forestry, fishing, & related activities	$71	$96	$25	0.69	0.81	35.21
Mining (including oil and gas)	$33	$38	$5	0.32	0.32	15.15
Construction	$851	$693	-$158	8.28	5.88	-18.57
Manufacturing	$954	$905	-$49	9.29	7.67	-5.14
Services related	**$4,612**	**$5,712**	**$1,100**	**44.90**	**48.44**	**23.85**
Utilities	$24	$70	$46	0.23	0.59	191.67
Wholesale trade	$467	$602	$135	4.55	5.10	28.91
Retail trade	$809	$806	-$3	7.88	6.83	-0.37
Transportation and warehousing	$267	$422	$155	2.60	3.58	58.05
Information	$107	$140	$33	1.04	1.19	30.84
Finance and insurance	$224	$290	$66	2.18	2.46	29.46
Real estate and rental and leasing	$138	$159	$21	1.34	1.35	15.22
Professional and technical services	$1,070	$1,293	$223	10.42	10.96	20.84
Management of companies and enterprises	$34	$17	-$17	0.33	0.14	-50.00
Administrative and waste services	$178	$202	$24	1.73	1.71	13.48
Educational services	$22	$28	$6	0.21	0.24	27.27
Health care and social assistance	$557	$827	$270	5.42	7.01	48.47
Arts, entertainment, and recreation	$120	$98	-$22	1.17	0.83	-18.33
Accommodation and food services	$270	$330	$60	2.63	2.80	22.22
Other services, except public administration	$325	$428	$103	3.16	3.63	31.69
Government	**$1,924**	**$2,208**	**$284**	**18.73**	**18.72**	**14.76**
Federal	$684	$841	$157	6.66	7.13	22.95
State	$172	$179	$7	1.67	1.52	4.07
Local	$1,068	$1,188	$120	10.40	10.07	11.24
Non-labor Income[3]	**$5,939**	**$8,250**	**$2,311**	**41.71**	**47.14**	**38.91**
Dividends, interest, and rent	$2,719	$3,325	$606	19.10	19.00	22.29

Table 3-64
Labor Income by Sector within the Socioeconomic Study Area (2010 dollars)

	Absolute (Millions)			Percentage of Total[1]		Percent Change 2001-2010
Socioeconomic Study Area	**2001**	**2010**	**Change 2001-2010**	**2001**	**2010**	
Personal current transfer receipts[4]	$2,112	$3,516	$1,404	14.83	20.09	66.48
Contributions to government social insurance[5]	$1,108	$1,409	$301	7.78	8.05	27.17
Total Personal Income[6]	**$14,239**	**$17,501**	**$3,262**	**100.00**	**100.00**	**22.91**

Sources: US Department of Commerce, 2012a. Values reported in 2001 dollars were converted to 2010 dollars using the Consumer Price Index (Bureau of Labor Statistics [BLS] 2012a).
[1]Industry earnings are reported as a share of total labor earnings. Dividends, interest, and rent; personal current transfer receipts; and contributions to government social insurance are reported as a share of personal income.
[2]Total labor earnings are reported by place of work.
[3]Non-labor income includes dividends, interest, and rent and personal current transfer receipts.
[4]"Personal current transfer receipts" are benefits received by persons for which no current services are performed. They are payments by government and business to individuals and institutions, such as retirement and disability insurance benefits.
[5]"Contributions for government social insurance" consists of payments by employers, employees, the self-employed, and other individuals who participate in the following government programs: Old-age, Survivors, and Disability Insurance; Medicare; unemployment insurance; railroad retirement; pension benefit guarantee; veterans' life insurance; publicly-administered workers' compensation; military medical insurance; and temporary disability insurance (US Department of Commerce 2012b).
[6]Total personal income is reported by place of residence.

With respect to employment by industry sector, the services-related sector accounted for the largest share (55.4 percent) of total employment in the Socioeconomic Study Area in 2010. This reflects a growth rate of 20.3 percent from 2001 (compared to an overall employment growth rate for all sectors of 10.1 percent from 2001). Compared to the services related sector, the non-services related sector and the government sector represented lower levels of employment, 21.9 percent and 14.2 percent, respectively. At the industry level, retail trade (10.6 percent) accounted for the largest share of employment of all industries in the Socioeconomic Study Area in 2010, followed by local government (9.6 percent), professional and technical services (6.3 percent), and health care and social assistance (6.2 percent). Although mining contributed a relatively small share of total employment within the study area in 2010, a notable proportion of total employment within Caribou County (21 percent) and Custerlark County (32 percent) came from the mining industry, according to estimates from Headwaters Economics (2013). The industries that demonstrated the largest growth between 2001 and 2010 were utilities, with an increase of 103.7 percent; real estate rental and leasing, with an increase of 64.3 percent; and transportation and warehousing, with an increase of 61.8 percent. The industries with greatest decrease in employment levels from 2001 to 2010 were management of companies and enterprises (decrease of 24.8 percent), manufacturing (decrease of 11.2 percent), and farming (decrease of 8.5 percent).

Appendix Z provides county-level employment figures. The greatest difference in industry sector proportion between counties in 2010 was in the professional and technical services industry. Professional and technical services contributed a low 1.5 percent of total employment in Power County, Idaho, but a much larger percentage in Butte County, Idaho (83.8 percent). Other industries also showed large variation in shares of employment across counties, including the farm industry (from 1.5 percent in Blaine County, Idaho, to 25.6 percent in Gooding County, Idaho) and the manufacturing industry (from 0.6 percent in Butte County, Idaho, to 24.8 percent in Power County, Idaho). Other counties identified as having relatively high employment shares in the farming industry include Lincoln County, Idaho (22.5 percent); Oneida County, Idaho (22.6 percent); and Owyhee County, Idaho (25.3 percent). The federal government industry also showed a high level of variation in shares across counties (from 1 percent in Blaine County, Idaho, to 35.5 percent in Elmore County, Idaho). However, in 24 of the 29 counties included in the Socioeconomic Study Area, the federal government contributed less than 5 percent of employment. Recreation-related economic activity, including the arts, entertainment, and recreation; retail trade; and accommodation and food services industries, varied across the counties (by 8.4 percentage points, 12.7 percentage points, and 16.7 percentage points, respectively). Note that these sectors are influenced not only by recreation but also by many other industries. See **Appendix Z** for individual county detail.

With respect to labor earnings, the services-related sector accounted for the largest share (48.4 percent) of labor earnings in the Socioeconomic Study Area in 2010, followed by the non-services related sector (25.0 percent) and the government sector (18.7 percent). In 2010, the individual industries that generated the largest shares of labor earnings included the professional and technical services industry (11.0 percent), farming (10.3 percent) and the local government industry (10.1 percent). Labor earnings associated with utilities almost tripled during the 2001-2010 period. Other sectors showing strong trends of growth since 2001 include transportation and warehousing (58.1 percent) and health care and social assistance (48.5 percent). During the same time period, management of companies and enterprises, construction and recreation experienced the largest decline in earnings of all the industry sectors (declines of 50.0 percent, 18.6 percent and 18.3 percent, respectively).

Appendix Z provides county-level labor earnings figures. The county-by-county patterns are similar to those for employment, with relatively more variation in income from professional and technical services than from other industries; professional and technical services contribute the most to earnings in Butte County, Idaho at 93.5 percent. At the other end of the range, professional and technical services accounts for only 1.2 percent of earnings in Elmore County, Idaho and only 1.3 percent in Power County, Idaho. Of the counties for which data are provided (20 of 29), only two earn more than 10 percent of income from the professional and technical services industry. Farm income varied from a low share of -2.1 percent of total earnings in Adams County, Idaho to highs of 47.3 percent in Gooding County, Idaho, followed by 46.9 percent in Owyhee County, Idaho. Manufacturing income varied in proportion across the counties, from 0.2 percent of earnings in Butte County, Idaho to 32.9 percent in Power County, Idaho. Earnings from the mining sector are left undisclosed in 15 of the 29 counties included in the Socioeconomic Study Area due to confidentiality requirements. Furthermore, mining sector earnings figures are not provided

for nine of the 29 counties because the earnings amounted to less than $50,000 in those counties. For the counties for which data are available, earnings from mining range from 0.1 percent in Twin Falls County, Idaho to a share of 12.7 percent of total earnings in Caribou County, Idaho. Accommodation and food services contributes 0.1 percent of total earnings in Butte County, Idaho and up to 16.6 percent in Madison County, Montana. The other recreation and travel-related industries (i.e., retail trade and arts, entertainment, and recreation) contribute between 0.1 percent (arts, entertainment, and recreation in Elmore County, Idaho) and 16.2 percent (retail trade in Adams County, Idaho).

In addition to industry shares of labor earnings, another metric – residence adjustment – provides information about the economic conditions in the Socioeconomic Study Area. Residence adjustment represents the net inflow of the earnings of inter-area commuters. A positive number indicates that, on balance, area residents commute outside to find jobs; a negative number indicates that, on balance, people from outside the area commute in to find jobs. Jefferson County, Idaho's residence adjustment represented 27.8 percent of its total personal income, the highest share of all counties in the Socioeconomic Study Area. Gem County, Idaho had the second highest share (25.8 percent). Residence adjustment accounted for the lowest share of total personal income in Butte County, Idaho (-701.3 percent), followed by Caribou County, Idaho (-22.1 percent). See **Appendix Z** for individual county detail.

Appendix Z provides employment and earnings data for Ada, Bannock, Boise, and Canyon Counties in Idaho, and Gallatin and Silver Bow Counties in Montana, which constitute the secondary study area as discussed in the introduction. In 2010, overall employment in the six-county secondary study area (472,046) was greater than overall employment levels in the 29-county Primary Socioeconomic Study Area (309,753). Earnings (by place of work) in the six-county secondary study area were $19,896, considerably larger than earnings in the Primary Socioeconomic Study Area ($11,793). The impact analysis in the next chapter will document potential effects on the economy in the secondary study area, as well as for the 29 counties within the Primary Socioeconomic Study Area.

Table 3-65 presents the unemployment rates for each county in the Socioeconomic Study Area, as well as the rates for the counties aggregated and the States of Idaho and Montana. The data show that unemployment in the Socioeconomic Study Area matches or approximates that of the state for each of the years listed. At the county level, in 2013, the unemployment rates in the Socioeconomic Study Area ranged from a low of 3.8 percent in Oneida County to a high of 12.8 percent in Adams County.

Recreation

An estimated 15.3 percent of the employment in the primary study area is related to travel and tourism (Headwaters Economics 2012). This estimate is based on data from the US Census Bureau County Business Patterns and includes industrial sectors that, at least in part, provide goods and services to visitors, the local economy, and the local population. This estimate includes both full- and part-time jobs. Most of these jobs are concentrated in the "accommodation and food services" and "retail trade" sectors. Jobs related to travel and

Table 3-65
Annual Unemployment, 2007 to 2013

Geographic Area	2007	2008	2009	2010	2011	2012	2013
Adams County, Idaho	5.5%	10.1%	14.1%	16.4%	17.0%	14.3%	12.8%
Bear Lake County, Idaho	2.3%	3.2%	5.0%	6.2%	5.3%	4.8%	4.5%
Bingham County, Idaho	2.6%	3.8%	5.6%	6.9%	7.0%	6.3%	5.9%
Blaine County, Idaho	2.3%	3.7%	7.1%	8.8%	8.3%	6.7%	5.6%
Bonneville County, Idaho	2.1%	3.4%	5.4%	6.6%	6.8%	6.2%	5.4%
Butte County, Idaho	2.4%	4.1%	4.8%	6.2%	7.0%	7.4%	6.7%
Camas County, Idaho	2.4%	4.3%	9.0%	11.2%	10.5%	9.3%	6.0%
Caribou County, Idaho	2.8%	3.5%	5.7%	7.5%	7.3%	6.0%	5.3%
Cassia County, Idaho	3.1%	3.7%	5.1%	6.7%	6.5%	5.7%	5.3%
Clark County, Idaho	2.2%	3.3%	5.1%	8.4%	7.8%	6.6%	5.2%
Custer County, Idaho	3.3%	4.4%	5.2%	7.1%	7.1%	7.4%	7.8%
Elmore County, Idaho	3.8%	5.4%	7.2%	8.5%	8.3%	7.7%	7.0%
Fremont County, Idaho	3.2%	4.7%	7.6%	9.1%	7.9%	6.7%	5.9%
Gem County, Idaho	3.7%	6.7%	10.0%	11.0%	11.0%	9.5%	7.7%
Gooding County, Idaho	2.1%	3.3%	5.3%	6.8%	6.3%	5.3%	4.6%
Jefferson County, Idaho	2.4%	3.6%	6.0%	7.2%	7.0%	6.2%	5.2%
Jerome County, Idaho	2.8%	4.0%	6.0%	8.1%	7.6%	6.7%	5.5%
Lemhi County, Idaho	4.4%	6.5%	7.7%	9.9%	10.4%	10.0%	9.8%
Lincoln County, Idaho	3.3%	5.4%	10.2%	12.9%	12.0%	9.4%	7.9%
Madison County, Idaho	2.1%	3.3%	5.1%	5.8%	6.4%	5.1%	4.6%
Minidoka County, Idaho	3.8%	4.3%	5.7%	7.4%	7.0%	6.2%	5.7%
Oneida County, Idaho	1.7%	3.3%	5.3%	5.0%	5.0%	4.3%	3.8%

Table 3-65
Annual Unemployment, 2007 to 2013

Geographic Area	2007	2008	2009	2010	2011	2012	2013
Owyhee County, Idaho	1.9%	3.0%	3.8%	4.8%	4.9%	5.1%	4.6%
Payette County, Idaho	4.1%	5.6%	8.4%	9.2%	9.1%	8.2%	7.2%
Power County, Idaho	3.9%	5.1%	6.9%	9.2%	8.9%	8.3%	7.0%
Twin Falls County, Idaho	2.7%	3.8%	5.9%	8.0%	7.7%	6.8%	5.7%
Washington County, Idaho	4.1%	5.5%	8.4%	10.0%	9.7%	8.5%	7.6%
Beaverhead County, Montana	2.7%	3.6%	4.4%	5.3%	5.5%	5.1%	4.5%
Madison County, Montana	2.8%	3.8%	5.6%	6.9%	6.6%	6.0%	5.3%
Socioeconomic Study Area	2.7%	4.0%	6.1%	7.6%	7.5%	6.6%	5.8%
Idaho	3.0%	4.8%	7.4%	8.7%	8.4%	7.3%	6.2%
Montana	3.4%	4.5%	6.0%	6.7%	6.5%	6.0%	5.6%

Source: BLS 2014b

tourism are more likely to be seasonal or part-time and are more likely to have lower average annual earnings than jobs in non-travel and tourism-related sectors. The average annual wage per travel or tourism related job is roughly half that of jobs not related to travel and tourism. In 2010 dollars, the average annual wage was $14,820 in 2011 compared to $31.315 for jobs not related to travel and tourism (Headwaters Economics 2013).

Although much of the recreation use on BLM-administered lands is dispersed and far from counting devices (e.g., trail registers, fee stations, and vehicle traffic counters), approximations of the number of visitors to BLM-administered lands can be obtained from the BLM Recreation Management Information Service database, in which BLM recreation specialists provide estimated total visits and visitor days to various sites within their field office boundaries. **Table 3-66** summarizes BLM visitation data in each field office area for fiscal year (FY) 2011 (i.e., the year ending September 30, 2011), and Forest Service visitation data from Round 2 of the National Visitor Use Monitoring program.

Visitor expenditures can be approximated by using the BLM Recreation Management Information Service database and Forest Service National Visitor Use Monitoring program visitation data in conjunction with data from Forest Service, which has constructed recreation visitor spending profiles based on years of survey data gathered through the Forest Service National Visitor Use Monitoring program. Although the data are collected from National Forest visitors, the analysis that follows is based on the National Visitor Use

Table 3-66
Estimated Annual Visits by Planning Unit

Field Office or National Forest	Total Individual Visits, FY 2011	Local Individual Visits[1]	Non-local Individual Visits[1]	Non Primary[1] Individual Visits[2]
Bruneau Field Office, Idaho	24,740	13,360	8,164	3,216
Burley Field Office, Idaho	642,867	347,148	212,146	83,573
Challis Field Office, Idaho	217,505	117,453	71,777	28,276
Four Rivers Field Office, Idaho	235,643	127,247	77,762	30,634
Jarbidge Field Office, Idaho	39,980	21,589	13,193	5,197
Owyhee Field Office, Idaho	288,968	156,043	95,359	37,566
Pocatello Field Office, Idaho	292,275	157,829	96,451	37,996
Salmon Field Office, Idaho	269,976	145,787	89,092	35,097
Shoshone Field Office, Idaho	926,637	500,384	305,790	120,463
Upper Snake Field Office, Idaho	1,174,536	634,249	387,597	152,690
Dillon Field Office, Montana	1,431,825	773,186	472,502	186,137
Beaverhead-Deerlodge National Forest	907,830	490,228	299,584	118,018
Boise National Forest	1,509,436	815,095	498,114	196,227
Caribou-Targhee National Forest[3]	1,291,105	697,197	426,065	167,844
Salmon-Challis National Forest	236,435	127,675	78,024	30,737
Sawtooth National Forest	1,086,883	586,917	358,671	141,295
Total	**10,576,641**	**5,711,387**	**3,490,291**	**1,374,966**

Sources: BLM 2012c; Forest Service 2012b
[1]Non-primary means incidental visits where the primary purpose of the trip was other than visiting the National Forest being surveyed.
[2]Based on national averages for all National Forests. White and Goodding (2012).
[3]Includes Curlew National Grassland

Monitoring program profiles because the BLM has no analogous database. The profiles break down recreation spending by type of activity, day use versus overnight use, local versus non-local visitors, and "non-primary" visits (i.e., incidental visits where the primary purpose of the trip was other than visiting BLM-administered lands). **Table 3-67** summarizes individual and party visits and expenditures by trip type and estimated direct expenditure.

As **Table 3-67** shows, the estimated total visitor spending on BLM-administered and National Forest System lands in the Socioeconomic Study Area was about $737.82 million in FY 2011. It is important to note that this includes expenditures from local residents and from visitors whose use of BLM-administered lands was incidental to some other primary purpose.

Table 3-67
Visitor Spending from Recreation on BLM-Administered and National Forest System Land in Socioeconomic Study Area, FY 2011

Trip Type	Percent of Visits	Estimated Number of Individual Visits	Average Party Size	Estimated Number of Party Visits	Party Spending Per Visit (2010 $)	Estimated Direct Expenditure (Millions $)
Non-local Day Trips	10	1,057,664	2.5	423,066	$63.68	$26.94
Non-local Overnight on Public Lands	9	951,898	2.6	366,115	$237.27	$86.87
Non-local Overnight off Public Lands	14	1,480,730	2.6	569,511	$522.63	$297.64
Local Day Trips	49	5,182,554	2.1	2,467,883	$33.56	$82.82
Local Overnight on Public Lands	4	423,066	2.6	162,718	$165.14	$26.87
Local Overnight off Public Lands	1	105,767	2.4	44,070	$216.48	$9.54
Non Primary Visits	13	1,374,964	2.5	549,985	$376.62	$207.14
Total	**100**	**10,576,641**	**-**	**4,583,347**	**-**	**$737.82**

Sources: White and Goodding 2012; Forest Service 2012b; BLS 2012a

Grazing

Farming employed approximately 25,639 people in the Socioeconomic Study Area in 2010, accounting for 8.2 percent of total employment. The average annual wage for a farm job in the Study Area was $27,565 in 2011 (in $2010 dollars). This was lower than the average annual wage for a non-farm job ($28,603) (Headwaters Economics 2013).[4]

Table 3-68 presents the proportion of personal income originating from farm earnings and the farm cash receipts from livestock received throughout the Socioeconomic Study Area and Idaho and Montana as a whole. As shown in **Table 3-68**, agricultural services are an important contribution in several counties; however, in some counties the data are not released for confidentiality reasons.

Table 3-68 shows the relative contribution of farm earnings across the counties in the Socioeconomic Study Area. Farm earnings constitute the largest share of total earnings in Camas, Cassia, Clark, Gooding, Jefferson, Jerome, Lincoln, Minidoka, Oneida, Owyhee and Twin Falls Counties. Both livestock and crops provide substantial cash receipts, with some variations across the counties. Though approximately 62.5 percent of farm cash receipts in the Socioeconomic Study Area come from livestock, many counties have significant percentages of farm cash receipts from crops, including Camas, Caribou, Clark, Gem, Madison, Minidoka, Oneida, and Power Counties.

[4] All dollar values were converted to 2010 dollars using the Consumer Price Index (BLS, 2012a).

Table 3-68
Farm Earnings Detail, 2010 (2010 dollars)

Geographic Area	Farm Earnings as Share of All Earnings	Agriculture and Forestry Support Activities Earnings as Share of All Earnings[1]	Farm Cash Receipts (Millions)	Share of Farm Cash Receipts from Livestock	Share of Farm Cash Receipts from Crops
Adams County, Idaho	-2.1%	(D)	$11.5	80.8%	19.2%
Bear Lake County, Idaho	7.8%	(D)	$21.9	74.7%	25.3%
Bingham County, Idaho	5.3%	2.7%	$310.0	33.5%	66.5%
Blaine County, Idaho	1.4%	(D)	$34.3	39.9%	60.1%
Bonneville County, Idaho	1.7%	(D)	$177.8	51.3%	48.7%
Butte County, Idaho	1.3%	(D)	$41.6	23.2%	76.8%
Camas County, Idaho	29.5%	(D)	$20.0	9.9%	90.1%
Caribou County, Idaho	5.6%	(D)	$51.6	43.2%	56.8%
Cassia County, Idaho	28.2%	2.2%	$688.7	72.1%	27.9%
Clark County, Idaho	31.6%	(D)	$38.0	22.0%	78.0%
Custer County, Idaho	9.5%	(D)	$22.6	65.6%	34.4%
Elmore County, Idaho	6.6%	0.3%	$349.3	66.7%	33.3%
Fremont County, Idaho	-1.1%	(D)	$59.8	19.5%	80.5%
Gem County, Idaho	6.3%	(D)	$37.7	53.1%	46.9%
Gooding County, Idaho	47.3%	2.5%	$664.4	90.0%	10.0%
Jefferson County, Idaho	19.9%	(D)	$247.0	48.3%	51.7%
Jerome County, Idaho	28.0%	3.5%	$516.0	75.9%	24.1%
Lemhi County, Idaho	2.6%	(D)	$25.4	88.5%	11.5%
Lincoln County, Idaho	46.0%	(D)	$147.2	76.2%	23.8%
Madison County, Idaho	-1.1	1.0%	$63.5	10.5%	89.5%
Minidoka County, Idaho	24.1%	(D)	$290.2	28.5%	71.5%
Oneida County, Idaho	27.8%	(D)	$35.9	30.5%	69.5%
Owyhee County, Idaho	46.9%	(D)	$263.8	63.5%	36.5%
Payette County, Idaho	8.4%	(D)	$165.1	77.6%	22.4%
Power County, Idaho	9.7%	2.6%	$122.2	29.2%	70.8%

Table 3-68
Farm Earnings Detail, 2010 (2010 dollars)

Geographic Area	Farm Earnings as Share of All Earnings	Agriculture and Forestry Support Activities Earnings as Share of All Earnings[1]	Farm Cash Receipts (Millions)	Share of Farm Cash Receipts from Livestock	Share of Farm Cash Receipts from Crops
Twin Falls County, Idaho	10.9%	(D)	$531.5	66.6%	33.4%
Washington County, Idaho	7.2%	3.5%	$49.7	54.6%	45.4%
Beaverhead County, Montana	5.3%	1.1%	$81.4	67.3%	32.7%
Madison County, Montana	1.9%	1.1%	$64.7	64.0%	36.0%
Socioeconomic Study Area	10.3%	0.7%	$5,132.8	62.5%	37.6%
Idaho	4.5%	0.7%	$6,128.8	59.2%	40.8%
Montana	2.5%	0.4%	3,162.6	43.8%	56.2%

Sources: Headwaters Economics 2012; US Department of Commerce 2012a. Values reported in 2001 dollars were converted to 2010 dollars using the Consumer Price Index (BLS 2012a).
[1]This division is the finest resolution of data provided by the US Department of Commerce's Bureau of Economic Analysis that includes agricultural services.
[2](D) indicates that the value is not shown to avoid disclosure of confidential information.

Table 3-69 provides information on active and billed AUMs on BLM-administered and National Forest System land, for each of the BLM field offices and National Forests. The estimated gross receipts in the table are calculated from USDA Economic Research Service (ERS) data, which publishes annual budgets for cow-calf operations for different production regions across the country (USDA ERS 2012). The BLM calculated a ten-year inflation-adjusted average gross receipt per cow-calf operation from the ERS budgets, then converted that information to a per-AUM figure based on average forage requirements for a cow including other livestock (e.g., bulls and replacement heifers) that are needed to support the production from the cow (Workman 1986). Southwest Montana falls into the Basin and Range region, whereas southern Idaho is in the ERS's Fruitful Rim region. The BLM's calculations resulted in a ten-year average gross receipt in the Basin and Range region of $50.24 per AUM (2010 dollars), and in the Fruitful Rim region of $30.29 per AUM (2010 dollars). However, the BLM used the higher value for both regions, both to err on the side of conservative analysis and because the characteristics of livestock grazing in southern Idaho seem more like those in southwestern Montana (and across southeast Oregon, Nevada, and Utah, which are also in ERS's Basin and Range region) than like those in the remainder of the Fruitful Rim (e.g., much of the California coast, western Oregon, and Washington State).

Table 3-69
Active and Billed Animal Unit Months

Geographic Area	Active (2011)[1]	Percent Billed (2000-2011)	Billed (2011)	Cattle (%)	Sheep (%)	Other (%)	Allot-ments	Acres per AUM	Gross Receipts (Million $)
Beaverhead-Deerlodge National Forest	154,629	98	152,144	96	4	1%	224	11.25	$7.6
Birds of Prey National Conservation Area	47,807	52	24,632	88	12	0%	23	12.3	$1.2
Boise National Forest	59,319	86	51,172	82	18	1%	54	25.78	$2.6
Bruneau Field Office	128,394	78	98,949	99	0	1%	37	10.9	$5.0
Burley Field Office	141,091	72	102,231	92	8	0%	201	6.1	$5.1
Caribou-Targhee National Forest (includes Curlew National Grassland)	288,344	97	280,451	73	26	0%	254	7.21	$14.1
Challis Field Office	55,107	59	32,512	98	0	2%	63	13.4	$1.6
Craters of the Moon National Monument	14,956	11	1,692	93	7	0%	4	7.1	$0.1
Dillon Field Office	105.669	75	78,782	97	0	3%	394	8.0	$4.0
Four Rivers Field Office	105,328	81	85,367	93	7	0%	305	7.1	$4.3
Jarbidge Field Office	182,212	84	153,365	97	2	0%	92	9.0	$7.7
Owyhee Field Office	121,975	86	104,898	98	2	1%	145	10.2	$5.3
Pocatello Field Office	86,492	86	73,991	90	10	1%	328	6.6	$3.7
Salmon Field Office	62,680	80	50,306	99	0	1%	83	7.9	$2.5
Salmon-Challis National Forest	146,804	81	118,876	97	2	1%	106	15.36	$6.0
Sawtooth National Forest	155,511	87	135,730	77	22	0%	128	9.36	$6.8
Shoshone Field Office	187,217	61	114,717	84	15	0%	197	7.7	$5.8
Upper Snake River Field Office	210,842	67	140,614	80	20	0%	309	7.5	$7.1
Total	2,148,814								$90.5

Sources: BLM 2012d; Forest Service 2013c; Workman 1986; USDA ERS 2012
[1]Forest Service data is for 2013

Thus, the table above reflects a gross receipt value of $50.24 per AUM, and the last column of the table represents annual gross receipts in the region from livestock operations in 2010 dollars. Gross receipts are calculated based on billed AUMs and ten-year average gross receipts, as described in the text.

The data in the table help to demonstrate the importance of livestock grazing throughout the Socioeconomic Study Area. It is important to remember, as well, that the data are only for forage values on BLM-administered and National Forest System lands; forage on other public and private lands contribute additional values to the Socioeconomic Study Area. The economic analysis of the alternatives, presented in Chapter 4, addresses additional indirect

contributions of livestock grazing (as well as other resource uses) to the regional economy, comparing the alternatives to one another.

Forestry and Wood Products

Approximately 1,570 jobs (1 percent of total employment in 2011) in the Socioeconomic Study Area came from timber-related industries, which is 0.3 percentage points higher than the national average of 0.7 percent (Headwaters Economics 2013). This estimate is based on data from the US Census Bureau County Business Patterns. The proportion of employment associated with timber-related industries varied by county, with a low of zero percent in Butte, Camas, Clark, Jerome, Lincoln, and Minidoka Counties and highs of 25.3 percent in Adams County, 8.8 percent in Washington County, 6.8 percent in Owyhee County, and 6.5 percent in Payette County. These estimates include both full- and part-time jobs and reflect three timber-related industries: growing and harvesting, sawmills and paper mills, and wood products manufacturing.

Average annual earnings for timber-related jobs tend to be higher than for non-timber jobs. The average annual wage per timber-related job in the Socioeconomic Study Area in 2011 was $35,521 (2010 dollars), compared to $29,971 for non-timber jobs.[5]

Mining and Minerals

The data in **Table 3-70** show that within the 29 counties in the Socioeconomic Study Area, mining industries employed 1,248 people in 2010, accounting for approximately 0.4 percent of total employment, which is 0.3 percentage points higher than the national average (Headwaters Economics 2012). Mining industries include those for phosphate, metals, building stone quarrying, sand and gravel quarrying, geothermal exploration and development, oil and gas exploration, and mining-related businesses. The proportion of employment associated with mining industries varied by county, from zero percent in 12 of the counties up to 30.4 percent of total employment in Custer County and 22.7 percent of total employment in Caribou County. The average annual earnings per mining-related job in the Socioeconomic Study Area are higher than non-mining jobs. The average annual wage per job in this sector was $56,239 (2010 dollars) in the Socioeconomic Study Area in 2011, compared to an average of $33,926 for private sector jobs (Headwaters Economics, 2013). States receive 50 percent of all rents and royalties collected from mineral extraction on public lands. In FY2012, $10 million was collected in Idaho (the state received $5 million).

Phosphate mining on BLM-administered land in Caribou County for raw ore produced 4.2 million units, for a sales total of $167.4 million in 2011 (ONRR 2012). There are currently three that employ over 1,800 people, at least in part, from federal mineral leases (BLM 2013f). According to the Idaho Department of Labor, almost half of the jobs in Caribou County involve the production of phosphate and manufacture of phosphate-derived products. Wages are higher than most of the state because of phosphate mining and

[5]All dollar values were converted to 2010 dollars using the Consumer Price Index (BLS 2012a).

Table 3-70
Mining Sector Employment by County

Geographic Area	Number of Jobs	Percentage of Total Employment
Adams County, Idaho	0	0.0
Bear Lake County, Idaho	0	0.0
Bingham County, Idaho	0	0.0
Blaine County, Idaho	13	0.1
Bonneville County, Idaho	10	0.0
Butte County, Idaho	0	0.0
Camas County, Idaho	0	0.0
Caribou County, Idaho	643	22.7
Cassia County, Idaho	44	0.7
Clark County, Idaho	0	0.0
Custer County, Idaho	289	30.4
Elmore County, Idaho	5	0.1
Fremont County, Idaho	3	0.2
Gem County, Idaho	13	0.6
Gooding County, Idaho	2	0.1
Jefferson County, Idaho	2	0.1
Jerome County, Idaho	0	0.0
Lemhi County, Idaho	15	0.9
Lincoln County, Idaho	0	0.0
Madison County, Idaho	0	0.0
Minidoka County, Idaho	0	0.0
Oneida County, Idaho	13	2.3
Owyhee County, Idaho	6	0.4
Payette County, Idaho	7	0.2
Power County, Idaho	13	0.6
Twin Falls County, Idaho	31	0.1
Washington County, Idaho	0	0.0
Beaverhead County, Montana	66	2.8
Madison County, Montana	73	5.3
Socioeconomic Study Area	1,248	0.4
Idaho	2,444	0.5
Montana	5,962	1.8
United States	581,582	0.5

Source: Headwaters Economics 2012.
All dollar values were converted to 2010 dollars using the Consumer Price Index (BLS 2012a).

manufacturing (Idaho Department of Labor 2015). None of these operations are in GRSG habitat. As discussed in **Section 3.12**, Mineral Resources, only 1 of the 86 federal phosphate leases is in GRSG habitat, and it is not operating.

This 65-acre lease is held by Stonegate Agricom, which also has a 240-acre prospecting lease. These acres are in the Paris-Bloomington KPLA and are both associated with the potential Paris Hills Phosphate Project.

Idaho's phosphate ore is used primarily in the agribusiness industry. Two of the three companies that mine phosphate refine the ore and mix it with other elements to produce fertilizer, while one company refines the ore to produce elemental phosphorous, which the company uses primarily to produce herbicides. These companies do not sell their refined ore on the open market but rather use it to produce their own products (BLM 2014). Idaho and Utah produce approximately 15 percent of the phosphate rock in the country; the remaining 85 percent is produced in Florida and North Carolina (USGS 2014b).

Although some of the richest silver-producing regions in the United States are in the northern Idaho panhandle (outside the Socioeconomic Study Area), the study area does produce some silver, along with industrial minerals such as molybdenum (Idaho Mining Association 2010). Idaho has several large stone quarries that support the rural communities of Oakley (Cassia County) and Challis (Custer County). It is estimated that approximately 40,000 tons of Oakley Stone are mined annually from unpatented mining claims in southern Idaho/northern Utah (not including patented claims). Approximately 60 people are employed full-time from these operations, and an additional 100 to 200 skilled laborers are employed during the summer months (BLM 2013d).

Other Values

BLM-administered lands provide a range of goods and services that benefit society in a variety of ways. Some of these goods and services, such as timber and minerals, are bought and sold in markets, and hence have a readily observed economic value (as documented in the sections above); others have a less clear connection to market activity, even though society derives benefits from them. In some cases, goods and services have both a market and a non-market component value to society. This section provides an overview of several non-market values described through a qualitative and quantitative economic valuation analysis.

The non-market values associated with BLM-administered lands can be classified as values that derive from direct or indirect use (e.g., recreation) and those that do not derive from use, such as existence values held by the general public from self-sustaining populations of GRSG. This section and the related appendix describe the use and nonuse economic values associated with recreation, populations of GRSG, and land that is currently used for livestock grazing and ranch operations. The sections that follow discuss each of these values in turn. **Appendix AA** provides more discussion of the concepts and measurement of use and nonuse nonmarket values. It is important to note that these nonmarket values are not directly comparable to previous sections that describe output (sales or expenditures) and jobs associated with various resource uses on BLM-administered and National Forest System lands (see **Appendix AA** for more information).

Values Associated with Recreation

Actions that promote the conservation of GRSG habitat may result in changes in recreation activity, by changing opportunities or access for different recreational activities. Opportunities for some activities such as wildlife viewing may increase as the amount of habitat may increase for species that depend on BLM-administered lands, including GRSG. The Environmental Consequences analysis (**Chapter 4**) addresses this issue for each of the management alternatives. This section documents baseline nonmarket values visitor receive associated with recreation activities. This is measured by what economists call consumer surplus, which refers to the additional value that visitors receive over and above the price they pay. **Appendix BB** provides an explanation of consumer surplus. Fees to use BLM-administered lands for recreation are typically very low or nonexistent, so the value people place on BLM-administered land recreation opportunities is not fully measured simply by the entrance fees people pay.

Economists estimate the consumer surplus from recreation by measuring how the variation in visitors' travel costs corresponds to the number of visits taken. This "travel cost method" has been developed extensively in academic literature and is used by federal agencies in economic analyses; the method is explained more fully in **Appendix AA**. Conducting original travel cost method studies can be time-consuming and expensive. For this project, the BLM and Forest Service relied on estimates of consumer surplus from prior recreation studies in the same geographic region, using an established scientific method called "benefit transfer." Based on the studies reviewed and cited in **Appendix AA**, visitors to natural areas, such as BLM-administered and National Forest System lands, gain values (in excess of their direct trip cost) ranging from approximately $32 per day for camping, to about $175 per day for mountain biking.

To calculate the aggregate "consumer surplus" value of recreation in the study area, BLM multiplied this per-day value of recreation by the estimated number of visitor days associated with each activity type. Visitation estimates by activity are derived based on the BLM Recreation Management Information Service database and the Forest Service National Visitor Use Monitoring program for the study area.

Accounting for the value per day and the number of days, the total nonmarket value of recreation on BLM-administered and National Forest System lands in the study area was estimated to be about $431.8 million per year (see **Appendix BB** for details). Based on the quantity of recreational trips and the economic value of each type of activity, the largest annual nonmarket values are associated with hunting, camping, fishing, hiking, sightseeing, floatboating/rafting/canoeing, and pleasure driving. These categories omit downhill skiing, because there is little or no overlap between GRSG habitat and lands used for downhill skiing. The Environmental Consequences section (**Chapter 4**) discusses how recreational visits and total nonmarket value for recreation may change under the alternatives being considered.

Values Associated with Populations of GRSG

The existence and perseverance of the Endangered Species Act and similar acts reflects the values held by the American public associated with preventing species from going extinct.

Economists have long recognized that rare, threatened and endangered species have economic values beyond those associated with active "use" through viewing. This is supported by legal decisions and technical analysis (see **Appendix AA** for details), as well as a number of conceptual and empirical publications that refine concepts and develop methods to measure these nonuse or existence values.

The dominant method uses surveys to construct or simulate a market or referendum for protection of areas of habitat, or changes in populations of species. The survey asks the respondent to indicate whether they would pay for an increment of protection, and if so how much they would pay. Economists have developed increasingly sophisticated survey methods for nonuse value over the last two decades to improve the accuracy of this method. **Appendix AA** offers an in-depth discussion of this method of value estimation.

Original surveys to estimate nonuse values are complex and time-consuming; rather than perform a new survey, the BLM and Forest Service reviewed existing literature to determine if there were existing nonuse value studies for GRSG. No existing studies on valuation specific to the GRSG were found. However, there are several studies published in peer-reviewed scientific journals for bird species that the BLM judged to have similar characteristics with GRSG, including being a candidate for listing as threatened or endangered and being a hunted species. These studies find average stated willingness to pay of between $15 and $58 per household per year in order to restore a self-sustaining population or prevent regional extinction (see **Appendix BB** for details). These values represent a mix of use and nonuse values, but the nonuse components of value are likely to be the majority share, since the studies primarily address species that are not hunted. Since GRSG protection is a public good available to all households throughout the intermountain west, if similar per-household values apply to the species the aggregate regional existence value could be substantial.

Values Associated with Grazing Land

BLM-administered land managed for livestock grazing provides both market values (e.g., forage for livestock) and nonmarket values, including open space and western ranch scenery, which provide value to some residents and outside visitors and may also provide some value to the those who do not use it (e.g., the cultural icon of the American cowboy). Many people who ranch for a living or who otherwise choose to live on ranches value the ranching lifestyle in excess of the income generated by the ranching operations. This could be seen as a nonmarket value associated with livestock grazing. On the other hand, some residents and visitors perceive nonmarket opportunity costs associated with livestock grazing. Although some scholars and policy makers have discussed nonmarket values associated with livestock grazing, the process for incorporating these values into analyses of net public benefits remains uncertain, and the BLM and Forest Service did not attempt to quantify these values for the present study.

Furthermore, some of the lifestyle value of ranching is likely to be captured in markets, such as through the property values of ranches adjacent to BLM-administered lands with historic leases or permits for grazing on BLM-administered land. Economists typically use a method called the hedonic price method to estimate values associated with particular amenities; this

method may be used to explain the factors that influence the observed sale prices of ranch land. **Appendix AA** provides more information about this method, as well as additional information to address potential nonmarket values associated with grazing.

Fiscal

Most of Idaho's tax revenue comes from three sources: income, sales and use, and property taxes (US Census Bureau 2010d). The Idaho State Tax Commission collects income tax and sales and use tax, while property taxes fund local governments and are imposed and collected by the county where the property is located. Idaho imposes a sales and use tax of 6 percent, a corporate net income tax of 7.6 percent, and an individual income tax rate that ranges from 1.6 percent to 7.8 percent. States receive 50 percent of rents and royalties collected from federal mineral leases. In 2012, $4.6 million was disbursed to the State and individual counties, primarily from phosphate royalties, but also from geothermal rent (BLM 2013f). In addition, Idaho imposes a severance tax rate of 2 percent of the market value of oil and gas produced or sold in the state. It also imposes a mine license tax of 1 percent of the value of ores mined or extracted, which accounted for approximately $2.5 million in tax revenue in 2011 (Idaho State Tax Commission 2011).

Idaho's counties receive most of their revenue from property taxes, charges for local services and redistribution of State and Federal sources. In 2009-2010, Idaho counties received approximately 25 percent of their revenues from property taxes, 25 percent from charges, and 40 percent from state government intergovernmental transfers (US Census Bureau 2010e). Major sources of state funds received by counties include state liquor revenues, highway user taxes and fees, sales taxes and education funds and endowments (Idaho Association of Counties 2011). Public elementary and secondary schools received, in 2008-2009, approximately 67 percent of their resources from state sources, 10 percent from federal funds, and 23 percent from local funds, mostly property taxes (National Center for Education Statistics 2012).

The largest source of revenue in Montana is the individual income tax. The second largest source is severance and other taxes (US Census Bureau 2010d), although most of the mineral production in Montana is outside the Socioeconomic Study Area for this sub-region. Two-thirds of the severance and other taxes category is made up of an oil and gas production tax, with the remainder of the category being composed of mining taxes and other miscellaneous taxes. While it is collected at the state level, about half of the oil and gas tax is distributed to local governments and school districts. Montana does not have a general sales tax, but selective sales taxes account for about 14 percent of state tax revenue (Montana Department of Revenue 2010).

In Montana, local government and school district tax collections come almost entirely from property taxes. Local jurisdictions also collect a coal gross proceeds tax, a local severance tax that imposes a flat tax on the value of production so that all mines pay the same rate (Montana Department of Revenue 2010).

The primary government revenues that are directly linked to BLM-administered and National Forest System lands are Payments in Lieu of Taxes (PILT), which are federal

government payments based on the presence of all federal lands (not just BLM-administered lands) within each county. **Table 3-71** shows the payments each county received in 2010. The nontaxable status of federal lands is of interest to local governments, which must provide public safety and other services to county residents. BLM revenue-sharing programs provide resources to local governments in lieu of property taxes because local governments cannot tax federally owned lands the way they would if the land were privately owned.

Table 3-71
Payments in Lieu of Taxes (PILT) Received in the Socioeconomic Study Area by County in 2010

Geographic Area	PILT (thousands of dollars)[1]
Adams County, Idaho	$179
Bear Lake County, Idaho	$373
Bingham County, Idaho	$679
Blaine County, Idaho	$1,807
Bonneville County, Idaho	$1,065
Butte County, Idaho	$295
Camas County, Idaho	$147
Caribou County, Idaho	$507
Cassia County, Idaho	$1,874
Clark County, Idaho	$153
Custer County, Idaho	$684
Elmore County, Idaho	$2,338
Fremont County, Idaho	$591
Gem County, Idaho	$220
Gooding County, Idaho	$603
Jefferson County, Idaho	$452
Jerome County, Idaho	$232
Lemhi County, Idaho	$874
Lincoln County, Idaho	$749
Madison County, Idaho	$21
Minidoka County, Idaho	$430
Oneida County, Idaho	$532
Owyhee County, Idaho	$1,209
Payette County, Idaho	$153
Power County, Idaho	$704
Twin Falls County, Idaho	$1,530
Washington County, Idaho	$770
Beaverhead County, Montana	$674
Madison County, Montana	$443
Socioeconomic Study Area	$22,070

Source: DOI 2012.

[1]Includes payments received from BLM, Forest Service, Bureau of Reclamation, National Park Service, and USFWS.

Other federal payments to states, counties, and public schools associated with the presence of federal lands include Forest Service revenue transfers and federal mineral royalties. Since 2008, the Forest Service pays 25 percent of its receipts to states for roads and schools in the counties where national forests are located. The decline in the sale of timber from federal lands over time has led to the decline in these payments. However, the Secure Rural Schools and Community Self-Determination Act of 2000 limits this decline (Congressional Research Service 2012). Idaho and Montana also receive federal mineral royalties from mining on federal land. In Idaho, 90 percent of these receipts are distributed to the Public School Income Fund and the other 10 percent are distributed to the general fund of the counties where the revenue was generated. In Montana, 25 percent of federal mineral royalties are distributed to counties (Headwaters Economics 2011). Other revenues from federal lands include fees for grazing, recreation, and rents on ROWs.

BLM Expenditures and Employment

BLM offices provide a direct contribution to the economy of the local and surrounding area. BLM operations and management make direct contributions to area economic activity by employing people who reside within the area and by spending on project related goods and services. Contracts for facilities maintenance, shuttling vehicles, and projects contribute directly to the area economy and social stability as well. **Table 3-72** provides available information on the BLM expenditures from each field office and National Forest, including both labor and nonlabor expenditures.

Table 3-72
BLM and Forest Service Employment and Related Expenditures in the Socioeconomic Study Area

Agency	State	Field Office	Employment, 2011 (Full-Time)	Nonlabor Expenditures, 2011 (2010 dollars)
BLM	Idaho	Bruneau	14.2	$189,214
	Idaho	Burley	23.9	$1,776,536
	Idaho	Challis	21.9	$472,283
	Idaho	Four Rivers	20.8	$810,326
	Idaho	Jarbidge	23.5	$6,072,960
	Idaho	Owyhee	20.0	$594,148
	Idaho	Pocatello	30.9	$699,083
	Idaho	Salmon	24.8	$670,559
	Idaho	Shoshone	24.1	$1,902,984
	Idaho	Upper Snake	30.1	$1,104,839
	Montana	Dillon	44.9	$1,107,213
Forest Service	Idaho	Boise National Forest	234	$11,682,250
	Idaho, Wyoming, Utah	Caribou-Targhee National Forest	177	$8,918,490
	Idaho	Salmon-Challis National Forest	159	$10,828,200
	Idaho, Utah	Sawtooth National Forest	129	$6,568,660

Table 3-72
BLM and Forest Service Employment and Related Expenditures in the Socioeconomic Study Area

Agency	State	Field Office	Employment, 2011 (Full-Time)	Nonlabor Expenditures, 2011 (2010 dollars)
	Montana	Beaverhead-Deerlodge National Forest	150	$6,942,850

Sources: BLM 2012b; Forest Service 2013d, 2013e
Values reported in 2001 dollars (BLM) or 2011 dollars (Forest Service) were converted to 2010 dollars using the Consumer Price Index (BLS 2012a)

Environmental Justice

Environmental justice pertains to the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the adverse environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and Tribal programs and policies). The BLM and Forest Service incorporate environmental justice into their planning processes, both as a consideration in the environmental effects analysis and by ensuring a meaningful role in the decision-making process for minority and low-income populations.

Executive Order 12898 requires federal agencies to "identify and address the disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." The BLM Land Use Planning Handbook reiterates the BLM's commitment to environmental justice – both in providing meaningful opportunities for low-income, minority, and Tribal populations to participate in decision-making, and to identify and minimize any disproportionately high or adverse impacts on these populations. Similarly, the USDA's Departmental Regulation on Environmental Justice provides direction to agencies for integrating environmental justice considerations into USDA programs and activities, including those of Forest Service. Specifically, the Departmental Regulation on Environmental Justice calls for the identification, prevention, and mitigation of disproportionately high and adverse human health or environmental effects of USDA programs and activities on minority and low-income populations and provision for the opportunity for minority and low-income populations to participate in planning, analysis, and decision-making that affects their health or environment.

According to the Council on Environmental Quality Environmental Justice Guidance Under the National Environmental Policy Act (CEQ 1997), "minority populations should be identified where either: (a) the minority population of the affected region exceeds 50 percent or (b) the minority population percentage of the affected region is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis." The same document states that, "In identifying low-income

populations, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions of environmental exposure or effect."

Additionally, the same guidance (CEQ 1997) advises that, "In order to determine whether a proposed action is likely to have disproportionately high and adverse human health or environmental effects on low-income populations, minority populations, or Indian tribes, agencies should identify a geographic scale, obtain demographic information on the potential impact area, and determine if there is a disproportionately high and adverse effect on these populations. Agencies may use demographic data available from the Bureau of the Census to identify the composition of the potentially affected population. Geographic distribution by race, ethnicity, and income, as well as a delineation of tribal lands and resources, should be examined."

Minority Populations

Table 3-73 summarizes the percentage of the population made up of ethnic minority groups in each county of the Socioeconomic Study Area and in the State of Idaho, the State of Montana, and the United States as a whole.

Table 3-73
Population Race and Ethnicity, 2010

Geographic Unit Analyzed	Total Population	Percent of Total Population								
		White	Black or African American	Alaska Native or American Indian	Asian	Native Hawaiian & Other Pacific Islander	Other Race	Two or More Races	Hispanic or Latino[1]	Total Minorities[2]
Adams County, Idaho	3,976	96.1	0.1	1.0	0.4	0.1	0.7	1.7	2.4	5.3
Bear Lake County, Idaho	5,986	96.3	0.1	0.5	0.4	0.0	1.6	1.1	3.6	5.2
Bingham County, Idaho	45,607	80.6	0.2	6.5	0.6	0.1	9.8	2.1	17.2	24.9
Blaine County, Idaho	21,376	84.9	0.2	0.6	0.9	0.1	11.8	1.5	20.0	22.0
Bonneville County, Idaho	104,234	90.6	0.6	0.8	0.8	0.1	5.1	2.1	11.4	14.6
Butte County, Idaho	2,891	95.5	0.2	0.4	0.2	0.2	2.0	1.5	4.1	6.2
Camas County, Idaho	1,117	94.1	0.3	0.5	0.1	0.0	1.8	3.2	6.7	9.7
Caribou County, Idaho	6,963	95.3	0.1	0.3	0.2	0.2	2.3	1.5	4.8	6.9
Cassia County, Idaho	22,952	81.8	0.3	0.8	0.5	0.1	14.2	2.3	24.9	27.1
Clark County, Idaho	982	72.4	0.7	1.0	0.5	0.0	23.8	1.5	40.5	42.9
Custer County, Idaho	4,368	96.4	0.2	0.6	0.2	0.1	1.5	1.0	4.0	5.9
Elmore County, Idaho	27,038	82.2	2.7	1.0	2.8	0.4	6.8	4.1	15.2	24.7
Fremont County, Idaho	13,242	89.5	0.3	0.7	0.2	0.1	7.6	1.5	12.8	14.8

Table 3-73
Population Race and Ethnicity, 2010

Geographic Unit Analyzed	Total Population	Percent of Total Population								
		White	Black or African American	Alaska Native or American Indian	Asian	Native Hawaiian & Other Pacific Islander	Other Race	Two or More Races	Hispanic or Latino[1]	Total Minorities[2]
Gem County, Idaho	16,719	93.4	0.1	0.6	0.5	0.1	3.1	2.2	8.0	10.9
Gooding County, Idaho	15,464	80.7	0.2	0.8	0.5	0.1	15.3	2.4	28.1	30.5
Jefferson County, Idaho	26,140	91.2	0.2	0.8	0.4	0.1	5.8	1.5	10.1	12.3
Jerome County, Idaho	22,374	80.0	0.3	1.3	0.3	0.1	15.8	2.1	31.0	33.2
Lemhi County, Idaho	7,936	96.4	0.2	0.7	0.4	0.0	0.6	1.6	2.3	4.9
Lincoln County, Idaho	5,208	80.1	0.4	0.7	0.4	0.1	16.2	2.2	28.3	30.6
Madison County, Idaho	37,536	93.9	0.5	0.3	0.9	0.1	2.8	1.5	5.9	8.7
Minidoka County, Idaho	20,069	80.2	0.4	1.2	0.4	0.0	15.3	2.4	32.4	34.6
Oneida County, Idaho	4,286	96.7	0.2	0.5	0.5	0.0	1.1	1.0	2.9	4.9
Owyhee County, Idaho	11,526	76.0	0.2	4.3	0.5	0.0	16.6	2.4	25.8	31.6
Payette County, Idaho	22,623	88.6	0.2	1.1	0.8	0.1	6.3	2.8	14.9	18.7
Power County, Idaho	7,817	75.1	0.3	2.3	0.4	0.1	19.5	2.4	29.8	34.0
Twin Falls County, Idaho	77,230	88.9	0.4	0.8	1.2	0.1	6.3	2.3	13.7	17.4
Washington County, Idaho	10,198	86.6	0.2	1.0	0.9	0.0	9.1	2.2	16.8	19.7
Beaverhead County, Montana	9,246	94.8	0.2	1.4	0.4	0.4	1.2	1.6	3.7	7.3
Madison County, Montana	7,691	96.8	0.2	0.5	0.3	0.0	0.8	1.4	2.4	4.6
Socioeconomic Study Area	562,795	87.5	0.5	1.4	0.8	0.1	7.6	2.1	15.0	18.6
Idaho	1,567,582	89.1	0.6	1.4	1.2	0.1	5.1	2.5	11.2	15.9
Montana	989,415	89.4	0.4	6.3	0.6	0.1	0.6	2.5	2.9	12.3
United States	308,745,538	72.4	12.6	0.9	4.8	0.2	6.2	2.9	16.3	36.0

Source: US Census Bureau 2010b.

[1]Individuals who identify themselves as Hispanic or Latino might be of any race; the sum of the other percentages under the "Percent of Total Population" columns plus the "Hispanic or Latino" column therefore does not equal 100 percent, and the sum of the percentages for each racial and ethnic category does not equal the percentage of "total minorities."

[2]The total minority population, for the purposes of this analysis, is the total population for the geographic unit analyzed minus the non-Latino/Hispanic white population.

Of the 27 Idaho counties in the Socioeconomic Study Area, 14 have a higher minority population than Idaho as a whole, while neither of the 2 Montana counties in the Socioeconomic Study Area have a higher minority population than Montana as a whole. The

percentage of minorities among counties ranges from a low of 4.6 percent in Madison County, Montana, to a high of 42.9 percent in Clark County, Idaho. Several Idaho counties have a Hispanic or Latino population greater than 25 percent, with the highest being Clark County (41 percent). Additionally, Montana as a whole has a high percentage of Alaska Native or American Indian residents (6.3 percent), though neither of the Montana counties included in the study area have a population of this minority group higher than 2 percent.

Low-income Populations

Table 3-74 summarizes the percentage of the population below the poverty line in each county of the Socioeconomic Study Area and in Montana, Idaho, and the United States as a whole. Following the Office of Management and Budget's Directive 14, the Census Bureau uses a set of money income thresholds that vary by family size and composition to detect what part of the population is considered to be in poverty (US Census Bureau 2012b).

Table 3-74
Low-Income Populations, 2006-2010 Average

Geographic Area	Percent Population Below Poverty Level
Adams County, Idaho	12.4
Bear Lake County, Idaho	13.9
Bingham County, Idaho	14.7
Blaine County, Idaho	9.3
Bonneville County, Idaho	11.0
Butte County, Idaho	13.8
Camas County, Idaho	16.3
Caribou County, Idaho	8.4
Cassia County, Idaho	15.4
Clark County, Idaho	11.3
Custer County, Idaho	13.8
Elmore County, Idaho	12.0
Fremont County, Idaho	8.5
Gem County, Idaho	14.7
Gooding County, Idaho	16.5
Jefferson County, Idaho	10.2
Jerome County, Idaho	15.5
Lemhi County, Idaho	20.0
Lincoln County, Idaho	15.3
Madison County, Idaho	32.2
Minidoka County, Idaho	13.1
Oneida County, Idaho	13.4
Owyhee County, Idaho	22.2
Payette County, Idaho	15.7
Power County, Idaho	11.1
Twin Falls County, Idaho	13.0
Washington County, Idaho	13.2
Beaverhead County, Montana	15.0
Madison County, Montana	11.6

Table 3-74
Low-Income Populations, 2006-2010 Average

Geographic Area	Percent Population Below Poverty Level
Socioeconomic Study Area	14.3
Idaho	13.6
Montana	14.5
United States	13.8

Source: US Census Bureau 2010c

Of the 27 Idaho counties in the socioeconomic study area, 14 have a higher percentage of residents below the poverty line than Idaho overall (13.6 percent); one of the two Montana counties has a higher percentage of residents below the poverty line than Montana as a whole (14.5 percent). Both Idaho and Montana have a higher percentage of residents above the poverty line than the United States as a whole (13.8 percent). The percentages of residents below the poverty line range from a low of 8.4 percent in Caribou County, Idaho, to a high of 32.2 percent in Madison County, Idaho.

Tribal Populations

Five Native American reservations in the State of Idaho are home to federally recognized tribes. These reservations comprise almost 2 million acres in trust. The Shoshone-Bannock Tribe of the Fort Hall Indian Reservation (Bannock, Bingham, Caribou, and Power Counties) and Shoshone-Paiute Tribe of the Duck Valley Indian Reservation (Owyhee County) are located within the Socioeconomic Study Area. Other tribes outside the Socioeconomic Study Area include Coeur d'Alene in Benewah and Kootenai Counties; Kootenai in Boundary County; and Nez Perce in Clearwater, Idaho, Latah, Lewis, and Nez Perce Counties (Rodríguez 2011).

Several major tribes live in Montana: the Blackfeet nation, the Confederated Salish, the Pend d'Oreille, the Kootenai, the Assiniboine, the Sioux, the Northern Cheyenne, the Crow Nation, the Gros Ventre, and the Little Shell Chippewa (Montana Office of Indian Affairs 2011). However, none of these tribes' reservations are located in or near the Socioeconomic Study Area.

3.23 Forest and Woodland Products

The NEPA, the FLPMA, the Water Quality Act of 1987, as amended from the Federal Water Pollution Control Act (Clean Water Act) of 1977, the Endangered Species Act of 1973, and the Archaeological Resources Protection Act of 1979 direct the protection and management of forest management and woodland products on BLM-administered lands. The FLPMA directs that BLM-administered lands be managed on the basis of multiple use and sustained yield without the permanent impairment of the productivity of the land and the quality of the environment. Guidance provided under FLPMA applies to those forested lands containing what is traditionally referred to as timber lands, capable of producing in excess of 20 cubic feet per acre per year; as well as woodlands, those forested lands producing less than 20 cubic feet per acre per year; and other vegetative material, or those

lands containing cactus and other salable vegetation which were not previously covered by management policy. Other salable vegetation includes Christmas trees and plant seed. BLM forest management policy and requirements are identified in the BLM Forest Management regulations (43 CFR Part 5000).

In the analysis area there are approximately 368,000 acres of BLM-administered forest land; 250,000 acres of BLM-administered forest land (timberland) available for commercial management; 353,000 acres of BLM-administered woodland; and 197,000 acres of BLM-administered woodland available for commercial management.

In the analysis area, annual production of commercial product from timberlands has averaged approximately 2,877 thousand board feet (MBF) per year. Annual production of special forest products (wood) in the past ten years has averaged approximately: 4 MBF per year for saw timber; 490 MBF for fuel wood; 8 MBF per year for fence posts; 11 MBF per year for fence poles; and 1 MBF per year for other wood products (such as mine timbers and teepee poles). Annual production of special forest products (nonwood, such as Christmas trees) in the past 10 years has averaged approximately 379 tickets per year.

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