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# Appendix O

Biological Assessment for the Utah  
Greater Sage-Grouse Land Use Plan Amendment  
and Final Environmental Impact Statement



Biological Assessment  
for the  
Utah Greater Sage-Grouse  
Land Use Plan Amendment  
and  
Final Environmental Impact Statement

May 20, 2015

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**Acronym List**

APD	applications for permits to drill
BA	Biological Assessment
BLM	Bureau of Land Management
COAs	conditions of approval
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESR	emergency stabilization and rehabilitation
ExPA	experimental population area
FEIS	Final Environmental Impact Statement
GHMA	general habitat management areas
GRSG	Greater Sage-Grouse
LUP	Land Use Plan
MSO	Mexican Spotted Owl
MUs	management units
NEPA	National Environmental Policy Act
NRLMD	Northern Rockies Lynx Management Direction
OHV	off-highway vehicles
ORV	off-road vehicle
PCE	primary constituent elements
PHMA	priority habitat management areas
RMP	resource management plan
ROW	right-of-way
SFA	sagebrush focal areas
T&E	threatened and endangered
TEP	threatened, endangered, or proposed
TNC	The Nature Conservancy
UDWR	Utah Division of Wildlife Resources
UPD	Utah prairie dog
USFWS	US Fish and Wildlife Service

## INTRODUCTION

### Background

The Bureau of Land Management (BLM) and the Forest Service have prepared amendments to their respective Land Use Plans (LUPs)/Final Environmental Impact Statements (EISs). These documents provide direction for the conservation of greater sage-grouse (GRSG; *Centrocercus urophasianus*) in the following plans in Utah: Cedar City Field Office, Fillmore Field Office, Grand Staircase/Escalante National Monument, Kanab Field Office, Price Field Office, Richfield Field Office, Salt Lake Field Office, Vernal Field Office, Ashley National Forest, Dixie National Forest, Fishlake National Forest, Manti-La Sal National Forest, and Uinta-Wasatch-Cache National Forest. The LUPs/EISs analyze the environmental effects that could result from implementing the proposed action. A Draft LUP/EIS was published in August 2013. The Proposed LUP amendment, scheduled for publication in June 2015, is a refinement of the Preferred Alternative (Alternative D) from the Draft LUP, with consideration given to comments from the public and the State of Utah, corrections, and rewording for clarification.

The purpose of this biological assessment (BA) is to review the Proposed LUP amendments to determine the extent that implementing these amendments may affect proposed threatened and endangered species and proposed or designated critical habitat in the planning area. Because the LUP is a planning document, this BA focuses on the effect of management actions to be implemented.

Under provisions of the US Endangered Species Act (ESA) of 1973, as amended (16 USC, Section 1531 et seq.), federal agencies are directed to conserve threatened and endangered (T&E) species and their habitats. Section 7(a)(1) states that all federal agencies should use “their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species...” Thus, the conservation and recovery of threatened and endangered species is not simply the responsibility of the US Fish and Wildlife Service (USFWS), but of all federal agencies. In order to meet this requirement, the BLM and Forest Service, through the land use plan, would implement management actions, standards and guidelines, protective stipulations, conditions of approval (COAs), conservation measures, required design features, best management practices, mitigation, habitat restoration, and protections.

Section 7(c) of the ESA requires the BLM to complete a BA to determine the effects of implementing a resource management plan (RMP) on listed species, based on compliance with Section 102 of NEPA (National Environmental Policy Act). Federal agencies are required to consider, avoid, or prevent adverse impacts on fish and wildlife species. The agencies are also required to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of T&E species or their critical habitat. The ESA requires agencies, such as BLM and Forest Service, to not only consult or confer with the USFWS when there is discretionary federal involvement or control over the action, but also to ensure that resources are afforded adequate consideration and protection. Formal consultation becomes necessary when the action agency requests consultation after determining that the proposed action is likely to adversely affect listed species or critical habitat, or the aforementioned federal agencies do not concur with the action agency’s finding (USFWS 1998).

This programmatic BA provides documentation and analysis for the proposed action to meet the federal requirements and agreements set forth among the federal agencies. It addresses proposed and federally listed threatened and endangered species and proposed or designated critical habitat. It has been prepared under the 1973 ESA Section 7 regulations, in accordance with the 1998 procedures set forth by USFWS and the National Marine Fisheries Service. The BLM and Forest Service, in coordination with the USFWS, conducted an analysis of the effects of the proposed LUP amendments on listed species.

## **Purpose and Need for GRSG LUP Amendment**

The BLM and Forest Service have prepared LUP amendments with associated EISs for LUPs containing GRSG habitat. This is in response to the need to inform the USFWS's March 2010 "warranted, but precluded" ESA listing decision. The inadequacy of regulatory mechanisms was identified as a significant threat in the USFWS finding on the petition to list the GRSG. The need is to ensure that the BLM and Forest Service have adequate regulatory mechanisms in the LUPs for consideration by USFWS a year in advance of its anticipated 2015 listing. The USFWS identified the principal regulatory mechanisms for the BLM and the 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 LUP amendments will focus on areas affected by threats to GRSG habitat identified by the USFWS in the March 2010 listing decision.

The purpose for the LUP amendments is to identify and incorporate appropriate conservation measures in LUPs to conserve, enhance, or restore GRSG habitat by reducing, eliminating, or minimizing threats to that habitat. Changes in the BLM and Forest Service management of GRSG habitats are anticipated to have a considerable beneficial impact on present and future GRSG populations and could reduce the need to list the species as threatened or endangered under the ESA. This is because the BLM and the Forest Service administer a large portion of GRSG habitat in the affected states.

## **Description of Planning Area**

The Utah sub-region includes BLM- and Forest Service-administered lands (Figure 1). The specific field offices and national forests in the planning area are Cedar City Field Office, Fillmore Field Office, Grand Staircase/Escalante National Monument, Kanab Field Office, Price Field Office, Richfield Field Office, Salt Lake Field Office, Vernal Field Office, Ashley National Forest, Dixie National Forest, Fishlake National Forest, Manti-La Sal National Forest, and Uinta-Wasatch-Cache National Forest. A portion of the Ashley National Forest considered in this analysis is in Wyoming (Figure 1).

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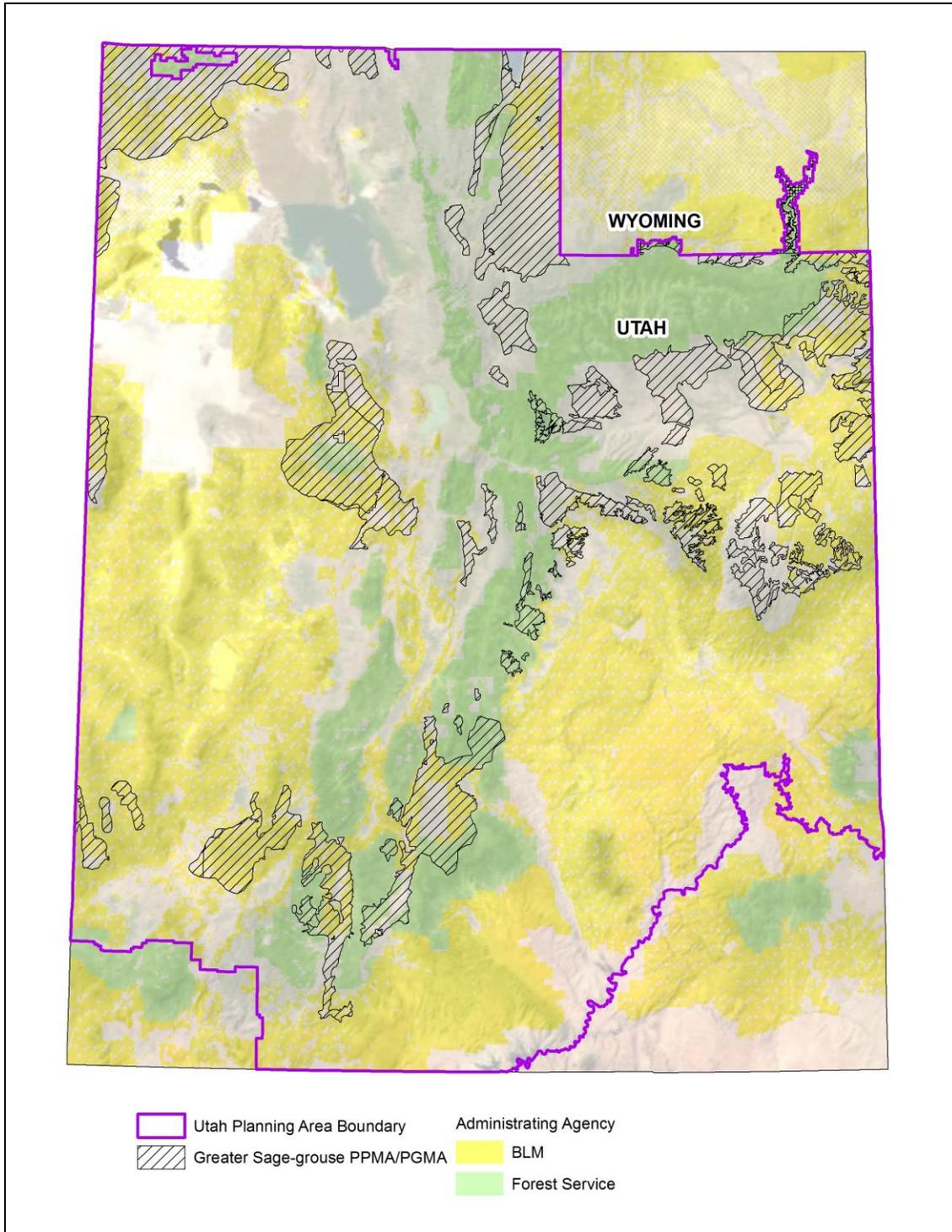


Figure 1. Utah GRSG EIS planning area boundaries

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Priority habitat management areas (PHMAs), general habitat management areas (GHMAs), and sagebrush focal areas<sup>1</sup> (SFAs) have been delineated as defined by BLM IM No. 2012-043 for Utah. Although slightly different processes were used to delineate these areas, the habitat described is analogous and will be discussed in conjunction for the purposes of analysis.

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. This is 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 a broad scale, PHMA and GHMA encompass areas of intact sagebrush, suitable for GRSG habitat needs. PHMA and GHMA may also have conifer encroachment and perennial grass-dominated areas, generally occupied by GRSG or potentially suitable for future restoration. At finer scales, PHMA and GHMA 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.

**Ownership acres and GRSG habitat by ownership in the planning area boundary are shown in**

Table 1. The planning area encompasses approximately 48 million acres, 12.7 million acres (26 percent) of which are under BLM administration and 13.9 million acres (28 percent) are under Forest Service administration. Mapped PHMA and GHMA GRSG habitats occur predominantly on BLM-administered lands (approximately 7 million acres), with lesser amounts on Forest Service lands (approximately 814,400 acres).

The decision area for this project includes lands in the planning area for which the BLM and Forest Service have authority to make management decisions. The BLM and Forest Service have jurisdiction over all BLM-administered and National Forest System lands, respectively. In addition the BLM has jurisdiction over federal minerals on National Forest System lands and in some areas where the surface is not owned by a federal entity.

The decision area also includes all GRSG mapped, occupied habitat administered by the BLM or Forest Service including non-federal lands where there are federal mineral interests. For this planning process, land with federal mineral interests refers to areas with state, private, or tribal surface estate with federal mineral estate. In total, there are 4,008,600 acres in the decision area. Tribal surface estate with tribal mineral estate is not considered part of the decision area, despite the fact that the BLM is responsible for reviewing applications for permits to drill (APDs) in these areas.

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<sup>1</sup>SFAs consist of PHMAs and GHMAs in areas that represent recognized strongholds for GRSG and are considered most vital to the species persistence and, therefore, have the strongest levels of protection.

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**Table 1. Acres of GRSG Mapped Occupied Habitat by Landownership**

<b>Population Area Name</b>	<b>Total Mapped Occupied Habitat</b>	<b>BLM Surface</b>	<b>Forest Service Surface</b>	<b>Total Decision Area<sup>2</sup></b>
Bald Hills	347,900	267,500	0	274,050
Box Elder	1,020,900	413,100	0	514,800
Carbon	497,800	125,100	49,700	307,870
Emery	96,200	100	87,600	93,000
Hamlin Valley	143,200	101,000	0	107,530
Ibapah	85,200	57,100	0	57,770
Lucerne	37,600	0	2,300	11,500
Panguitch	343,900	163,000	58,600	252,900
Parker Mountain	792,500	226,200	305,600	613,300
Rich	1,226,000	166,200	15,200	323,250
Sheeprocks	836,300	423,500	92,400	556,100
Strawberry	181,300	0	40,200	40,680
Uintah	1,557,300	556,600	86,000	779,030
Wyoming-Blacks Fork	54,800	0	54,800	54,800
Wyoming-Uinta	22,000	0	22,000	22,000
<b>Totals</b>	<b>7,242,900</b>	<b>2,499,400</b>	<b>814,400</b>	<b>4,008,580</b>

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<sup>2</sup>The decision area includes BLM- and Forest Service-administered surface and split-estate lands.

## DESCRIPTION OF THE PROPOSED ACTION

There are two selected actions, which are very similar, one for BLM-administered lands (Attachment B) and one for Forest Service-administered lands (Attachment C). These selected actions are excerpts of Chapter 2 from the Final Environmental Impact Statement (FEIS); see this chapter for full details.

In general, the BLM and FS proposed plan amendments are intended to increase the regulatory mechanisms in place to adequately conserve and maintain Greater sage-grouse. As such, the nature of these actions will avoid and/or minimize impacts on GRSG and their habitats, and are generally anticipated to be beneficial to other species, in particular, species that are found within or rely on sagebrush habitats within GRSG occupied areas. Though vegetation management and fire-related actions already exist in current management plans, BLM and FS plan amendments specifically prioritize actions in GRSG habitats. Therefore, federally listed or federally proposed species in or reliant on GRSG habitats, may have a higher likelihood of exposure to these actions. One exception is Utah prairie dogs (federally listed as Threatened), since their site-specific habitat requirements differ from the site-specific descriptions of GRSG habitats. Therefore, where the Utah prairie dog and GRSG overlap, areas will be managed in coordination with DWR, BLM, USFWS biologists, to ensure that habitat treatments benefit both species. But, due to the increased emphasis of fire suppression actions in GRSG habitat, though conservation measures will be applied to avoid and minimize impacts to Utah prairie dogs, there could still be unintentional adverse impacts. In addition, in the Panguitch area, a proposed shift of a utility corridor in the Panguitch area could affect Utah prairie dogs.

## SPECIES CONSIDERED IN THE ANALYSIS

This BA provides detailed analyses of all federally listed endangered or threatened species, proposed species, and designated or proposed critical habitat that may be affected by the actions proposed in the Utah Greater Sage-grouse LUP Amendments document. Development of this BA was guided by the regulations on Interagency Cooperation (Section 7 of the ESA) in 50 CFR, Part 402, and BLM Manual 6840.

The USFWS list of threatened, endangered, or proposed (TEP) species is composed of plants, birds, mammals, amphibians, fish, and invertebrates. Those species or critical habitat that may be in the decision area or be affected by the Preferred Alternative in the FEIS were reviewed.

Table 2 and Table 3 list USFWS TEP species that may be present or are known in the planning area and designated or proposed critical habitat for those species. The species and critical habitat in the tables were considered in this analysis and compared to the seven evaluation criteria listed below. The criteria were used to identify species or proposed or designated critical habitat that would have no effect from the action alternatives and could therefore be eliminated from detailed analysis. These numerical categories below are referred to in table 2.

1. Evaluation Criteria Decision area is outside species' range
2. Potential habitat for the species does not exist in GRSG habitat (sagebrush-steppe) or is outside the elevation range of the GRSG
3. The type or intensity of the activity in the proposed action is expected to have no impact on these species or their habitat
4. Individual animals may be accidental, dispersing, migrating, happenstance, vagrant, nomadic, or opportunistic visitors to the habitats impacted by the proposal, but no affiliation or dependence on these habitats has been shown
5. The associated conservation design or mitigations eliminate any potential for impact on the species
6. No overlap between critical habitat polygons and PHMA and GHMA
7. Critical habitat polygons may overlap with PHMA or GHMA, but primary constituent elements (PCEs) do not overlap; no essential features of critical habitat will be affected

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Species with a no effect (NE) initial biological determination could be affected by site-specific projects in or near occupied or unoccupied suitable habitat. The potential effects on all species should be analyzed for any project that could affect any of the species listed in **Error! Reference source not found.**

**Table 2. USFWS endangered and threatened species potentially occurring on BLM administered lands.**

Species (Status <sup>3</sup> )	Habitat Description and Range	Units where the species is known or suspected to be present in the decision area or that contain suitable or critical habitat in the decision area <sup>4</sup>								Evaluation Criteria	Initial Biological Determination
		Cedar City FO	Fillmore FO	GSENM	Kanab FO	Price FO	Richfield FO	Salt Lake FO	Vernal FO		
<b>Mammals</b>											
<b>Black-footed ferret</b> (E-exp) <i>Mustela nigripes</i>	Black-footed ferret habitats are directly associated with the presence of prairie dog colonies. Grassland plains are the predominant habitats associated with both the ferret and the prairie dog.  There is some overlap between the Coyote Basin Reintroduction Area and mapped GRSG habitat.	NP	NP	NP	NP	NP	NP	NP	D	3	No effect (see Attachment A)
<b>Canada lynx</b> (T) <i>Lynx Canadensis</i>	Core habitat is dense and continuous spruce/fir forests and lodgepole pine forests with snowshoe hare populations, and includes designated lynx analysis units. Secondary habitat is a mosaic of shrublands and mixed conifer forests next to core habitat. May include linkage corridors.  Two linkage corridors overlap with PHMA in the Vernal Field Office and Salt Lake Field Office.	NP	NP	NP	NP	NP	NP	S	S	NA	See detailed analysis below

<sup>3</sup> E = Endangered; E-exp. = Endangered Experimental Population; T = Threatened; P-T = Proposed Threatened; P-E = Proposed Endangered

<sup>4</sup> Sources include: Agency Resource Specialist Review ;

NF = National Forest; S = Species is Suspected within planning unit; D = Presence of species within the planning unit has been Documented; X = Either Documented or Suspected; X1: These species do not occur in the planning area, but water depletions may affect the species and/or critical habitat in downstream reaches, GSENM = Grand Staircase/Escalante National Monument. NP = Not Present; Findings: LAA, NLAA, NE

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Species (Status <sup>3</sup> )	Habitat Description and Range	Units where the species is known or suspected to be present in the decision area or that contain suitable or critical habitat in the decision area <sup>4</sup>								Evaluation Criteria	Initial Biological Determination
		Cedar City FO	Fillmore FO	GSENM	Kanab FO	Price FO	Richfield FO	Salt Lake FO	Vernal FO		
<b>Canada lynx</b> (T) <i>Lynx Canadensis</i> designated critical habitat		NP	NP	NP	NP	NP	NP	NP	NP	6	No effect
<b>Utah prairie dog</b> (T) <i>Cynomys parvidens</i>	Occur in semiarid shrub-steppe and grassland habitats. Currently limited to the central and southwestern quarter of Utah, in Beaver, Garfield, Iron, Kane, Piute, Sevier, and Wayne Counties, 6,200 feet to 9,180 feet.  Overlaps with GRSG habitat in Cedar City, Kanab, and Richfield Field Offices. Historical habitat only in the Fillmore Field Office.	D	S	NP	D	NP	D	NP	NP	NA	See detailed analysis below
<b>Birds</b>											
<b>California condor</b> (E) <i>Gymnogyps californianus</i>	Nest in caves, on cliffs, or in a crevice among boulders on a steep slope. Regularly sighted in southern Utah, particularly in the vicinity of Zion National Park/Kolob Canyons. Possible foraging overlap with GRSG habitats.	D	NP	NP	NP	NP	S	NP	NP	NA	See detailed analysis below
<b>California condor</b> (E-exp) <i>Gymnogyps californianus</i>	Nest in caves, on cliffs, or in a crevice among boulders on a steep slope. Nesting documented in Bryce Canyon National Park. Possible foraging overlap with GRSG habitats.	D	NP	D	S	NP	NP	NP	NP	NA	See detailed analysis below

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Species (Status <sup>3</sup> )	Habitat Description and Range	Units where the species is known or suspected to be present in the decision area or that contain suitable or critical habitat in the decision area <sup>4</sup>								Evaluation Criteria	Initial Biological Determination
		Cedar City FO	Fillmore FO	GSENM	Kanab FO	Price FO	Richfield FO	Salt Lake FO	Vernal FO		
<b>Mexican spotted owl (T)</b> <i>Strix occidentalis lucida</i>	<p>A habitat specialist that roosts and nests in late seral forests or rocky canyons that include desert scrub and riparian vegetation. Occurs in Arizona, Colorado, New Mexico, and Texas and in the southern and eastern portions of Utah in Duchesne, Emery, Garfield, Grand, Iron, Kane, San Juan, Uintah, Washington, and Wayne Counties.</p> <p>No documented occurrences in GRSG mapped habitats on BLM or split-estate lands. However, there is some overlap of modeled potential habitat and GRSG mapped habitat.</p>	D	S	D	D	D	D	NP	S	NA	See detailed analysis below
<b>Mexican spotted owl (T)</b> <i>Strix occidentalis lucida</i> designated critical habitat	<p>Designated critical on lands administered by the Price, Cedar City, GSENM, Kanab, and Richfield Field Offices.</p> <p>Approximately 10,482 acres of overlap with PHMA on BLM-administered lands and 998 acres in Price Field Office only.</p>	P	NP	P	P	P	P	NP	NP	NA	See detailed analysis below
<b>Southwestern willow flycatcher (E)</b> <i>Empidonax traillii extimus</i>	<p>Summer breeder in Arizona, California, Colorado, Nevada, New Mexico, Texas, and southern Utah in Emery, Garfield, Grand, Iron, Kane, San Juan, Washington, and Wayne Counties. Requires dense riparian habitats (cottonwood/willow and tamarisk vegetation), saturated soils, standing water, or nearby streams, pools, or cienegas for nesting (below 8,500 feet).</p> <p>No overlap between documented breeding or other occurrences and GRSG mapped habitat on BLM or split-estate lands in all Field Offices.</p>	D	NP	D	D	D	D	NP	D	3	No effect (see Attachment A)

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Species (Status <sup>3</sup> )	Habitat Description and Range	Units where the species is known or suspected to be present in the decision area or that contain suitable or critical habitat in the decision area <sup>4</sup>								Evaluation Criteria	Initial Biological Determination
		Cedar City FO	Fillmore FO	GSENM	Kanab FO	Price FO	Richfield FO	Salt Lake FO	Vernal FO		
<b>Southwestern willow flycatcher</b> (E) <i>Empidonax traillii extimus</i> designated critical habitat	Designated critical habitat occurs only in the Grand Staircase-Escalante National Monument Field Office and is more than 20 miles from GRSG mapped habitat.  No overlap between critical habitat and GRSG mapped habitat on BLM or split-estate lands.	NP	NP	D	NP	NP	NP	NP	NP	6	No effect
<b>Yellow-billed cuckoo</b> (T) <i>Coccyzus americanus</i>	Require large blocks of riparian woodlands (50 acres or more) in low to moderate elevation, arid to semiarid landscapes. Reported occurrences in Utah are primarily associated with larger rivers.  No known recent occurrences in GRSG mapped habitats on BLM or split-estate lands within the past 19 years.	NP	NP	D	S	S	D	S	D	3	No effect (see Attachment A)
<b>Yellow-billed cuckoo</b> <i>Coccyzus americanus</i> proposed designated critical habitat	Proposed critical habitat is in the Vernal, Richfield, and Moab Field Offices.  No overlap between known occurrences and GRSG mapped habitats on BLM or split-estate lands.	NP	NP	NP	NP	NP	NP	NP	NP	6	No effect
<b>Invertebrates</b>											
<b>Kanab ambersnail</b> (E) <i>Oxyloma haydeni kanabensis</i>	Occur in springs and seeps at bases of sandstone or limestone cliffs. In Utah, it is on private land near Kanab, around several spring-fed ponds named Three Lakes.  No overlap between known occurrences and GRSG mapped habitats on BLM or split-estate lands.	NP	NP	D	D	NP	NP	NP	NP	2	No effect

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Species (Status <sup>3</sup> )	Habitat Description and Range	Units where the species is known or suspected to be present in the decision area or that contain suitable or critical habitat in the decision area <sup>4</sup>								Evaluation Criteria	Initial Biological Determination
		Cedar City FO	Fillmore FO	GSENM	Kanab FO	Price FO	Richfield FO	Salt Lake FO	Vernal FO		
<b>Fish</b>											
<b>Bonytail chub (E)</b> <i>Gila elegans</i>	Adapted to main stem rivers of the Colorado River basin where it has been observed in pools and eddies. Based on available distribution data, flooded bottomland habitats are likely important growth and conditioning areas for bonytail, particularly as nursery habitats for young.	NP	NP	D	NP	D	NP	NP	D	1, 3	No effect (see Attachment A)
<b>Bonytail chub (E)</b> <i>Gila elegans</i> designated critical habitat	Critical habitat is the 100-year floodplain of the Colorado River. PCEs are water of sufficient quality and quantity, appropriate physical habitat (river channels, these areas also include bottom lands, side channels, secondary channels, oxbows, backwaters, and other areas in the 100-year floodplain) supporting all life stages and biological environment (food supply for all life stages, competition, and predation).  No overlap of critical habitat or GRSG mapped habitats on BLM or split-estate lands.	NP	NP	D	NP	D	NP	NP	D	6	No effect (see Attachment A)
<b>Colorado pikeminnow (E)</b> <i>Ptychocheilus lucius</i>	Inhabit a variety of habitats, by life stage, in warm-water reaches of the Colorado River main stem and larger tributaries, and require uninterrupted stream passage for spawning migrations and young dispersal.	NP	NP	D	NP	D	NP	NP	D	1, 3	No effect (see Attachment A)
<b>Colorado pikeminnow (E)</b> <i>Ptychocheilus Lucius</i> designated critical habitat	See critical habitat description above for bonytail chub (same for Colorado pikeminnow).	NP	NP	D	NP	D	NP	NP	D	6	No effect (see Attachment A)

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Species (Status <sup>3</sup> )	Habitat Description and Range	Units where the species is known or suspected to be present in the decision area or that contain suitable or critical habitat in the decision area <sup>4</sup>								Evaluation Criteria	Initial Biological Determination
		Cedar City FO	Fillmore FO	GSENM	Kanab FO	Price FO	Richfield FO	Salt Lake FO	Vernal FO		
<b>Greenback cutthroat trout</b> (T) <i>Oncorhynchus clarki stomias</i>	Habitat is restricted to La Sal Mountains east of Moab. Does not occur in GRSG habitat on Forest Service lands in the planning area.	NP	NP	NP	NP	NP	NP	NP	NP	1, 3	No effect
<b>Humpback chub</b> (E) <i>Gila cypha</i>	Live and complete their entire life cycle in canyon-bound reaches of the Colorado River main stem and larger tributaries, characterized by deep water, swift currents, and rocky substrates.	NP	NP	D	NP	D	NP	NP	D	1, 3	No effect (see Attachment A)
<b>Humpback chub</b> (E) <i>Gila cypha</i> designated critical habitat	See critical habitat description above for bonytail chub (same for humpback chub).	NP	NP	D	NP	D	NP	NP	D	6	No effect (see Attachment A)
<b>June sucker</b> (E) <i>Chasmistes liorus</i>	Native range includes Utah Lake and the adjacent Provo River, Utah. Refuge populations have been established in protected locations throughout Utah.  A refuge population (lake habitat) overlaps GRSG habitat on split-estate land in Box Elder County.	NP	NP	NP	NP	NP	NP	D	NP	3	No effect (see Attachment A)
<b>June sucker</b> (E) <i>Chasmistes liorus</i> designated critical habitat	Constituent elements are one to three feet of high-quality water flowing over a clean, unsilted gravel substrate in the Provo River.  No overlap of critical habitat or GRSG mapped habitat on BLM or split-estate lands.	NP	NP	NP	NP	NP	NP	NP	NP	6	No effect

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		Cedar City FO	Fillmore FO	GSENM	Kanab FO	Price FO	Richfield FO	Salt Lake FO	Vernal FO		
<b>Lahontan cutthroat trout (T)</b> <i>Oncorhynchus clarkii</i> ssp. <i>henshawi</i>	Occur in California, Nevada, Oregon, and Utah. Inhabits both lakes and streams but is an obligatory stream spawner in habitat that is characterized by well-vegetated and stable streambanks, stream bottoms with relatively silt-free gravel/rubble substrate, cool water, and pools in proximity to cover and velocity breaks.  Known occurrences overlap GRSB mapped habitat on BLM and split-estate lands in the Salt Lake Field Office.	NP	NP	NP	NP	NP	NP	D	NP	3	No effect (see Attachment A)
<b>Razorback sucker(E)</b> <i>Xyrauchen texanus</i>	Inhabit different habitats of the Colorado River Basin seasonally and by life stage.	NP	NP	D	NP	D	NP	NP	D	1, 3	No effect (see Attachment A)
<b>Razorback sucker(E)</b> <i>Xyrauchen texanus</i> designated critical funding	Critical habitat: Colorado River, Rifle west, Yampa River, Gunnison River.  See critical habitat description above for bonytail chub (same for razorback sucker).	NP	NP	D	NP	D	NP	NP	D	6	No effect (see Attachment A)
<b>Plants</b>											
<b>Autumn buttercup (E)</b> <i>Ranunculus aestivalis</i>	Narrowly distributed to two populations in the upper Sevier River Valley, north of Panguitch. Found on islands of drier peaty hummocks in perennial wet meadows (6,358 to 6,446 feet). Blooms August-September.  Populations are entirely on private lands, so occurrences do not overlap the decision area but are within 0.2 mile of PHMA on BLM lands. Unsurveyed habitat may exist on these nearby BLM lands.	NP	NP	NP	D <sup>1</sup>	NP	NP	NP	NP		See detailed analysis below.  Autumn buttercup has been documented within the boundaries of the Kanab Field Office but not on BLM-administered lands.

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		Cedar City FO	Fillmore FO	GSENM	Kanab FO	Price FO	Richfield FO	Salt Lake FO	Vernal FO		
<b>Barneby reed-mustard</b> (E) <i>Schoenocrambe barnebyi</i>	Endemic to the canyonlands of south-central Utah and Emery and Wayne Counties, where it grows in mixed desert shrub communities on sparsely vegetated sites on steep, eroding north to northeast facing slopes at 4,800 to 6,500 feet. Blooms May-June.  Occurs over 22 miles from the nearest PHMA/GHMA.	NP	NP	NP	NP	D	NP	NP	NP	2	No effect (see Attachment A)
<b>Barneby ridge-cress</b> (E) <i>Lepidium barnebyanum</i>	Found only in Indian Canyon in Duchesne County, on limestone outcrops in mixed desert shrub and pinyon/juniper woodlands. Very localized and occurs on poorly developed soils derived from marly shales in a zone of interbedding geologic strata from the Uinta and Green River Formations (6,200 to 6,500 feet).  Occurs over 8 miles from the nearest PHMA/GHMA.	NP	NP	NP	NP	NP	NP	NP	D	2	No effect (see Attachment A)
<b>Clay phacelia</b> (E) <i>Phacelia argillacea</i>	Steep sparsely vegetated slopes among mountain brush and pinyon/juniper, on clayey substrates derived from shale of the Green River Formation. Grows at elevations ranging from 6,000-7,000 feet.  Suitable (modeled) habitat for clay phacelia does not overlap PHMA/GHMA but does occur within about 1.5 miles of PHMA. Known sites also do not overlap GRSG habitats and are about 2 miles from PHMA.	NP	NP	NP	NP	NP	NP	D	NP		See detailed analysis below

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		Cedar City FO	Fillmore FO	GSENM	Kanab FO	Price FO	Richfield FO	Salt Lake FO	Vernal FO		
<b>Clay reed-mustard (T)</b> <i>Schoenocrambe argillacea</i>	Restricted distribution in Uintah County, in mixed desert shrub communities on steep slopes at 4,600- to 5,900-foot elevation. Blooms June-July.  Occurrences overlap GHMA in the Willow Creek area.	NP	NP	NP	NP	NP	NP	NP	D		See detailed analysis below
<b>Deseret milk-vetch (T)</b> <i>Astragalus desereticus</i>	Occur in one location on steep, highly erosive, sandy slopes in a sagebrush-juniper community near Birdseye in Wasatch County at 5,320- to 5,780-foot elevation. Blooms May-June.  The known population and its habitat occurs over 3 miles from PHMA/GHMA.	NP	NP	NP	NP	NP	D	NP	NP	2	No effect (see Attachment A)
<b>Heliotrope milk-vetch (T)</b> <i>Astragalus montii</i>	Alpine species found in openings in spruce-fir forests on plateaus in the Manti-LaSal National Forest (Sanpete and Sevier Counties), 11,000- 11,300-foot elevation. Restricted to subalpine mixed grass-forb cushion plant communities on level to gently sloping pavement surfaces of Flagstaff limestone shale barrens. Blooms July-August.  Habitat does not occur on BLM-administered lands.	NP	NP	NP	NP	NP	NP	NP	NP	1	No effect (see Attachment A)
<b>Heliotrope milk-vetch (T)</b> <i>Astragalus montii</i>  Critical habitat	Critical habitat occurs only on the Manti-LaSal National Forest, 3.9 miles from PHMA and 6.5 miles from GHMA.	NP	NP	NP	NP	NP	NP	NP	NP	6	No effect (see Attachment A)

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Species (Status <sup>3</sup> )	Habitat Description and Range	Units where the species is known or suspected to be present in the decision area or that contain suitable or critical habitat in the decision area <sup>4</sup>								Evaluation Criteria	Initial Biological Determination
		Cedar City FO	Fillmore FO	GSENM	Kanab FO	Price FO	Richfield FO	Salt Lake FO	Vernal FO		
<b>Jones cycladenia</b> (T) <i>Cycladenia humilis</i> var. <i>jonesii</i>	Occur in desert shrub in the canyonlands section of the Colorado Plateau in southeastern Utah and in northern Arizona. Grows on barren gypsiferous clay hills that form the steep sides and lower slopes of mesas (USFWS 1986). Restricted to soils with a narrow range of morphological and physical properties, but not an obligate gypsophile. Documented between 4,600 and 6,600 feet.  Known occurrences are over 25 miles from PHMA.	NP	NP	D	NP	D	D	NP	NP	2	No effect (see Attachment A)
<b>Kodachrome bladderpod</b> (E) <i>Lesquerella tumulosa</i>	Restricted to one population of scattered occurrences in the Kodachrome Flats area of the Paria River Drainage in Kane County, Utah. Grows on white, bare shale knolls derived from the Winsor member of the Carmel geologic formation. This plant is restricted to very xeric shale outcrops, at about 5,700 feet. Associated with scattered Utah juniper in a <i>Bouteloua</i> (grama grass) grassland.  Known occurrences and habitats are about 13 miles from PHMA.	NP	NP	D	NP	NP	NP	NP	NP	2	No effect (see Attachment A)

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		Cedar City FO	Fillmore FO	GSENM	Kanab FO	Price FO	Richfield FO	Salt Lake FO	Vernal FO		
<b>Last Chance townsendia</b> (T) <i>Townsendia aprica</i>	<p>Known from Emery, Sevier, and Wayne Counties, Utah, at 6,100 to 9,100 feet elevation. It generally occurs with galleta and salt desert shrubs in small barren openings of pinyon/juniper communities on barren soils of the Mancos Shale Formation. This plant's habitat is an inclusion in a larger matrix of GRSG habitat.</p> <p>Known occurrences overlap PHMA in the Lower Last Chance Creek area, on the Fishlake National Forest.</p>	NP	NP	NP	NP	D	D	NP	NP		See detailed analysis below
<b>Maguire primrose</b> (T) <i>Primula maguirei</i>	<p>A narrow endemic of Logan Canyon in Cache County, Utah, that is found on damp ledges, crevices, and over-hanging rocks along canyon walls. Almost always on north-facing, moss covered limestone cliffs at or near the canyon bottom in shallow dolomitic soils of the Laketown and Fish Haven geologic formations, 4,429 to 5,577 feet.</p> <p>This species does not occur on BLM administered lands. Occurrences on Forest Service lands are over 9 miles from PHMA.</p>	NP	NP	NP	NP	NP	NP	NP	NP	1	No effect (see Attachment A)
<b>Pariette cactus</b> (T) <i>Sclerocactus brevispinus</i>	<p>Restricted to fine soils in clay badlands derived from the Uinta Formation, Duchesne and Uintah Counties, Utah. Habitat is sparsely vegetated desert shrubland dominated by <i>Atriplex</i>, <i>Chrysothamnus</i>, and <i>Tetradymia</i> species (4,593 to 4,921 feet).</p> <p>This species is geographically restricted to Pariette Draw. PHMA occurs about 5 miles from Pariette Draw cactus habitats.</p>	NP	NP	NP	NP	NP	NP	NP	D	2	No effect (see Attachment A)

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		Cedar City FO	Fillmore FO	GSENM	Kanab FO	Price FO	Richfield FO	Salt Lake FO	Vernal FO		
<b>San Rafael cactus (E)</b> <i>Pediocactus despainii</i>	Known from only 2 populations in Emery County, with a total of about 6,000 individuals. Occurs on hills, benches, and flats of open semiarid grassland with scattered junipers and pinyon pines.  No overlap is present between GRSG habitats and San Rafael cactus locations. The closest occurrences are about 1 mile from PHMA, near South Horn Mountain.	NP	NP	NP	NP	D	D	NP	NP	2	No effect (see Attachment A)
<b>Shrubby reed-mustard (E)</b> <i>Schoenocrambe suffrutescens</i>	Occur along semi-barren, white-shale layers of the Evacuation Creek member of the Green River Formation in the Uinta Basin of eastern Utah in Duchesne and Uintah Counties. Habitat includes disjunct knolls and benches resembling small extremely dry desert islands surrounded by mixed desert shrub and pinyon/juniper woodland (3,000 to 5,200 feet elevation).  Occurrences overlap GHMA, in the Johnson Draw area.	NP	NP	NP	NP	NP	NP	NP	D		See detailed analysis below
<b>Siler pincushion cactus (T)</b> <i>Pediocactus sileri</i>	Distribution is limited to southwestern Utah and northwestern Arizona, where it is ecologically restricted to Moenkopi Formation gypsum and salt-rich soil in a variety of plant communities, from low elevation (approx. 2,789 feet) Mohave Desert scrub up to conifer woodlands and grasslands at 5,413 feet.  Siler pincushion in the Kanab Field Office occurs over 22 miles from the nearest PHMA/GHMA.	NP	NP	NP	D	NP	NP	NP	NP	2	No effect (see Attachment A)

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Species (Status <sup>3</sup> )	Habitat Description and Range	Units where the species is known or suspected to be present in the decision area or that contain suitable or critical habitat in the decision area <sup>4</sup>								Evaluation Criteria	Initial Biological Determination
		Cedar City FO	Fillmore FO	GSENM	Kanab FO	Price FO	Richfield FO	Salt Lake FO	Vernal FO		
<b>Uinta Basin hookless cactus</b> (T) <i>Sclerocactus wetlandicus</i>	<p>Endemic to the Uinta Basin, Duchesne and Uintah Counties, in northeast Utah. Found on coarse soils derived from cobble and gravel river and stream terrace deposits, or rocky surfaces on mesa slopes at 4,400 to 6,200 feet in desert shrub communities and pinyon-juniper woodlands.</p> <p>One occurrence overlaps GHMA near Nine Mile Canyon, in the Vernal Field Office.</p>	NP	NP	NP	NP	D	NP	NP	D		See detailed analysis below
<b>Ute ladies'-tresses</b> (T) <i>Spiranthes diluvialis</i>	<p>Occur in Colorado, Idaho, Montana, Nebraska, Nevada, Utah, Washington, and Wyoming. Found in moist meadows associated with perennial stream terraces, floodplains, and oxbows seasonally flooded river terraces, sub-irrigated or spring-fed abandoned stream channels, valleys, lakeshores, and human-modified wetlands (720 to 7,000 feet).</p> <p>No overlap, but a few occurrences are just over 0.1 mile from PHMA and others are close to GHMA. Some habitat likely is in PHMA/GHMA.</p>	NP	NP	D	NP	NP	NP	S	D		See detailed analysis below
<b>Welsh's milkweed</b> (T) <i>Asclepias welshii</i>	<p>Occur in Coral Pink Sand Dunes in sagebrush, juniper, and ponderosa pine communities at 5,577 to 6,234 feet.</p> <p>Known from only four locations in Kane County, Utah, and Navajo Nation lands in Arizona. Known occurrences and habitats are about 6 miles from PHMA.</p>	NP	NP	NP	D	NP	NP	NP	NP	2	No effect (see Attachment A)

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		Cedar City FO	Fillmore FO	GSENM	Kanab FO	Price FO	Richfield FO	Salt Lake FO	Vernal FO		
<b>Welsh's milkweed (T)</b> <i>Asclepias welshii</i> designated critical habitat	Do not overlap with GRSG habitat; closest critical habitat area is over 5.5 miles from PHMA.	NP	NP	NP	D	NP	NP	NP	NP	6	No effect (See Attachment A)
<b>Winkler cactus (T)</b> <i>Pediocactus winkleri</i>	Endemic to a small area of south-central Utah and restricted to a specific, alkaline soil type in salt desert shrub communities, characterized by drought-tolerant shrubs and grasses with ephemeral forbs (4,757 to 6,890 feet).  Known occurrences and habitats are about 11 miles from PHMA.	NP	NP	NP	NP	D	D	NP	NP	2	No effect (see Attachment A)
<b>Wright fishhook cactus (E)</b> <i>Sclerocactus wrightiae</i>	Occur in barren alkaline soils with widely scattered shrubs, perennial herbs, bunch grasses, or scattered pinyon and juniper (4,790 to 6,119 feet). Endemic to east-central Utah in western Emery County, southeastern Sevier County, and central Wayne County.  Although there is no overlap, the nearest occurrence is about 1 mile from PHMA. Due to the barren nature of Wright fishhook cactus habitat, it does not likely overlap with GRSG habitats.	NP	NP	NP	NP	D	D	NP	NP	2	No effect (see Attachment A)

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**Table 3. USFWS endangered and threatened species listed as potentially occurring on national Forest Service administered lands in the analysis area and that may be influenced by the preferred alternative and will be further analyzed in this document.**

Species (Status <sup>5</sup> )	Habitat Description and Range	Units in which the species is known or suspected to be present in the decision area, and/or containing suitable or critical habitat in the decision area					Evaluation Criteria	Initial Biological Determination
		Ashley NF	Dixie NF	Fishlake NF	Manti-LaSal NF	Uinta-Wasatch-Cache NF		
<b>Mammals</b>								
<b>Black-footed ferret</b> (Exp.) <i>Mustela nigripes</i>	Historically found throughout the Great Plains, mountain basins, and semiarid grasslands of North America wherever black-tailed, Gunnison's, or white-tailed prairie dogs occur.  Known current ferret populations were all reintroduced in Wyoming, South Dakota, Montana, Utah, Colorado, Arizona, Kansas, New Mexico, Canada, and Mexico. The only population in Utah is the Coyote Basin population established in 1999.	NP	NP	NP	NP	NP	1	No effect

<sup>5</sup>E = Endangered; E-exp. = Endangered Experimental Population; T = Threatened; P-T = Proposed Threatened; P-E = Proposed Endangered

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		Ashley NF	Dixie NF	Fishlake NF	Manti-LaSal NF	Uinta-Wasatch-Cache NF		
<b>Canada lynx</b> (T) <i>Lynx canadensis</i>	<p>Montane and subalpine coniferous forests above 4,000 feet, with lodgepole pine, subalpine fir and Engelmann spruce. Core habitat is dense and continuous spruce/fir forests and lodgepole pine forests with snowshoe hare populations, and includes designated lynx analysis units. Secondary habitat is a mosaic of shrublands and mixed conifer forests next to core habitat. May include linkage corridors.</p> <p>Overlap between lynx secondary habitat and GRSG mapped habitat on about 42,400 acres.</p>	D	NP	NP	NP	S	NA	See detailed analysis below
<b>Canada lynx</b> <i>Lynx canadensis</i> critical habitat	No designated critical habitat occurs in the planning area.	NP	NP	NP	NP	NP	6	No effect (see Attachment A)
<b>Utah prairie dog</b> (T) <i>Cynomys parvidens</i>	<p>Occur in semiarid shrub-steppe and grassland habitats. Limited to the central and southwestern quarter of Utah in Beaver, Garfield, Iron, Kane, Piute, Sevier, and Wayne Counties at 6,200 to 9,180 feet.</p> <p>Overlap of Utah prairie dog Management Units and GRSG mapped habitat on the Dixie and Fishlake National Forests.</p>	NP	D	D	NP	NP	NA	See detailed analysis below

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		Ashley NF	Dixie NF	Fishlake NF	Manti-LaSal NF	Uinta-Wasatch-Cache NF		
<b>Birds</b>								
<b>California condor (E)</b> <i>Gymnogyps californianus</i>	Nest in caves, on cliffs, or in crevices among boulders on a steep slope. Regularly sighted in southern Utah, particularly in the vicinity of Zion National Park/Kolob Canyons.  Possible foraging overlap with GRSG habitats.	D	D	S	S	NP	NA	See detailed analysis below
<b>California condor (Exp. 10J)</b> <i>Gymnogyps californianus</i>	Nest in caves, cliffs or crevices among boulders on a steep slope.  Nesting documented in Bryce Canyon National Park. Possible foraging overlap with GRSG habitats.	D (10J)	D (10J)	S (10J)	NA	NP	NA	See detailed analysis below
<b>Mexican spotted owl (T)</b> <i>Strix occidentalis lucida</i>	A habitat specialist that roosts and nests in late seral forests or rocky canyon habitats that include desert scrub and riparian vegetation.  Occur in southern and eastern portions of Utah in Duchesne, Emery, Garfield, Grand, Iron, Kane, San Juan, Uintah, Washington, and Wayne Counties.	NP	D	D	D	NP	NA	See detailed analysis below
<b>Mexican spotted owl (T)</b> <i>Strix occidentalis lucida</i> designated critical habitat	No overlap of Mexican spotted owl designated critical habitat and GRSG mapped habitats on National Forest lands.	NP	D	D	NP	NP	6	See detailed analysis (see Attachment A)

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		Ashley NF	Dixie NF	Fishlake NF	Manti-LaSal NF	Uinta-Wasatch-Cache NF		
<b>Southwestern willow flycatcher (E)</b> <i>Empidonax traillii extimus</i>	Summer breeder in Arizona, California, Colorado, Nevada, New Mexico, Texas, and southern Utah in Emery, Garfield, Grand, Iron, Kane, San Juan, Washington, and Wayne Counties. Requires dense riparian habitats (cottonwood/willow and tamarisk vegetation), saturated soils, standing water, or nearby streams, pools, or cienegas for nesting (below 8,500 feet).  No overlap between documented breeding or other occurrences and GRSG mapped habitat on Forest Service lands.	NP	NP	NP	D	NP	3	No effect (see Attachment A)
<b>Southwestern willow flycatcher (E)</b> <i>Empidonax traillii extimus</i> designated critical habitat	No designated critical habitat occurs on National Forest lands.	NP	NP	NP	NP	NP	6	No effect (see Attachment A)
<b>Yellow-billed cuckoo (T)</b> <i>Coccyzus americanus</i>	Require large blocks of riparian woodlands (50 acres or more) in low to moderate elevation, arid to semiarid landscapes. Reported occurrences in Utah are primarily associated with larger rivers.  No known recent occurrences in GRSG mapped habitats on Forest Service lands within the past 15 years	D	S	S	D	D	3	No effect (see Attachment A)

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		Ashley NF	Dixie NF	Fishlake NF	Manti-LaSal NF	Uinta-Wasatch-Cache NF		
<b>Yellow-billed cuckoo</b> (P-T) <i>Coccyzus americanus</i> proposed critical habitat	No overlap of proposed critical habitat and National Forest lands.	NP	NP	NP	NP	NP	6	No effect (see Attachment A)
<b>Invertebrates</b>								
<b>Kanab ambersnail</b> (E) <i>Oxyloma haydeni kanabensis</i>	Occur in springs and seeps at base of sandstone or limestone cliffs. In Utah, it is on private land near Kanab, around several spring-fed ponds named Three Lakes. No overlap of species occurrence and National Forest lands.	NP	NP	NP	NP	NP	1	No effect
<b>Fish</b>								
<b>Bonytail chub</b> (E) <i>Gila elegans</i>	Critical habitat is the Colorado River, Yampa River, Dinosaur National Monument west, and Ruby Canyon west (not in planning area).	NP	NP	NP	NP	NP	1, 3	No effect (see Attachment A)

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		Ashley NF	Dixie NF	Fishlake NF	Manti-LaSal NF	Uinta-Wasatch-Cache NF		
<b>Bonytail chub</b> (E) <i>Gila elegans</i> designated critical habitat	Critical habitat is the 100-year floodplain of the Colorado River. PCEs are water of sufficient quality and quantity, appropriate physical habitat (river channels; these areas also include bottom lands, side channels, secondary channels, oxbows, and backwaters in the 100-year floodplain) supporting all life stages and biological environment (food supply for all life stages, competition, and predation).  No overlap of critical habitat and GRSG mapped habitats on National Forest lands.	NP	NP	NP	NP	NP	6	No effect (see Attachment A)
<b>Colorado pikeminnow</b> (E) <i>Ptychocheilus lucius</i>	Occur in the upper Colorado River Basin.  No known occurrences on National Forest lands since 1961.	NP	NP	NP	NP	NP	1, 3	No effect (see Attachment A)
<b>Colorado pikeminnow</b> (E) <i>Ptychocheilus lucius</i> designated critical habitat	See critical habitat description above for bonytail chub (same for Colorado pikeminnow).  No overlap of designated critical habitat and National Forest lands in the planning area.	NP	NP	NP	NP	NP	6	No effect (see Attachment A)
<b>Greenback cutthroat trout</b> (T) <i>Oncorhynchus clarki stomias</i>	Habitat is restricted to La Sal Mountains east of Moab. Do not occur in GRSG habitat on Forest Service lands in the planning area.	NP	NP	NP	D	NP	3	No effect

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Species (Status <sup>5</sup> )	Habitat Description and Range	Units in which the species is known or suspected to be present in the decision area, and/or containing suitable or critical habitat in the decision area					Evaluation Criteria	Initial Biological Determination
		Ashley NF	Dixie NF	Fishlake NF	Manti-LaSal NF	Uinta-Wasatch-Cache NF		
<b>Humpback chub</b> (E) <i>Gila cypha</i>	Live and complete their entire life cycle in canyon-bound reaches of the Colorado River main stem and larger tributaries, characterized by deep water, swift currents, and rocky substrates.  No known occurrences on National Forest lands since 1961.	NP	NP	NP	NP	NP	1,3	No effect (see Attachment A)
<b>Humpback chub</b> (E) <i>Gila cypha</i> designated critical habitat	See critical habitat description above for bonytail chub (same for Colorado pikeminnow).  No overlap of designated critical habitat and National Forest lands in the planning area.	NP	NP	NP	NP	NP	6	No effect (see Attachment A)
<b>June sucker</b> (E) <i>Chasmistes liorus</i>	Native range is Utah Lake and the adjacent Provo River, Utah. Refuge populations have been established in protected locations throughout Utah.	NP	NP	NP	NP	S	3	No effect (see Attachment A)
<b>June sucker</b> (E) <i>Chasmistes liorus</i> designated critical habitat	Constituent elements include one to three feet of high quality water flowing over a clean, unsilted gravel substrate in the Provo River.  No overlap of critical habitat and GRSG mapped habitat on National Forest lands.	NP	NP	NP	NP	NP	6	No effect (see Attachment A)

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		Ashley NF	Dixie NF	Fishlake NF	Manti-LaSal NF	Uinta-Wasatch-Cache NF		
<b>Lahontan cutthroat trout (T)</b> <i>Oncorhynchus clarkii ssp. henshawi</i>	Occur in California, Nevada, Oregon, and Utah. Inhabit both lakes and streams but is an obligatory stream spawner in habitat that is characterized by well-vegetated and stable streambanks, stream bottoms with relatively silt-free gravel/rubble substrate, cool water, and pools in proximity to cover and velocity breaks.	NP	NP	NP	NP	NP	1,3	No effect
<b>Razorback sucker(E)</b> <i>Xyrauchen texanus</i>	Inhabits different habitats of the Colorado River Basin seasonally and by life stage.	NP	NP	NP	NP	NP	1,3	No effect (see Attachment A)
<b>Razorback sucker(E)</b> <i>Xyrauchen texanus</i> designated critical habitat	Critical habitat is the Colorado River, Rifle west, Yampa River, Gunnison River.  See critical habitat description above for bonytail chub (same for razorback sucker).	NP	NP	NP	NP	NP	6	No effect (see Attachment A)
<b>Plants</b>								
<b>Autumn Buttercup (E)</b> <i>Ranunculus aestivalis</i>	Narrowly distributed to 2 populations in the upper Sevier River Valley, north of Panguitch. Found on islands of drier peaty hummocks in perennial wet meadows (6,358 to 6,446 feet). Blooms August-September.  Because GRSG use wet meadows, there may be limited overlap with GRSG.	NP	NP	NP	NP	NP	1	No effect (see Attachment A)

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Species (Status <sup>5</sup> )	Habitat Description and Range	Units in which the species is known or suspected to be present in the decision area, and/or containing suitable or critical habitat in the decision area					Evaluation Criteria	Initial Biological Determination
		Ashley NF	Dixie NF	Fishlake NF	Manti-LaSal NF	Uinta-Wasatch-Cache NF		
<b>Barneby reed-mustard (E)</b> <i>Schoenocrambe barnebyi</i>	<p>Endemic to the canyonlands of south-central Utah, Emery and Wayne Counties, where it grows in mixed desert shrub communities on sparsely vegetated sites on steep, eroding north to northeast facing slopes at 4,800 to 6,500 feet. Blooms May-June.</p> <p>Occur over 22 miles from the nearest PHMA/GHMA.</p>	NP	NP	NP	NP	NP	1	No effect (see Attachment A)
<b>Barneby ridge-cress (E)</b> <i>Lepidium barnebyanum</i>	<p>Found only in Indian Canyon in Duchesne County on limestone outcrops in mixed desert shrub and pinyon/juniper woodlands. Very localized on poorly developed soils derived from marly shales in a zone of interbedding geologic strata from the Uinta and Green River Formations (6,200 to 6,500 feet).</p> <p>Barneby ridge cress occurs over 8 miles from the nearest PHMA/GHMA.</p>	NP	NP	NP	NP	NP	1	No effect (see Attachment A)

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Species (Status <sup>5</sup> )	Habitat Description and Range	Units in which the species is known or suspected to be present in the decision area, and/or containing suitable or critical habitat in the decision area					Evaluation Criteria	Initial Biological Determination
		Ashley NF	Dixie NF	Fishlake NF	Manti-LaSal NF	Uinta-Wasatch-Cache NF		
<b>Clay phacelia</b> (E) <i>Phacelia argillacea</i>	<p>Grow at elevations ranging from 6,000 to 7,000 feet. Found on steep hillsides of shaley clay colluvium on an extremely limited band of soil derived from an upper member of the Green River geologic formation called Green River Shale in Utah County, Utah.</p> <p>Suitable (modeled) habitat for clay phacelia does not overlap PHMA or GHMA but occurs within 0.85 mile of PHMA and within 0.4 mile of GHMA. Known sites also do not overlap GRSG habitats and are about 1.5 miles from PHMA.</p>	NP	NP	NP	S	D	2	See detailed analysis below
<b>Clay reed-mustard</b> (T) <i>Schoenocrambe argillacea</i>	<p>Restricted distribution in Uintah County in mixed desert shrub communities on steep slopes at 4,600 to 5,900 foot elevation. Blooms June-July.</p> <p>Occurrences overlap GHMA in the Willow Creek area (BLM).</p>	NP	NP	NP	NP	NP	1	No effect in Forest Service units; see detailed analysis below for BLM units
<b>Deseret milk-vetch</b> (T) <i>Astragalus desereticus</i>	<p>Occur on steep, highly erosive, sandy slopes in a sagebrush-juniper community near Birdseye in Wasatch County at 5,320 to 5,780 foot elevation. Blooms May-June.</p> <p>The known population and its habitat occurs over 3 miles from PHMA/GHMA.</p>	NP	NP	NP	S	S	2	No effect (see Attachment A)

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Species (Status <sup>5</sup> )	Habitat Description and Range	Units in which the species is known or suspected to be present in the decision area, and/or containing suitable or critical habitat in the decision area					Evaluation Criteria	Initial Biological Determination
		Ashley NF	Dixie NF	Fishlake NF	Manti-LaSal NF	Uinta-Wasatch-Cache NF		
<b>Heliotrope milk-vetch</b> (T) <i>Astragalus montii</i>	Alpine species found in openings in spruce-fir forests on plateaus in the Manti-LaSal National Forest (Sanpete and Sevier Counties), 11,000- to 11,300-foot elevation. Restricted to subalpine mixed grass-forb cushion plant communities on level to gently sloping pavement surfaces of limestone (Flagstaff limestone); shale barrens. Blooms July-August.	NP	NP	NP	D	NP	2	No effect (see Attachment A)
<b>Heliotrope milk-vetch</b> (T) ( <i>Astragalus montii</i> ) designated critical habitat	Designated critical habitat occurs on the Manti-LaSal National Forest but is 3.9 miles from PHMA and 6.5 miles from GHMA.	NP	NP	NP	D	NP	6	No effect (see Attachment A)
<b>Jones cycladenia</b> (T) <i>Cycladenia humilis</i> var. <i>jonesii</i>	Occur in desert shrub in the canyonlands section of the Colorado Plateau in southeastern Utah and in northern Arizona. Grow on barren gypsiferous clay hills that form the steep sides and lower slopes of mesas (USFWS 1986). Restricted to soils with a narrow range of morphological and physical properties but not an obligate gypsophile (Boettinger 1997). Documented between 4,600 and 6,600 feet.  Known occurrences are over 25 miles from PHMA.	NP	NP	NP	NP	NP	1	No effect (see Attachment A)

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Species (Status <sup>5</sup> )	Habitat Description and Range	Units in which the species is known or suspected to be present in the decision area, and/or containing suitable or critical habitat in the decision area					Evaluation Criteria	Initial Biological Determination
		Ashley NF	Dixie NF	Fishlake NF	Manti-LaSal NF	Uinta-Wasatch-Cache NF		
<b>Kodachrome bladderpod</b> (E) <i>Lesquerella tumulosa</i>	<p>Endemic only in Kane County, Utah. Restricted to one population of scattered occurrences in the Kodachrome Flats area of the Paria River Drainage. Kodachrome bladderpod is restricted to very xeric shale outcrops at about 5,700 feet. Occurs on extremely dry, sparsely vegetated, white shale knolls with thin soils derived from the Windsor Member of the Carmel Formation. Associated with scattered Utah juniper in a <i>Bouteloua</i> grassland.</p> <p>Known occurrences and habitats are about 13 miles from PHMA.</p>	NP	NP	NP	NP	NP	1	No effect (see Attachment A)
<b>Last Chance townsendia</b> (T) <i>Townsendia aprica</i>	<p>Known from Emery, Sevier, and Wayne Counties in Utah, at 6,100 to 9,100 feet in elevation. It generally occurs with galleta and salt desert shrubs in small barren openings of pinyon-juniper communities on barren soils of the Mancos Shale Formation. This plant's habitat is an inclusion in a larger matrix of GRSG habitat.</p> <p>Known occurrences overlap PHMA in the Lower Last Chance Creek area, in the Fishlake National Forest.</p>	NP	D	D	NP	NP		See detailed analysis below

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		Ashley NF	Dixie NF	Fishlake NF	Manti-LaSal NF	Uinta-Wasatch-Cache NF		
<b>Maguire primrose</b> (T) <i>Primula maguirei</i>	<p>A narrow endemic of Logan Canyon in Cache County, Utah. Found on damp ledges, crevices, and overhanging rocks along canyon walls. Almost always on north-facing, moss covered limestone cliffs at or near the canyon bottom in shallow dolomitic soils of the Laketown and Fish Haven geologic formations (4,429 to 5,577 feet).</p> <p>Occurrences are mapped in PHMA/GHMA, but the moist cliff habitat of this species is not a target for GRSG conservation actions.</p>	NP	NP	NP	NP	D	2	No effect (see Attachment A)
<b>Pariette cactus</b> (T) <i>Sclerocactus brevispinus</i>	<p>Restricted to fine soils in clay badlands derived from the Uinta Formation, Duchesne and Uintah Counties, Utah. Habitat is sparsely vegetated desert shrubland, dominated by <i>Atriplex</i>, <i>Chrysothamnus</i>, and <i>Tetradymia</i> species (4,593 to 4,921 feet).</p> <p>This species is geographically restricted to Pariette Draw, about 4 miles from PHMA.</p>	NP	NP	NP	NP	NP	1	No effect (see Attachment A)

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		Ashley NF	Dixie NF	Fishlake NF	Manti-LaSal NF	Uinta-Wasatch-Cache NF		
<b>San Rafael cactus (E)</b> <i>Pediocactus despainii</i>	<p>Known from only two populations in Emery County, with a total of about 6,000 individuals. Occur on hills, benches, and flats of open, semiarid grassland, with scattered junipers and pinyon pines.</p> <p>No overlap with GRSB habitats. The closest occurrences are about 1 mile from PHMA near South Horn Mountain.</p>	NP	NP	D	NP	NP	1	No effect (see Attachment A)
<b>Shrubby reed-mustard (E)</b> <i>Schoenocrambe suffrutescens</i>	<p>Occur along semi-barren, white-shale layers of the Evacuation Creek member of the Green River Formation in the Uinta Basin of eastern Utah in Duchesne and Uintah Counties. Habitat includes disjunct knolls and benches resembling small, extremely dry desert islands, surrounded by mixed desert shrub and pinyon-juniper woodland (3,000 to 5,200 feet in elevation).</p> <p>Occurrences do overlap GHMA in the Johnson Draw area on BLM-administered lands. The species is not suspected of occurring in National Forests.</p>	NP	NP	NP	NP	NP	1	No effect in Forest Service units (see Attachment A)

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Species (Status <sup>5</sup> )	Habitat Description and Range	Units in which the species is known or suspected to be present in the decision area, and/or containing suitable or critical habitat in the decision area					Evaluation Criteria	Initial Biological Determination
		Ashley NF	Dixie NF	Fishlake NF	Manti-LaSal NF	Uinta-Wasatch-Cache NF		
<b>Siler pincushion cactus</b> (T) <i>Pediocactus sileri</i>	Distribution is limited to southwestern Utah and northwestern Arizona, where it is ecologically restricted to Moenkopi Formation gypsum and salt-rich soil in a variety of plant communities, from low elevation (approx. 2,788 feet) Mohave Desert scrub up to conifer woodlands and grasslands at 5,413 feet.  Occurs over 22 miles from the nearest PHMA/GHMA.	NP	NP	NP	NP	NP	1	No effect (see Attachment A)
<b>Uinta Basin hookless cactus</b> (T) <i>Sclerocactus wetlandicus</i>	Endemic to the Uinta Basin, Duchesne and Uintah Counties, in northeast Utah. Found on coarse soils derived from cobble and gravel river and stream terrace deposits or on rocky surfaces on mesa slopes at 4,400 to 6,200 feet in desert shrub communities and pinyon-juniper woodlands.  One occurrence overlaps GHMA near Ninemile Canyon, BLM administered lands. It is not suspected of occurring on National Forest lands.	NP	NP	NP	NP	NP	1	No effect for Forest Service units; see detailed analysis below for BLM units

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		Ashley NF	Dixie NF	Fishlake NF	Manti-LaSal NF	Uinta-Wasatch-Cache NF		
<b>Ute ladies'-tresses</b> (T) <i>Spiranthes diluvialis</i>	Occurs in Colorado, Idaho, Montana, Nebraska, Nevada, Utah, Washington, and Wyoming. Found in moist meadows associated with perennial stream terraces, floodplains, and oxbows; seasonally flooded river terraces; sub-irrigated or spring-fed abandoned stream channels and valleys; lakeshores; and human-modified wetlands (720 to 7,000 feet).  No overlap but a few occurrences are just over 0.1 mile from PHMA, and others are close to GHMA. Some habitat likely is in PHMA/GHMA.	NP	NP	S	NP	D		See detailed analysis below
<b>Welsh's milkweed</b> (T) <i>Asclepias welshii</i>	Occurs in Coral Pink Sand Dunes in sagebrush, juniper, and ponderosa pine communities at (5,577 to 6,233 feet).  Known from only four locations in Kane County, Utah, and Navajo Nation lands in Arizona. Known occurrences and habitats are about 6 miles from PHMA.	NP	NP	NP	NP	NP	1	No effect (see Attachment A)
<b>Welsh's milkweed</b> (T) <i>Asclepias welshii</i> designated critical habitat	Does not overlap with GRSB habitat; closest critical habitat area is over 5.5 miles from PHMA.	NP	NP	NP	NP	NP	6	No effect (see Attachment A)

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Species (Status <sup>5</sup> )	Habitat Description and Range	Units in which the species is known or suspected to be present in the decision area, and/or containing suitable or critical habitat in the decision area					Evaluation Criteria	Initial Biological Determination
		Ashley NF	Dixie NF	Fishlake NF	Manti-LaSal NF	Uinta-Wasatch-Cache NF		
<b>Winkler cactus (T)</b> <i>Pediocactus winkleri</i>	<p>Endemic to a small area of south-central Utah. The species is restricted to a specific alkaline soil type in salt desert shrub communities, characterized by drought-tolerant shrubs and grasses with ephemeral forbs (4,757 to 6,889 feet).</p> <p>Known occurrences and habitats are about 11 miles from PHMA.</p>	NP	NP	NP	D	NP	1	No effect (see Attachment A)
<b>Wright fishhook cactus (E)</b> <i>Sclerocactus wrightiae</i>	<p>Occurs in barren alkaline soils, with widely scattered shrubs, perennial herbs, bunch grasses, or scattered pinyon and juniper (4,790 to 6,1818 feet). Endemic to east-central Utah in western Emery County, southeastern Sevier County, central Wayne County, and a small strip in Garfield County.</p> <p>Although there is no overlap, the nearest occurrence is about 1 mile from PHMA. Due to the barren nature of Wright fishhook cactus habitat, it does not likely overlap with GRSG habitats.</p>	NP	NP	NP	NP	NP	1	No effect (see Attachment A)

## SPECIES INFORMATION AND CRITICAL HABITAT

### A. Wildlife and Fish

#### Canada lynx (*Lynx canadensis*)—Threatened

##### *Species/Habitat Description*

The Canada lynx (*Lynx canadensis*) occurs across the boreal forests of Canada and Alaska into isolated spruce, fir, and lodgepole pine forests of the northern United States, including Washington, Montana, Wisconsin, Michigan, and Maine. Isolated or dispersing populations are thought to occur in northeastern Oregon, Wyoming, Utah, and Colorado (USFWS 2003). Lynx are generally found in the northern boreal forest in association with habitat for snowshoe hares and other suitable prey species. Early successional stands with high densities of shrubs and seedlings are optimal for hares and provide important habitats for lynx foraging activities. Mature forest stands are used for denning, cover for kittens, and linkage areas, which consist of habitat that provides landscape connectivity between blocks of lynx habitat (Ruggiero et al. 1999).

##### *Life History*

The lynx is a medium-sized cat with long legs, large well-furred paws, long tufts on the ears, and a short, black-tipped tail (McCord and Cardoza 1982). Adult males average 22 pounds and are 33.5 inches from head to tail; females average 19 pounds and are 32 inches from head to tail. The lynx's long legs and large feet make it highly adapted for hunting in deep snow.

Lynx use large woody debris, such as downed logs and windfalls, to provide denning sites with security and thermal cover for kittens (McCord and Cardoza 1982; Koehler 1990; USFWS 1999). For den sites, the age of the forest stand does not seem as important as the amount of downed, woody debris available.

The size of lynx home ranges varies by the animal's gender, abundance of prey, season, and the density of lynx populations (Koehler 1990; Poole 1995). Documented home ranges vary from 3 to 300 square miles (Saunders 1963; Brand et al. 1976; Mech 1980; Koehler and Aubry 1994). Preliminary research supports the hypothesis that lynx home ranges at the southern extent of the its range are generally large compared to those in the northern portion of the range in Canada (Koehler and Aubry 1994).

Lynx are highly specialized predators whose primary prey is the snowshoe hare (*Lepus americanus*), which has evolved to survive in areas that receive deep snow (Bittner and Rongstad 1982). Snowshoe hares use forests with dense understories that provide forage, cover to escape from predators, and protection during extreme weather (Wolfe et al. 1982; Hodges 1998, 1999). Generally, earlier successional forest stages have greater understory structure than do mature forests and therefore support higher hare densities (Hodges 1998, 1999). However, mature forests can also provide snowshoe hare habitat as openings develop in the canopy of mature forests when trees succumb to disease, fire, wind, ice, or insects and the understory grows. Lynx concentrate their hunting in areas where hare activity is relatively high (Koehler and Aubry 1994; Ward and Krebs 1985). Lynx also prey opportunistically on other small mammals and birds, particularly when hare populations decline (Nellis et al. 1972; Brand et al. 1976; McCord and Cardoza 1982).

##### *Status and Distribution*

The USFWS lists Canada lynx as threatened. In the contiguous United States, overall numbers and range are substantially reduced from historical levels. At present, numbers have not recovered from

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overexploitation by both regulated and unregulated harvest in the 1970s and 1980s. Forest management practices that result in the loss of diverse age structure, fragmentation, road construction, urbanization, agriculture, recreational developments, and unnatural fire frequencies have altered suitable habitat in many areas. As a result, many states may have insufficient habitat quality or quantity to sustain lynx or their prey. Human access into habitat has increased dramatically over the last few decades contributing to direct and indirect mortality and displacement from suitable habitat. Although legal take is highly restricted, existing regulatory mechanisms may be inadequate to protect small remnant populations or to conserve habitat. Competition with bobcats and coyotes may be a concern in some areas.

In 1994, the USFWS (*Federal Register*, August 26, 1994) found that federal listing of the North American population of Canada Lynx may be warranted, and it initiated a formal status review. In 1997, the USFWS (*Federal Register*, May 27, 1997) determined that listing of the contiguous US population is warranted but is precluded by other higher priority actions. In 1998, the USFWS (*Federal Register*, July 8, 1998) proposed listing the lower 48-state population segment as threatened. In 1999, the USFWS (*Federal Register*, July 8, 1999) extended for not more than six months a decision to list the contiguous US population segment as a threatened species; this extension was made to allow time to resolve a dispute over the status of the lower 48-state lynx population. In 2000, the USFWS determined threatened status for the contiguous US distinct population segment of *L. canadensis*.

In 2006, the USFWS designated critical habitat for the contiguous US distinct population segment. In total, approximately 1,841 square miles fall within the boundaries of the critical habitat designation, in three units in Minnesota, Montana, and Washington (*Federal Register*, November 9, 2006). No designated critical habitat exists in the state of Utah.

In the summer of 2004, two radio-collared male lynx from the experimental-nonessential Colorado transplant population were detected in Utah. One lynx crossed through the Wasatch-Cache National Forest while traveling northward along the Wasatch Front. It continued to head north out of the Forest into Idaho or Wyoming. The other lynx, after crossing the Uinta Mountains, headed south toward Panguitch (Richard Williams, personal communication, September 28, 2004,). In addition, there is one report of a lynx trapped in Cache County in 1991 (Ruggiero et al. 1999). In December 2006 two lynx were trapped and tranquilized after being treed by dogs (Brian Maxfield, personal communication, 2007). The first, a female, was caught on the north end of the Book Cliffs near Argyle Canyon; the other, a male, was caught in the Mineral Mountains between Beaver and Milford, Utah. It is believed that both lynx migrated from the San Juan Mountains in Colorado where Colorado state wildlife officials started an experimental population in 1999, and both lynx were relocated back into the release area in Colorado in December 2006.

The Utah population is isolated and is considered to be comprised of dispersing rather than breeding individuals. Although there may be some individual lynx moving through the Vernal Field Office (VFO) area, no known resident populations of lynx have been documented in the VPA.

#### *Ashley and Uinta-Wasach-Cache National Forests*

There are 10 specimens of lynx that have been reliably traced to the Uinta Mountains, with collection dates ranging from 1916 to 1972. According to a completed biological assessment, lynx occur rarely if at all in the Uintas. Ashley National Forest staff began hair snare surveys in the fall of 1999 as part of the National Lynx Detection Protocol. In 1999, several hair samples were collected and results from the Rocky Mountain Research lab indicated no positive Canada lynx hair samples. Hair samples from the 2000 and 2001 field seasons also found no positive Canada lynx hair samples (USDA Forest Service 2006).

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Between February of 1999 and March of 2007, 22 lynx (7 females and 15 males) from the experimental releasing in Colorado have been located at least once in Utah. Use-density of these locations indicates the primary area of use is in the Uinta Mountains, with most use in the Wasatch-Cache National Forest and a somewhat lesser degree of use on the Ashley National Forest. Although the potential for future residency of lynx in the Uinta Mountains is possible, these individual lynx were transient. Before the recent lynx occurrences, the last confirmed lynx in the Uinta Mountains was in 1972.

Photographic bait stations were placed on the Vernal District in 2005, in the Yellowstone drainage of the Roosevelt/Duchesne District in 2006 and in the Pole Creek (Roosevelt/Duchesne District) and Whiterocks (Vernal District) drainages in 2009. The photographic bait stations were to sample the Uintas for the presence of lynx and wolverine. To date, there have been no detections of lynx at these bait stations. Additionally, in the winter of 2010 161 miles of forest roads were surveyed for lynx and wolverine tracks in the National Forest (including the Rock Creek drainage), but no lynx tracks were detected (USDA Forest Service 2010).

In 2007, the FEIS for the Northern Rockies Lynx Management Direction (NRLMD) was released (USDA Forest Service 2007). The Ashley National Forest was included in the analysis and subsequently incorporated NRLMD direction as a Forest Plan amendment. The Ashley National Forest is considered unoccupied by lynx under the NRLMD.

While Canada lynx are not known to occur on BLM- or Forest Service-administered lands in the planning area, suitable habitat and lynx analysis units (LAUs) have been mapped in the Ashley and Uinta-Wasatch-Cache National Forests. Approximately 39,839 acres of lynx suitable habitat overlaps with PHMA/GHMA on the forests listed above. Lynx habitat overlap consists of both primary and secondary classifications.

### **Threats**

In determining the threatened status for the contiguous US distinct population segment, the USFWS (2000) cited the inadequacy of existing regulatory mechanisms. “Current USFS and BLM LUPs include programs, practices, and activities within the authority and jurisdiction of federal land management agencies that may threaten lynx or lynx habitat. The lack of protection for lynx in these plans render[s] them inadequate to protect the species” (USFWS 2000). Past extensive logging that eliminated habitat for lynx and snowshoe hare was detrimental. Habitat has been lost due to suppression of forest fires and ecological succession to habitats that no longer support snowshoe hare and lynx. Fragmentation, due to forestry, agriculture, and roads, and the subsequent isolation of suitable habitat is a concern. Lack of immigration from Canadian lynx populations is an important factor in some regions. Past excessive trapping of lynx (as recently as the 1970s and 1980s) depressed populations and may have been detrimental to local lynx populations in Washington and elsewhere. Road construction causes habitat fragmentation and allows increased human access into lynx habitat; this may increase lynx mortality by facilitating access to hunters and trappers (although there is no legal harvest except for two lynx per year in Montana); incidental harvest of lynx in the course of legal trapping/hunting for other species may be a problem in some areas. Increased winter recreation (snowmobiles and ski area development) may be displacing or killing lynx. Habitat changes and increased access into lynx habitats has increased competition, and bobcat and coyote have displaced lynx in some areas.

### **Utah prairie dog (*Cynomys parvidens*)—Threatened**

#### ***Species/Habitat Description***

Utah prairie dogs (UPDs) occupy grasslands and open shrubland habitat with low shrubs on sites with well-drained soils, at elevations ranging from 6,200 to 9,180 feet above sea level (USFWS 2012a). Five

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factors have been identified as influencing the suitability of prairie dog habitat: soils, vegetation height and density, vegetation moisture availability, and vegetation quantity and quality. Deep well-drained soils provide protection from predators and extreme temperatures and reduce the risk of drowning (Toombs 2007; 72 *Federal Register* 7843-7852). Suitable sites are flat or gentle slopes with soil that can support burrowing (Toombs 2007). Open grassy sites are preferred for foraging, as prairie dogs can communicate and detect predators better when vegetation is low or sparse enough to see through. Water is obtained from eating moisture-rich vegetation; sufficient succulent forage must be available to survive drought conditions (Toombs 2007; 72 *Federal Register* 7843-7852).

### *Life History*

UPDs live in groups or families. They are social and maintain family unity through physical contact. The species forms colonies and spends much of its time in underground burrows, often hibernating in the winter. The life span of the UPD ranges from 5 to 8 years.

The species breeds in the spring, and young can be seen aboveground in early June. The UPD is sexually mature after its first winter and breeds in March. Gestation lasts 34 to 35 days, with litter sizes ranging from 1 to 6 pups. The pups remain underground for their first 6 weeks of life.

Predators are badgers, weasels, ferrets, coyotes, bobcats, foxes, hawks, humans, eagles, and some snakes. In an established prairie dog colony, predators do not make a significant impact; conversely they have a huge impact on translocation sites where an established social system or burrow system is not present.

Prairie dogs forage primarily on grasses and forbs and tend to select those with higher moisture content. They often select colony sites in swales where the vegetation can remain moist even in drought conditions (Collier 1975). Vegetation must be short to allow the prairie dogs to see approaching predators as well as other prairie dogs in the colony (Collier 1975; Crocker-Bedford and Spillet 1981). Soils need to be well drained for burrow sites. Burrows must be deep enough to protect the prairie dogs from predators and environmental and temperature extremes.

### *Status and Distribution*

By the 1960s, distribution of the UPD was greatly reduced due to disease (sylvatic plague), poisoning, drought, shooting, and human-related habitat alteration from cultivation and poor grazing practices. The UPD was first federally listed as an endangered species (38 *Federal Register* 14678, June 4, 1973); it was later down-listed to its current federal listing status as a threatened species (49 *Federal Register* 22330, May 29 1984), due to the improved status and increased population numbers seen on private lands since 1976.

It was once widely distributed throughout southern Utah. The UPD, which now occurs in the southwestern part of the state (Beaver, Garfield, Iron, Kane, Millard, Piute, Sanpete, Sevier, and Wayne Counties), is one of three prairie dog species found in Utah. The species is not found anywhere else in the world, making it the only non-fish vertebrate endemic to Utah. The population declined from an estimated 95,000 animals in 1920, to less than 3,500 in 1976. No critical habitat has been designated for the UPD.

The Utah Prairie Dog Recovery Plan identified three areas in Utah for its recovery: West Desert (primarily in eastern Iron County, with a few isolated colonies in western Iron and southern Beaver Counties), Pansaugaunt Area (along the East Fork and main stem of the Sevier River, in western Garfield County), and Awapa Plateau (portions of north-central Garfield, western Wayne, eastern Piute, and southeastern Sevier Counties). The goal of the recovery plan was to establish three populations on public lands, one in each of the three identified recovery areas, with a minimum population of 813 animals in each population sustained for five consecutive years.

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In 1997, the Utah Prairie Dog Recovery Implementation Team completed the Utah Prairie Dog Interim Conservation Strategy. The team determined that the Utah Prairie Dog Recovery Plan did not consider the latest scientific information for the species and that new recovery strategies needed to be considered. The team also recognized that existing conservation and recovery criteria for the UPD were not working and that the information necessary to define new and better criteria was not available. The resulting Interim Conservation Strategy identified an interim management strategy that focuses on habitat improvement, research, and public involvement. An instruction memorandum from the BLM State Director formalized implementation of the Utah Prairie Dog Interim Conservation Strategy on BLM-administered lands in Utah, and directed that all actions related to UPD management be guided by this strategy (IM No. UT 2002-040, March 13, 2002).

In 1972, the Utah Division of Wildlife Resources (UDWR) initiated a transplant program to move animals from private agricultural lands to areas of historical occupancy on public lands. For 31 years, from 1972 to 2002, over 19,561 UPD were translocated to public land sites (Bonzo 2003). Although initial survival has been limited, the number of UPD colonies on public lands has increased. Increases in the known number of active colonies on public land can be attributed to a combination of factors, including the translocation program, natural increases, flea dusting, distribution from existing sites, and discovery of previously unrecorded colonies. However, approximately 74 percent of UPD still occur on private and other non-federal lands.

UPD suitable habitat and distribution is public lands managed by the BLM and Forest Service in Utah in the planning area.

### **Threats**

UPD populations are susceptible to sylvatic plague (*Yersinia pestis*), a bacterium introduced to North American in the late 1800s (Cully 1993). There is a limited understanding of the variables that determine when sylvatic plague will impact prairie dog populations. Fleas are the vectors that spread the disease and can be brought into the vicinity of a prairie dog colony by a suite of mammals. Plague outbreaks generally occur when populations increase to high densities causing increased stress among individuals and easier transmission of disease between individuals.

Threats to the species are intentional poisoning, urban development, shooting, diseases such as plague, habitat loss and degraded habitat quality, and environmental conditions, such as vegetation changes and drought. Factors leading to degraded habitat quality arise from landownership and management practices, including overgrazing and fire suppression, recreation, off-highway vehicles (OHVs), energy exploration, and development. Overgrazing has led to vegetation changes from grass to shrub, erosion of the swales that were historically occupied by UPD, and lowered water tables, which in turn reduces the amount of moisture available for palatable grasses and forbs that supply summer food for UPD. Habitat loss and poor habitat quality are immediate concerns for the remaining UPD. Most of the species' distribution is on private lands, which are now or will be largely developed for agricultural production or housing.

## **Mexican Spotted Owl (*Strix occidentalis lucida*)—Threatened**

### **Species/Habitat description**

The Mexican spotted owl is one of three subspecies of spotted owl recognized by the American Ornithologists' Union (AOU 1957:285). The other two subspecies are the northern spotted owl (*S. o. caurina*) and the California spotted owl (*S. o. occidentalis*). The Mexican subspecies is geographically isolated from both the California and northern subspecies.

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Steep-walled rocky canyonlands provide typical owl habitat in the BLM Price and Richfield Field Offices and the Manti-La Sal National Forest within the planning area. Owls use Canyon habitat for nesting, roosting and foraging and includes landscapes dominated by vertical walled, rocky cliffs in complex watersheds, including many tributary side canyons. Rock walls must include caves, ledges, and fracture zones that provide protection for nesting and roosting sites. Although it is difficult to rely on vegetation alone to identify canyon habitat, these areas frequently contain small clumps or stringers of mixed-conifer, ponderosa pine, pine-oak, pinyon-juniper, and riparian vegetation (69 *Federal Register* 53181). Willey and Van Riper (2007) documented owl use in Utah to include steep canyon areas below rims.

### *Life History*

Mexican spotted owls breed sporadically and do not nest every year (Ganey 1988). In good years, most of the population will nest, whereas in other years only a small proportion of pairs will nest successfully. Breeding sites are below canyon rims; however, it is known that owls use areas outside of the canyons (i.e., rims and mesa tops). In the planning area, owls nest and roost primarily on cliff faces, using protected caves and ledges, and forage in canyon bottoms, on cliff faces and benches and along canyon rims and adjacent lands.

Courtship begins in March and eggs are laid in late March or early April. Incubation begins shortly after the first egg is laid, and is performed entirely by the female. During incubation, the female leaves the nest only to defecate, regurgitate pellets, or receive prey delivered by the male, who does most or all of the foraging. The eggs usually hatch in early May (Ganey 1988). Females brood their young almost constantly, leaving their nests for only brief periods during the night. Nestling owls, in most cases, fledge from early to mid-June in most cases (Ganey 1988). Owlets often leave the nest before they can fly, simply jumping from the nest onto surrounding tree branches or the ground. Within a week after leaving the nest, most owlets can make short clumsy flights. Three weeks after leaving the nest owlets can hold and tear up prey on their own, and by late July most have become proficient at pouncing on crawling insects. The young depend on their parents for food during the summer and will eventually disperse out of the natal area in the fall.

Mexican spotted owls appear to use a wider variety of cover types for foraging than for roosting or nesting. Owls forage in a variety of habitats: managed and unmanaged forests, pinyon-juniper woodlands, mixed-conifer and ponderosa pine forests, cliff faces and terraces between cliffs, and riparian zones (Ganey and Balda 1994; Willey 1998a, 1998b; Ganey et al. 2003; Willey and Van Riper 2007).

### *Status and Distribution*

The Mexican spotted owl was listed as a threatened species on March 16, 1993 (58 *Federal Register* 14248). Mexican spotted owl is found in forested mountain and canyons habitat from southern Utah and Colorado to the mountains of Arizona, New Mexico, west Texas and into the mountains of northern and central Mexico.

On August 31, 2004, the USFWS designated approximately 8.6 million acres of critical habitat in Arizona, Colorado, New Mexico, and Utah on federal lands (69 *Federal Register* 53181). Approximately, 1,928,878 acres of designated critical habitat exists in the planning area under all landownerships. Critical habitat only slightly overlaps with PHMA/GHMA (0.5 percent of the MSO critical habitat; approximately 10,481 acres) on Forest Service and BLM-administered lands. MSO critical habitat occurs within the Price Field Office and Manti-La Sal National Forest, and an additional 998 acres overlap with PHMA/GHMA on split-estate lands in the Price Field Office boundary.

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The primary constituent elements of the critical habitat designation are those physical and biological features that support nesting, roosting, and foraging. Primary constituent elements related to critical habitat in Utah are one or more of the following:

- Presence of water (often providing cooler temperatures and higher humidity than the surrounding areas)
- Clumps or stringers of mixed conifer, pine-oak, pinyon-juniper, or riparian vegetation
- Canyon walls containing crevices, ledges, or caves
- High percent of ground litter and woody debris

The primary constituent elements provide a qualitative description of those physical and biological features necessary to ensure the conservation of the owl in Utah (69 *Federal Register* 53181). The mixed-conifer, pine-oak communities and canyon habitat appear to be the most frequently used throughout most portions of the subspecies' range, but owls primarily use canyon habitats in Utah (USFWS 2012b).

The Mexican Spotted Owl Recovery Plan was finalized in 1995 and was revised in 2012. Six recovery units in the United States were identified based on similarities, or obvious dividing lines, between the following: physiographic provinces, biotic regimes, perceived threats to habitat or individual birds, administrative boundaries, and owl distribution. Suitable habitat and designated critical habitat on public lands managed by the BLM and Forest Service in Utah occur in the planning area (USFWS 2012b).

### *Threats*

Two primary reasons were cited for the original listing of the Mexican spotted owl in 1993: historical alteration of its habitat from timber-management and the threat of these practices continuing as evidenced in existing national forest plans. The danger of stand-replacing wildland fire was also cited as a threat at that time. The primary threats to its population in the United States have since transitioned from timber harvest to an increased risk of stand-replacing wildland fire. Recent forest management now emphasizes sustainable ecological function and a return to pre-settlement fire regimes, both of which are more compatible with maintaining spotted owl habitat conditions than the even-aged management regime practiced at the time of listing. Conversely, southwestern forests have experienced larger and more severe wildland fires from 1995 to the present. Climate variability combined with current forest conditions may also synergistically increase habitat loss from fire. The intensification of natural drought cycles and the ensuing stress placed on forested habitats could result in even larger and more severe wildland fires in owl habitat (USFWS 2012b).

In Utah, the threats to the species and its habitat are recreation, grazing, oil and gas exploration and development, road improvement and development in canyons, and increased predation associated with habitat fragmentation (USFWS 1995).

## **California condor (*Gymnogyps californianus*)—Endangered and Experimental/Nonessential Listings**

### *Species/Habitat Description*

California condors are primarily a cavity-nesting species and typically nest in cavities on steep rock formations or in the burned-out hollows of old-growth conifers. Less typical nest sites are cliff ledges, cupped broken tops of old-growth conifers, and, in several instances, nests of other species (USFWS 2013a). They are obligate scavengers that feed only on carrion. Typical foraging includes long-distance reconnaissance flights, lengthy circling over a carcass, and hours of waiting at a perch or on the ground near a carcass, possibly watching for predators. Condors maintain wide-ranging foraging patterns throughout the year, an important adaptation for a species with unpredictable food supplies. Condors at

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interior locations in California feed on mule deer, Tule elk, pronghorn antelope, feral hogs, domestic ungulates, and smaller mammals.

Currently, California condors predominately forage in open terrain of foothill grassland and oak savanna habitats, and at coastal sites in central California, but they have also been observed feeding in more wooded areas, though this is less common. Condors repeatedly use roosting sites on ridgelines, rocky outcrops, and steep canyons and in tall trees or snags near foraging grounds. While at a roost, condors devote considerable time to preening, sunning, and other maintenance activities. Similar to other vulture species, condor roosts also may serve in social interaction and as assembly points for group activities; it is common for two or more California condors to roost together and leave the roost at the same time. Brooding pairs generally use cliffs and tall trees, including dead snags, as roosting sites in nesting areas (USFWS 2013a).

### *Life History*

Condors reach sexual maturity by 5 to 6 years of age and breed between 6 and 8 years of age. Courtship and nest site selection occurs from December through spring (USFWS 1996). Nest sites are caves, cliffs, or a crevice among boulders on a steep slope. Breeding California condors normally lay a single egg between late January and early April, every other year (USFWS 1996). The condor provides an extensive amount of parental care and the average incubation period for a condor egg is about 56 days (USFWS 1996). Both parents share responsibilities for feeding the nestling, which fledges at six months; however, juvenile condors may depend on their parents for more than a year. The California condor life span is unknown but may extend up to 60 years (San Diego Zoo 2005).

### *Status and Distribution*

The California condor was listed as endangered on March 11, 1967. The main reason for their decline is an unsustainable mortality rate of free-flying birds combined with a naturally low reproductive rate.

Despite intensive conservation efforts, the wild California condor population declined steadily until 1987, when the last free-flying individual was captured. During the 1980s, captive condor flocks were established at the San Diego Wild Animal Park and the Los Angeles Zoo, and the first successful captive breeding was accomplished at the former facility in 1988. Following several years of increasingly successful captive breeding, captive-produced condors were first released back to the wild in California in early 1992.

On October 6, 1996, the USFWS announced its intention to reintroduce California condors into northern Arizona and southern Utah and to designate the released birds as a nonessential, experimental population under Section 10(j) of the Endangered Species Act. On October 29, 1996, six California condors were released at the Vermilion Cliffs in Coconino County of northern Arizona. Since then, additional birds have been released. The designated experimental population area (ExPA) includes remote BLM-, Forest Service-, and National Park Service-administered lands, Native American reservation lands, and some private lands in northern Arizona, southern Utah, and southeastern Nevada. The primary release site and current nesting sites are in Grand Canyon National Park and Vermilion Cliffs, Arizona.

The California condor may occur throughout southern Utah in a variety of habitats in the planning area. Although most of the time the condors will occur in the designated ExPA, they have also been observed north of the ExPA boundary. In the Utah portion of the ExPA, nesting has recently been documented in Zion National Park. Condors have been documented in Utah as far north as Flaming Gorge Reservoir; regular sightings occur in southern Utah, particularly in the vicinity of Zion National Park/Kolob Canyons.

Because the planning area includes habitat that contains both the experimental population (areas south of I-70) and habitat that could be occupied by California condors in non-experimental areas (north of I-70), two determinations are made in the analysis portion of this report. One analysis includes the endangered California condor that may migrate north of I-70 and one analysis is made to determine effects on the experimental population south of I-70.

### *Threats*

Since reintroduction in 1992, causes of California condor mortality have been closely documented. While not all have been identified, the great majority of deaths in the reintroduced population have been anthropogenic. Records from 1992 to 2012 show the cause of condor mortality in nearby Arizona was predominately lead exposure (USFWS 2013a). Other less prevalent mortality factors have included (in order of frequency) predation, starvation, shooting, and power line collision. Some of these factors may have contributed to the species' decline before extirpation, but it is difficult to determine to what extent the current limitations on the population were a factor in the decline. These recent causes of mortality provide a better understanding of current limitations on the reintroduced populations and species recovery. However some factors, such as predation and starvation, are likely the result of the challenges of reintroducing captive-bred individuals into the wild (which has been a necessary step toward reestablishing wild populations), rather than factors that will have a large effect on a self-sustaining population (USFWS 2013a).

## **B. Plants**

### **Autumn Buttercup (*Ranunculus aestivalis*, *R. acriformis* var. *aestivalis*)—Endangered**

#### *Habitat Description*

These plants inhabit the transition zone between wet, sedge-dominated, spring-fed meadows and dry, upland meadows. Within this transition zone, the plants occupy raised hummocks of soil that are presumed to be formed from livestock trampling (USFWS 2013). Juvenile plants are strongly associated with hummocks, which are drier than the surrounding soil in the area. It is not known if hummocks occurred before livestock grazing nor what the habitat conditions were before livestock grazing. Habitat consists of small peaty hummocks on a low knoll surrounded by freshwater marsh. The knoll may be the result of a raised peat bog uplifted by the upwelling waters of a spring that surrounds it. The overflow channel of a nearby spring-fed stock water pond also runs past the knoll (USFWS 1989). The most common species in the vicinity of autumn buttercup were blue-eyed grass (*Sisyrinchium demissum*), wiregrass (*Juncus arcticus*), scratchgrass (*Muhlenbergia asperifolia*), and other autumn buttercup plants.

#### *Status and Distribution*

There is uncertainty about the taxonomy of autumn buttercup, with some authorities considering it to be a separate species and some considering it a subspecies or variety of *Ranunculus acriformis*. Autumn buttercup was listed as endangered in 1988 after experiencing a 90 percent decline in population numbers in the five years before. In 1988 The Nature Conservancy (TNC) bought the property supporting the occurrence known at the time and removed grazing. Periodic monitoring has shown that numbers of plants on the TNC Preserve property increased to around 1,000 in 1992 and have since declined with no plants remaining on the property in 2010 (USFWS 2013). Two reintroductions were performed at the Preserve in 2007 and 2010 to avoid the possibility of extinction in the wild and to work toward meeting recovery plan criteria. The two reintroduction efforts were unsuccessful, with 100 percent mortality of reintroduced plants as of the fall of 2010, apparently due to small mammal herbivory. A second population occurs on the private Dale Ranch and contains several hundred plants. There is little data to assess the stability of the Dale Ranch population; ranch owners have not shown interest in formal

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conservation efforts, but population numbers on the ranch appear to be fairly stable. No critical habitat has been designated.

The USFWS initiated a five-year review of autumn buttercup in 2011. At that time the plant was considered to have a high degree of threat and a low potential for survival.

The species is endemic to saline wet meadows in the upper Sevier River Valley at elevations between 6,374 and 7,000 feet in western Garfield County, Utah. To date, no plants have been found through cursory review of the areas near the two existing or recently existing known locations on any BLM administered lands in the Kanab Field Office.

### *Life History*

Autumn buttercup appears to be a short-lived herbaceous perennial that reproduces only by seed (USFWS 2013b). Seeds require an exposure to cold temperatures before they germinate. At maturity, plants are between 1 and 2 feet tall. Most of the simple but deeply palmately divided leaves are clustered at the base. The stems and leaves are covered with fine hairs. The plant flowers from July to early October. There are typically six to ten flowers per plant and each flower is approximately 1/2 inch in diameter. The flowers have five yellow petals and produce twenty to forty small, dry, one seeded fruits clustered at the center of the flower.

### *Threats*

Any disturbance is likely to increase the chances of extinction of the species. The species may depend on specific hydrologic conditions, but its hydrologic requirements have not been studied. Autumn buttercup is highly palatable to livestock and small mammals. Livestock grazing is generally considered a threat to the plant, but the population on private land continues to support several hundred plants, despite grazing, while the population fenced from grazing appears to be extirpated. Small mammals appear to be an important threat and were apparently responsible for the failure of reintroductions (USFWS 2013b). Other threats to the known occurrences have not been identified, but if the species or habitat is found on BLM-administered lands, other threats could be present. Potential threats are oil and gas development and off-road vehicle (ORV) use.

## **Clay Phacelia (*Phacelia argillacea*)—Endangered**

### *Habitat Description*

Clay phacelia has blue to violet flowers and stands 4 to 14 inches tall. It is found on steep hillsides of shaley clay colluvium on an extremely limited band of soil derived from an upper member of the Green River geologic formation called Green River shale. Occupied sites are xeric, with steep slopes and southeast- to west-facing aspects. Vegetation that grows with clay phacelia includes the yellow-flowered buckwheat (*Eriogonum brevicaulis*), serviceberry (*Amelanchier alnifolia* Nutt.), Gambel oak (*Quercus gambelii* Nutt.), Indian ricegrass (*Stipa hymenoides*), and houndstongue (*Cynoglossum officinale*). Additional associated species are sparse stands of pinyon-juniper or mountain brush. Clay phacelia does not do well competing with other vegetation, and the habitat of actively eroding shale slopes likely discourages the growth of competitors.

### *Status and Distribution*

Clay phacelia was listed as endangered in 1978. At the time, it was known from a single population containing nine individuals (USFWS 1978). In 1980 a second population was discovered, bringing the total number of individuals to approximately 200 (USFWS 1982). The range of clay phacelia extends along a 7.5-mile stretch of Highway 6 in Spanish Fork Canyon in Utah County, Utah. Today, three

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population centers are known: Water Hollow-Garner Canyon, Tie Fork (an introduced population), and Tucker-Clear Creek. The species occurs on lands managed by the Forest Service (Uinta National Forest), BLM (SLFO), and The Nature Conservancy, as well as private lands. Accurate population estimates or trends are not available (USFWS 2013c).

Potentially suitable habitat has been modeled and represents the best estimate of the extent of suitable habitat. This potentially suitable, modeled habitat is not present in PHMA or GHMA, but it does occur within about 1.5 miles of PHMA near Starvation Creek. The nearest known occurrences are about 2 miles from PHMA.

### *Life History*

Clay phacelia germinates in late summer and early autumn, and basal rosettes form in October. The first of the season's flowers begin opening by late May, full bloom is reached in late June or early July, and the last of the season's flowers are seen in October. Clay phacelia was formerly considered a winter annual but new data supports the idea that it is instead a true biennial. The life history of a biennial includes seedling emergence in the spring, growth of a rosette in the summer, vernalization during the following winter, and flowering, seed set, and death the second summer. Germination seems to be triggered by late summer or early autumn storms and two rains per summer seem to be critical for survival. The species harbors an extended seed bank, and one successful recruitment event every 10 to 15 years, coupled with high seed output, may be enough for the species survival through time. Seeds produced in one year germinate over the course of several years, thus ensuring a robust seedbank that can withstand stochastic events.

The following native bee species may be clay phacelia pollinators: *Dialictus perdifficilis*, *D. sedi*, *Evyllaenus pulveris*, *Andrena walleye*, *A. pronorum*, and *Halictus rubicundus* (USFWS 2015). These species are small to medium-sized, mostly solitary bees and have been seen in the vicinity of clay phacelia.

### *Threats*

The greatest current threats to this species are transportation and transmission line development and maintenance and herbivory. Invasive plants are considered a moderate threat (USFWS 2013c). US Highway 6 is a major transportation route that bisects the largest population and has affected the westernmost population. Threats may also come from increased railway traffic and dust and disturbance associated with transportation and transmission line development and maintenance. Herbivory has affected the species survival and abundance over many years. Herbivory, especially by deer, elk, and rabbits on clay phacelia occurs heavily in the winter and spring, preventing wintering rosettes from becoming flowering adults in summer. Livestock grazing and other herbivory has been reduced on some private land sites by fencing; it may still occur on other public and private lands, but the overall threat level is considered low (USFWS 2013c). Invasive, exotic species are a moderate threat and may become a larger threat in the future (USFWS 2013c). The species is particularly vulnerable because there are few small populations and the species is extremely restricted by climatic and edaphic factors (NatureServe 2014).

## Clay Reed-Mustard (*Schoenocrambe argillacea*)—Threatened

### Habitat Description

Clay reed-mustard occurs in desert shrub plant communities in association with shadscale, Indian ricegrass, pygmy sagebrush, western wheatgrass, Salina wildrye, and *Ephedra* species. It grows on gypsum-rich clay soils overlain with sandstone talus, resulting from a mixture from the zone of contact between the Uinta and Green River formations (USFWS 1992). Its elevation range is between 4,800 and 5,640 feet. Mapping suitable habitat for this species is problematic because it grows on steep inaccessible slopes, and the habitat is not well defined (USFWS 2011b).

### Status and Distribution

Clay reed-mustard was listed as a threatened species in 1992. There are six known populations of clay reed-mustard, all in Uintah County, Utah (USFWS 2011b). The entire species range stretches approximately 13 miles from Green River to Willow Creek. There are approximately 6,000 plants total (USFWS 1994), and this remains the best estimate of the range-wide population size (USFWS 2011b). It occurs in the Vernal Field Office but no other BLM areas or National Forests. Known occurrences do not overlap PHMA, but they do overlap GHMA in the Willow Creek area, where 10 of 77 documented sites are.

### Life History

Clay reed-mustard flowers from April to May, with fruit ripening in May to June. The plant reproduces by seed, and the pollinators are as yet unknown (USFWS 2011b). However, ground nesting, solitary bees pollinate the closely related *S. suffrutescens* (shrubby reed-mustard) that grows in nearby habitats (USFWS 1994), and it is likely that clay reed-mustard pollinators are similar.

### Threats

Threats to clay reed-mustard are oil and gas exploration, oil-shale mining, stone quarrying, and ORV use. All known populations are found on federal lands leased for oil and gas energy reserves. Additionally, this species' range is underlain by oil shale, which may be mined when economic conditions for oil extraction become favorable (USFWS 1994). Oil and gas development remains the most significant threat to clay reed-mustard (USFWS 2011b).

Historical sheep and cattle grazing use may have impacted clay reed-mustard on BLM lands, but current grazing levels are not believed to pose a serious threat (USFWS 2011b). Although invasive species such as cheatgrass are present in clay reed-mustard habitat, they have not been identified in high numbers or densities, and they are not currently considered a threat to clay reed-mustard (USFWS 2011b).

## Last Chance Townsendia (*Townsendia aprica*)—Threatened

### Habitat Description

Last Chance townsendia is a low-growing perennial, herbaceous plant in the composite family (Asteraceae). The species is stemless, with its narrow leaves and orange-yellow (apricot-colored) flowers borne at ground level. Populations of Last Chance townsendia occur on a variety of geologic substrates, and most populations are found on soils in the Moenkopi Formation, Morrison Formation, Mancos Shale Group, and the San Rafael Group. The species is associated with pinyon-juniper grassland communities. However, the species appears to be restricted to fine-textured shale soils in each formation (USFWS 2013d).

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### *Status and Distribution*

Last Chance townsendia was listed as threatened in August 1985. Critical habitat has not been proposed. The range of the species extends across Capitol Reef, Fishlake National Forest (documented), Dixie National Forest (documented), and BLM-administered land managed by the Price and Richfield Field Offices (documented) (southeast portion of Sevier County, southwestern portion of Emery County, and northern central portion of Wayne County). BLM-administered land contains the most occupied habitat, with approximately 4,830 acres, followed by the Forest Service, with 2,620 acres, and Capitol Reef, with 2,390 acres (USFWS 2013d). The latest range-wide estimate for the total population of Last Chance townsendia is 6,848 individuals.

In the Lower Last Chance Creek area, Fishlake National Forest, two of the 68 documented sites are in PHMA. No known occurrences overlap PHMA or GHMA on BLM-managed lands in the Lower Last Chance Creek area. In the Price Field Office, Last Chance townsendia habitat does not overlap GRSG habitat. But in the Richfield Field Office, there is some overlap of habitats between Last Chance townsendia and PHMA/GHMA.

### *Life History*

Last Chance townsendia reproduces by seed. The plants flower from late April to early June, and seeds mature from May to June. The species only rarely self-pollinates, so cross-pollination is accomplished by several species of solitary bees: eight species of metallic blue and green inegachilid bees in the genus *Osinia*, and the anthophorid bee *Tetralonia fulvitaris*. A few species of flies also visit the flowers. Seed set seems frequently to be pollinator-limited. Lack of pollination may result from various causes, including low pollinator numbers, inclement weather affecting pollinator flight activity, and possibly other unidentified factors.

### *Threats*

Overall abundance of Last Chance townsendia has declined over the last thirteen years; drought is believed to be the primary cause of the decline (USFWS 2013d).

The USFWS (2013c) concluded that livestock grazing poses a threat to Last chance townsendia at the present time because of the range-wide scope of the threat and the apparent vulnerability of the species to low frequency trampling events. They also concluded that energy and mineral development (coal, oil and gas, and uranium) as well as wild horses and burros pose a moderate threat to the species and that OHV use and range improvements are low threats to the species.

Coal development and related activities may result in increased surface disturbance, increased foot and vehicle traffic, vegetation disturbance, removal of top soil and overburden, and localized ground subsidence. Coal development is considered a low threat, based on the present localized scope of underground coal mining, conservation measures protecting the species from direct impacts, and the potential future threat of strip mining within the range of Last Chance townsendia. This threat may increase to moderate if coal development expands in the range of the species (USFWS 2013d).

Oil and gas development is a moderate threat based on the imminent and future immediacy of development, the moderate scope, and moderate to high exposure of the activities within Last Chance townsendia's range. While conservation measures are in place to avoid directly impacting individual plants, oil and gas development is still considered a threat because of indirect impacts, such as habitat degradation and loss, and the loss of unoccupied suitable habitat that could limit potential expansion and recovery of the species.

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The overall threat of uranium mining to the species is moderate at this time. The threat is not imminent, but alteration and destruction of the habitat from historic mining use needs to be assessed.

Cattle trampling and compaction of the soil and trampling of individual plants is a threat because Last Chance townsendia, like many small herbaceous plants, can be severely damaged in heavily travelled areas, such as around watering areas, fences, and along trails. The grazing of palatable forbs that flower at the same time as Last Chance townsendia, such as *Phlox austromontana*, may indirectly affect Last Chance townsendia pollinator abundance and the species' seed production. Livestock grazing is considered a moderate overall threat, based on the range-wide scope, the immediacy of the threat, and the small exposure of the threat. Range improvements are considered a low threat to the species (USFWS 2013d).

Wild horses and burros are considered a moderate threat to the species. While the exposure is small, the intensity of the threat is equivalent to that of livestock grazing and trampling (USFWS 2013d).

The overall threat of OHV use to the species is low. The current threat of direct impacts on the species is not imminent, now that vehicles are restricted to designated routes throughout a moderate portion of the species range.

### **Shrubby Reed-Mustard (*Schoenocrambe suffrutescens*)—Endangered**

#### ***Habitat Description***

Shrubby reed-mustard grows in an extremely limited band of soil derived from an upper member of the Green River geologic formation (USFWS 1994). This habitat is a disjunct white shale layer resembling small, dry desert islands, on level to moderate slopes (USFWS 1994).

#### ***Status and Distribution***

Shrubby reed-mustard was listed as an endangered species in 1987, under the name of toad-flax cress (*Glaucocarpum suffrutescens*). In 1985, the genus was formally changed from *Glaucocarpum* to *Schoenocrambe* (Welsh and Chatterley 1985), and the species' common name was also changed from toad-flax cress to shrubby reed-mustard.

Shrubby reed-mustard occurs in three areas and seven populations in Uintah and Duchesne Counties: Gray Knolls, with two populations, Pack Mountain, with four populations, and Badlands Cliff, with one population. The total number of plants is estimated at about 3,000 individuals (USFWS 2010a). No overlap occurs with PHMA, but 7 of 63 documented sites are in GHMA. Except for one, the remaining 56 sites are all within 1 mile of GHMA on BLM-administered lands. This species is documented in the Vernal Field Office, but it is not suspected to occur on National Forest System lands or in any other BLM Field Offices.

#### ***Life History***

Shrubby reed-mustard is a perennial plant that grows in clumps from a branched, slightly woody stem. It flowers in April to May and fruits May to June. It reproduces by seed and is capable of self-pollination; however, seed set is lower in individuals that self-pollinate, compared to individuals that are fertilized by pollen from another plant. The following native bee species may be shrubby reed-mustard pollinators: *Dialictus perdificilis*, *D. sedi*, *Evylaeus pulveris*, *Andrena walleye*, *A. prunorum*, and *Halictus rubicundus* (USFWS 1994). These species are small to medium sized, mostly solitary bees.

### **Threats**

The primary threat to shrubby reed-mustard is from energy development (USFWS 2010a), with associated direct damage to individuals and habitat, as well as effects from habitat fragmentation, increased dust, and pollinator disturbance. The entire range of this species is leased for oil and gas development and is underlain by oil shale deposits (USFWS 1987, 1994), which poses a significant threat. The underlying oil shale may also be mined when economically favorable (USFWS 1994).

In the listing and recovery plan for shrubby reed-mustard, building stone mining and localized grazing were associated with the decline in this species (USFWS 1987, 1994). Building stone mining can directly disturb individual plants and their habitat, with other effects similar to oil and gas development, including habitat fragmentation, increased dust, and pollinator disturbance. Today, building stone mining is a substantive issue only on private land (USFWS 2010a). At this time, effects from grazing and trampling are not considered meaningful factors impacting the viability of shrubby reed-mustard (USFWS 2010a). Although invasive species such as cheatgrass are present in shrubby reed-mustard habitat, they have not been identified in high numbers or densities, and they are not considered a threat to shrubby reed-mustard (USFWS 2010a).

## **Uinta Basin Hookless Cactus (*Sclerocactus wetlandicus*)—Threatened**

### **Habitat Description**

Uinta Basin hookless cactus is generally found on coarse soils derived from cobble and gravel river terrace deposits, or rocky surfaces on mesa slopes at 4,400 to 6,200 feet in elevation (USFWS 2012a). It is most abundant on south-facing exposures and on slopes to about 30 percent grade. It can be found growing with other common desert shrubland plants, including shadscale, black sagebrush, and galleta grass. It is usually a drier habitat than the sagebrush chaparral preferred by GRSG.

### **Status and Distribution**

Uinta Basin hookless cactus was listed as a threatened species under the combined taxa name *Sclerocactus glaucus* in 1979. In 2009, the USFWS recognized and maintained threatened status for three distinct species that were formerly considered *Sclerocactus glaucus*, including *Sclerocactus wetlandicus*, Uinta Basin hookless cactus. Uinta Basin hookless cactus is known to occur in Uintah County, Utah, along the Green River and its tributaries, and in Carbon and Duchesne Counties, Utah. The species is known from the Vernal and Price Field Offices; it is not known or suspected on National Forest System lands. Of the thousands of specific locations documented, only one is in GHMA. Additional habitat for Uinta Basin hookless cactus likely occurs in GHMA in this area.

### **Life History**

Uinta Basin hookless cactus is a perennial plant which presumably reproduces by seed. A broad assemblage of native bees and possibly other insects, including ants and beetles, pollinate Uinta Basin hookless cactus.

### **Threats**

At the time of the original listing of the Uinta Basin hookless cactus complex, ongoing and foreseeable threats included mineral and energy development, illegal collection, recreational ORV use, and grazing. Energy development remains one of the largest threats to this species through direct loss of habitat (USFWS 2010b). Livestock grazing can result in mortality when livestock trample individual plants, and invasive species establishment may be enhanced by grazing activities. ORV use also threatens this species

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with habitat damage and mortality from direct contact. New threats identified since original listing are climate change, parasitism by the cactus-borer beetle, and invasive weeds.

### Ute Ladies'-Tresses (*Spiranthes diluvialis*)—Threatened

#### Habitat Description

When Ute ladies'-tresses was listed in 1992 it was known primarily from moist meadows associated with perennial stream terraces, floodplains, and oxbows at elevations between 4,300 and 6,850 feet. Surveys since 1992 have expanded the number of vegetation and hydrology types occupied by Ute ladies'-tresses to include seasonally flooded river terraces, sub-irrigated or spring-fed abandoned stream channels and valleys, and lakeshores. In addition, 26 populations have been discovered along irrigation canals, berms, levees, irrigated meadows, excavated gravel pits, roadside barrow pits, reservoirs, and other human-modified wetlands.

#### Status and Distribution

Ute ladies'-tresses was listed as threatened in 1992. In 2004, the USFWS issued a petition to delist the species and initiate a five-year review, which is ongoing. Occurrences are present on the Uinta-Wasatch-Cache National Forest, the Grand Staircase-Escalante National Monument, the Vernal Field Office and are suspected in the Salt Lake Field Office and the Fishlake National Forest. Although no Ute ladies'-tresses occurrences are mapped as overlapping PHMA or GHMA, several occurrences on BLM-administered lands occur just outside PHMA. Those occurrences are along drainages, and it is possible that GRSG would use the areas during breeding and nesting season.

#### Life History

Ute ladies'-tresses is a long-lived perennial forb that probably reproduces exclusively by seed (USFWS 2015). As with other orchid species, Ute ladies'-tresses seeds are microscopic and dust-like and are readily dispersed by wind or water. It is hypothesized that germinated seedlings must quickly establish a symbiotic relationship with mycorrhizal soil fungi in order to survive. The absence or rarity of appropriate fungal symbionts in the soil may be a major factor limiting the establishment of new Ute ladies'-tresses populations. New vegetative shoots are produced in October and persist through the winter as small rosettes. These resume growth in the spring and develop into short-stemmed, leafy, photosynthetic plants. Depending on site productivity and conditions, vegetative shoots may remain in this state all summer or may develop inflorescences. Individuals die back in the winter to subterranean roots or persist as winter rosettes. Across its range Ute ladies'-tresses blooms from early July to late October, typically earlier in sites that have an open canopy and later in well-shaded sites. Whole colonies of Ute ladies'-tresses can go dormant or not flower for many consecutive years, making the species very difficult to detect. Bees are the primary pollinators of Ute ladies'-tresses, particularly solitary bees in the genus *Anthophora*, bumblebees (genus *Bombus*), and occasionally nonnative honeybees (*Apis mellifera*; Sipes and Tepedino 1995). Of these species, *Anthophora terminalis* is apparently the most effective pollinator.

#### Threats

Threats are competition from invasive species, vegetation succession, construction, hydrologic changes, grazing, recreation, urbanization, flooding, haying/mowing, natural herbivory, loss of pollinators, and drought (Fertig et al. 2005).

## GENERAL DISCUSSION OF POTENTIAL IMPACTS BY PROGRAM AREAS

### *Actions Evaluated and General Effects*

Because the proposed land use plan amendment is an umbrella planning document, it does not propose any specific ground-disturbing actions, there would be no direct effects on any threatened, endangered, or proposed species (listed species). Although, indirect effects will occur later in time and those actions that are reasonably certain to occur within PHMA/GHMA are mentioned in the following discussion. Only in one case do we consider indirect impacts outside PHMA/GHMA, with clay phacelia and the reasonably foreseeable TransWest Express (TWE) and Energy Gateway South (EGS) transmission line projects. Aside from the likely impacts to Utah prairie dog, the determination for proposed actions under this Land Use Plan Amendment are either be “no effect” or “may affect, but not likely to adversely affect” listed species and/or their habitats (and designated critical habitat, where applicable). Proposed actions from this Land Use Plan Amendment that could affect species will be evaluated at the project level, and adverse impacts will be avoided.

The environmental baseline is set by the existing conditions, including the current authorized activities and programs already analyzed and for which there has been consultation in the jurisdiction of each land use plan. Various activities, such as grazing, mining, recreation, travel management, and invasive species control, are already analyzed at the land use plan level. Each activity may also have been assessed for environmental impacts through their project-level, site-specific NEPA analysis and ESA compliance. Examples of these are allotment management plans, noxious weed control plans, and travel management plans. All of their associated conservation measures concerning listed species would still be valid.

Programmatic plans are considered permissive in that they allow but do not authorize or approve any site-specific projects or actions. They are much like zoning ordinances under which future decisions are made. Decision at the land use plan level establish goals and objectives, identify the types of activities that are allowed or prohibited in specific areas, may specify management standards and minimum habitat condition goals, either unit wide or for specific areas, and may establish a monitoring and evaluation program.

This biological assessment does not analyze site-specific actions (e.g., ongoing and new roads or other disturbances or ongoing, new, or renewed permits). Though, effects determinations made in this document should provide the umbrella effects determinations for site-specific projects. In the future, during project-level environmental planning and analysis, site-specific actions will continue to be analyzed to identify possible effects on listed species. As part of any future project-level environmental analysis, additional specific conservation measures and strategies to alleviate any potential adverse effects may be developed as the details of the future proposed actions become available.

The proposed actions were evaluated for possible indirect (later in time) effects on listed plants within PHMA/GHMA. Many of the amendment actions are restrictive of anthropogenic disturbances for the benefit of GRSGs, reducing the potential impacts from various activities on GRSGs and their habitats. Some examples of restrictive actions are as follows:

- Avoid construction of new recreation facilities (e.g., campgrounds, trails, trailheads, and staging areas) in PHMA and sagebrush focal areas, unless the development would have a net conservation gain for GRSG habitat or unless required for visitor safety (BLM MA-REC-2 and FS GRSG-R-GL-065)
- Collocate new road right-of-ways (ROWS) (BLM MA-LAR-3) and new infrastructure (e.g., high-voltage transmission lines, major pipelines, roads, distribution lines, and cellular towers; FS GRSG-LR-SUA-ST-020-Standard) in or as close as possible to existing sites in PHMA

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- Establish PHMAs as avoidance areas for new linear and site type ROWs, except in designated ROW corridors (BLM MA-LAR-2)
- Not exceed a 3 percent disturbance cap in PHMA at the scales of biologically significant units and the proposed project analysis area (BLM MA-GRSG-3 and FS GRSG-GEN-ST-004)

All of the energy and minerals conservation measures are also considered restrictive actions. Therefore, no adverse effects on listed plants are expected from these types of actions because the measures would reduce potential impacts on GRSG habitats (mostly in PHMA), and these same measures could also benefit listed plants by reducing potential impacts in those areas.

Many other proposed management actions for GRSGs establish guidance for resource management planning and establish priority and emphasis for sound GRSG habitat management. One example is stated in BLM MA-FIRE-8: *Fire fighter and public safety are the highest priority. GRSG habitat in PHMA 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 across the range of GRSG habitat consistent with LUP direction. PHMA will be viewed as more valuable than GHMA when priorities are established. When suppression resources are widely available, maximum efforts will be placed on limiting fire growth in GHMA polygons as well.*

This is an action that prioritizes the implementation of an existing program in GRSG habitat. Occupied habitat and critical habitat for threatened and endangered species already has a priority for protection in wildfire suppression, below firefighter and public safety and property protection. This measure says to include GRSGs (a candidate species) at the same priority level as critical habitat for threatened and endangered species.

Some proposed management actions for GRSGs are more directive, presenting somewhat specific actions to benefit GRSG in the future, if they occur. Such actions would only have potential to impact plant species that exist within PHMA/GHMA. The plant species that exist within PHMA/GHMA are Autumn buttercup, clay reed-mustard, Last Chance townsendia, shrubby reed-mustard, Uinta Basin hookless cactus, and Ute ladies'-tresses. One such action, to *work with ROW holders to retrofit existing towers with perch deterrents or other anti-perching devices, where appropriate, to limit GRSG predation* (BLM MA-LAR-5), has potential to impact listed plants from personnel and vehicles accessing the towers, if the plants are present in the ROW corridors where retrofit activities are needed. Though, if listed plants are present in any proposed areas, any proposed actions that may adversely affect these species and/or their habitats will be evaluated at the project level, and adverse impacts would be avoided.

Restrictions for ORV use may benefit listed plant species by reducing impacts from this activity. BLM MA-TTM-2 states: *PHMA and GHMA that do not have designated routes in a Travel Management Plan would be managed as limited to existing routes until a Travel Management Plan designates routes (unless they are already designated as limited to designated routes or closed to OHV use).* Where travel management planning has not been completed and listed plant habitats are present, there may be a reduction of impacts from ORV use. Restricting motorized travel as described above would occur immediately following the decision to amend land use plans.

Because many activities would be restricted or not allowed in GRSG habitats, there is potential for an increase of the restricted activities in other plant communities outside of PHMA/GHMA. Of the most concern is energy exploration and development and other infrastructure, but other activities, such as ORV use, may also increase in areas remaining open to their particular uses. The nature and location of these potential shifts in activities are not known. Although potential impacts are too speculative at this time to analyze, the activities would still be required to comply with existing restrictions of authorized use. Furthermore, any future proposals for specific activities would still be required to undergo site-specific

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analysis through NEPA and ESA consultation to determine effects of the actions on listed plant species and other resources.

### Adaptive Management

The proposed plans establish soft and hard adaptive management triggers for both GRSG populations and habitat. The specific triggers and additional detail on the management responses are identified in Attachment B and Attachment C (the BLM and Forest Service proposed plans, respectively), as well as Appendix B in the GRSG FEIS.

If a soft trigger is met, the BLM and Forest Service will determine the specific cause or causes that are contributing to the decline. If they determine that the decline is related to a natural variation in the population, no specific management actions would be required. However, if agency management actions are determined to be the cause or contribution to the decline, the agency would apply measures in its implementation-level discretion to mitigate the decline of populations and habitat. These measures would apply more conservative or restrictive implementation-level conservation conditions, terms, or decisions in the agency's discretion to mitigate the decline or, for example, increase proactive habitat improvement efforts in the population area where the soft trigger was tripped.

If monitoring indicates that a hard trigger is met, definitive action is necessary to stop further population declines and/or address loss of habitat. On reaching a hard trigger, a more restrictive alternative, or an appropriate component of a more restrictive alternative analyzed in the environmental impact statement would be implemented without further action by the agency involved. The final strategy could also include the need to further amend land use plans to address the situation and modify management accordingly.

Adaptive management soft triggers can result in a suite of prioritized proactive management actions aimed at protecting existing habitat, expanding sagebrush areas used by GRSG, prioritizing management, and increasing coordination to address determined threats. Adaptive management hard triggers may further restrict power lines larger than 138kV and pipelines larger than 24 inches from PHMA. Other than that, hard trigger responses are aimed at prioritizing management actions already identified in the GRSG LUP Amendment (e.g., habitat assessments, the fire program, activities). More restrictive or conservative management of GRSG habitat is the expected result from implementing adaptive management, and these changes would potentially further benefit listed species from activities already analyzed and consulted on in preceding Resource Management Plans (e.g., closing OHV routes). In the event that adaptive management response requires an additional Land Use Plan amendment, that amendment would be analyzed for effects to listed species during the additional Land Use Plan amendment process.

### *Regulatory Mechanisms*

In general, ground-disturbing activities could modify habitat and cause individuals to be lost, depending on the extent of area disturbed, the nature of the disturbance, the species affected, and the location of the disturbance. The proposed land use plan amendments would not take the place of site-specific environmental analysis required for any new ground-disturbing actions that may arise from implementing the proposal. Furthermore, if listed species are present in any of the areas where proposed actions may adversely affect them and/or their habitats, the project will be evaluated at the project level, and adverse impacts would be avoided. Current regulatory mechanisms in place are a thorough analysis at the appropriate scale of the presence and possible effects on TEP species, as required by NEPA, and in consultation with the USFWS, as required by the ESA. In addition, conservation measures for TEP species are required by each management unit. Documents used by the management units (MUs) are listed below with summaries of their included conservation measures.

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The BLM is mandated to ensure that special status species are protected, by virtue of the ESA; by agency policy, as described in the Special Status Species Management Manual (Manual 6840) (BLM 2008a); by the BLM Land Use Planning Handbook (H-1601-1) (BLM 2005); and management direction in RMPs produced by BLM field offices.

The Forest Service is also subject to requirements of the ESA. Its handbook, the Forest Service Manual, and the land and resource management plans for National Forests provide direction to be used in all ground-disturbing projects to protect threatened and endangered species.

All BLM and Forest Service units have resource management plans in place: All units are subject to national and local guidance related to invasive species management. In general, newer and proposed plans provide more specific management direction for federally listed, proposed, and candidate plant species.

Federal legislation and agency regulations direct agencies to avoid jeopardizing the continued existence of any federally listed species or species proposed for listing; to actively promote species recovery; and to improve the status of candidate species. If a federally listed species may be affected by a proposed land use allocation or management action, consultation with the USFWS, pursuant to Section 7 of the ESA, would occur.

### *Existing Conservation Measures*

Management direction for TEP species on the eight BLM and five Forest Service units considered in this analysis is listed in Attachment D. Direction specific to a certain species is listed in the analysis of effects for that species.

## **ANALYSIS OF EFFECTS OF THE PROPOSED ACTION BY SPECIES**

### **A. Wildlife and Fish**

#### *Canada lynx (*Lynx canadensis*)*

Canada lynx is not known to occur on BLM- or Forest Service-administered lands in the planning area. However, suitable habitat and LAUs have been mapped in the Ashley and Uinta-Wasatch-Cache National Forests. Approximately 39,839 acres of lynx suitable habitat overlaps with PHMA/GHMA on the forests listed above. Lynx habitat overlap consists of both primary and secondary classifications (Table 4). Closer inspection shows that vegetation cover types where overlap with primary lynx habitat occurs are not habitat for GRSG and consist predominately of spruce-fir, mixed conifer, and conifer-aspen forests. Vegetation in areas of overlap with lynx secondary habitat consists primarily of aspen, aspen-conifer, Douglas-fir, and lodgepole pine habitats. Forested lynx-suitable habitat in mapped PHMA and GHMA often occurs where forest patches and stringers are interspersed with grass/forb/shrub openings. Locations of lynx-suitable habitat and GRSG mapped habitat overlap are shown in Figure 2.

Utah GRSG habitat mapping was conducted at a broad scale in order to include all seasonal habitat and potential movement areas important for each population and include known use areas, historic use areas, as well as areas of non-habitat (GRSG FEIS, Appendix N). It is expected that the maps will be refined as more information is gained and much of this refinement is likely to be completed by individual Field Offices and National Forests at a unit-wide scale, or during project-level analysis. Further mapping refinement is also expected to identify forested lynx suitable habitats as unsuitable for GRSG unless they provide a benefit to GRSG such as facilitating movement between areas of suitable habitat. On rare occasion when suitable lynx habitat also functions as beneficial sage-grouse habitat, actions that would

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adversely affect lynx would not be conducted. Site-specific analysis will be conducted at the project level to ensure adverse impacts to lynx do not occur.

**Table 4. Overlap Between Lynx Suitable and Mapped GRSG Habitats**

National Forest	Lynx Habitat	
	Primary (Acres)	Secondary (Acres)
Ashley	1,281	4,411
Uinta-Wasatch-Cache	8,686	25,460
<b>Total</b>	<b>9,967</b>	<b>29,871</b>

There is also overlap between areas linking suitable lynx habitat and mapped GRSG habitats (Figure 2) in the Salt Lake, Vernal, and Price Field Offices and split-estate lands, as well as in the Ashley and Uinta-Wasatch-Cache National Forests.

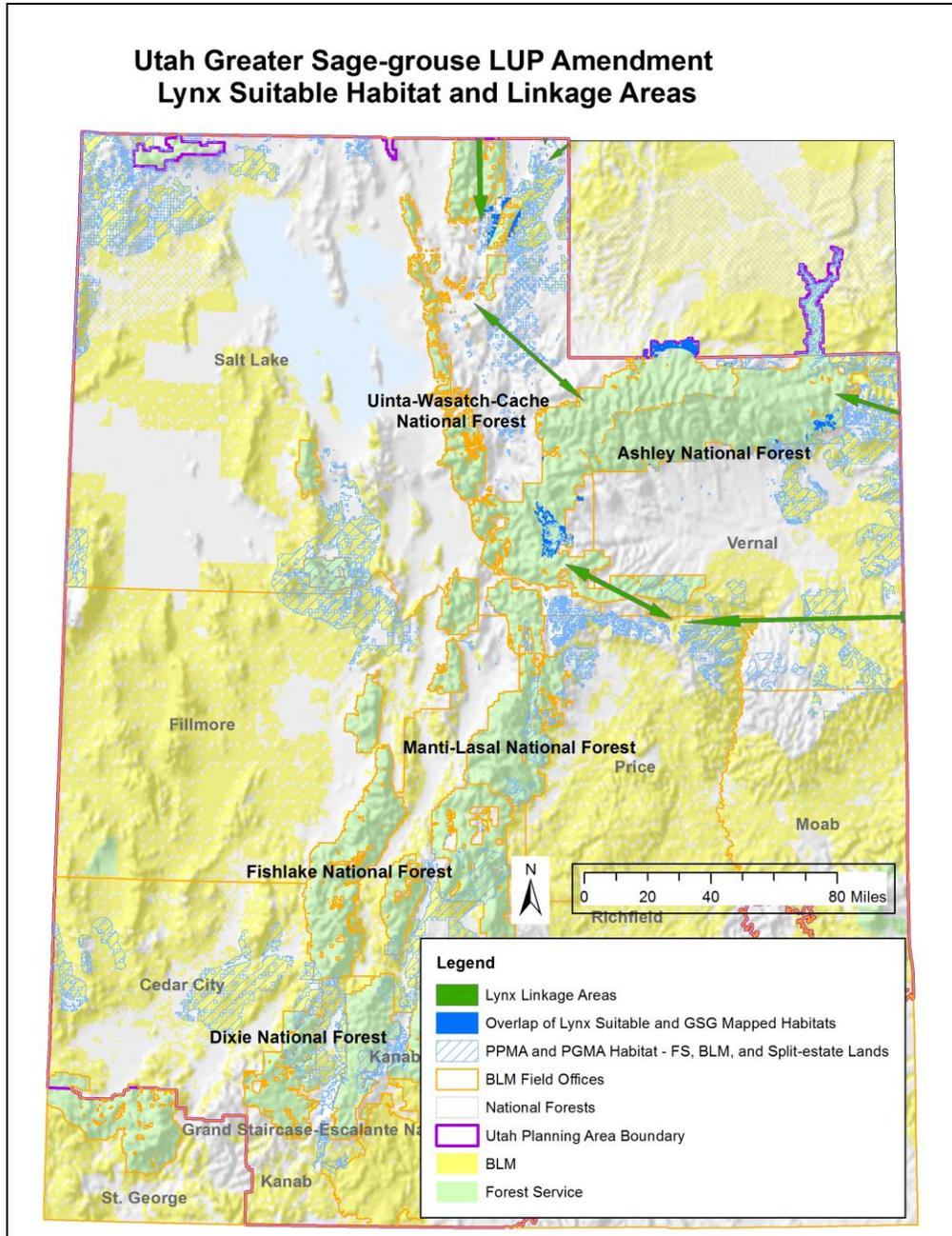
No direct effects on Canada lynx from the proposed land use plan amendments would occur. Negative indirect impacts from the proposed action are highly unlikely, due to the project focus on protection and enhancement of GRSG habitats, the lack of known occurrences in the project area, and the fact that additional site-specific analysis and, if necessary, avoidance would occur at the project level in the future. Where PHMA and GHMA overlap with lynx linkage areas, elements provided in the proposed action that would maintain or enhance GRSG habitats are compatible with maintaining lynx linkage characteristics in shrub-steppe habitats.

### *Cumulative Effects*

To evaluate cumulative effects, the future state, tribal, local, or private actions that are reasonably certain to occur in the decision area are identified, and their effects are added to the anticipated effects of the current proposal. The decision area for the current proposal is limited to PHMA and GHMA on BLM- and Forest Service-administered lands. No state, tribal, local, or private lands are in the decision area, and no state, tribal, local, or private actions are planned or expected to occur in the decision area; only federal actions are expected to occur, so no cumulative effects are expected.

### *Summary Determination of Effects on Canada Lynx*

**The Utah GRSG LUP Amendment and EIS may affect, but will not likely adversely affect Canada lynx** because negative impacts on suitable habitat will not occur in the Ashley and Uinta-Wasatch-Cache National Forests. Where PHMA and GHMA overlap lynx linkage areas on the Salt Lake, Vernal, and Price Field Offices and Split-estate lands, and the Ashley and Uinta-Wasatch-Cache National Forests may be beneficial because they retain intact shrub communities. Further, there are no potential direct or indirect adverse effects to this species from this action.



**Figure 2. Locations of lynx suitable habitat and GRSG mapped habitat overlap**

### Utah Prairie Dog (*Cynomys parvidens*)—Threatened

Utah prairie dog (UPD) species is endemic to Utah and exists in southwestern Utah in Beaver, Garfield, Iron, Kane, Millard, Piute, Sanpete, Sevier, and Wayne Counties. The Utah Prairie Dog Recovery Implementation Plan identifies three recovery areas with 40 management units within the recovery areas (UPDRIP 2013, 2014; Figure 3). The 40 UPD management units (MUs) encompass approximately 342,258 acres located in only 3 counties within Utah. The species represents the only vertebrate non-fish endemic to the State. UPD MUs occur within portions of the Cedar City, Kanab, and Richfield BLM Field Offices and in parts of the Dixie and Fishlake National Forests.

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UPD MUs overlap with GRSG mapped habitats to a substantial degree (Figure 3). On all landownerships, UPD MUs coincide with priority and general GRSG habitats on 87.6 percent of all MU acreage. In contrast, UPD MUs encompass a relatively small portion of GRSG mapped habitats in Utah: about 4.1 percent of all priority and general habitat. On BLM, Forest Service, and split-estate lands, UPD MU overlap with GRSG mapped habitats totals 267,853 acres. UPD MU overlap with GRSG mapped habitats on BLM, Forest Service, and split-estate lands is 81 percent (Table 5).

**Table 5. UPD MU and GRSG Mapped Habitat Overlap**

<b>Administrating Agency or Land Status</b>	<b>UPD MU Overlap with Agency or Split-Estate Lands (Acres)</b>	<b>UPD MU Overlap with GRSG Mapped Habitat Acres (Percent)</b>
BLM	132,360	121,482 (92)
Forest Service	92,085	84,005 (91)
Split-estate	43,408	11,153 (26)
<b>Totals</b>	<b>267,853</b>	<b>216,640 (81)</b>

Relative to management for UPD, the recovery plan (USFWS 2012a) identifies the following recovery actions relative to effects generated by this and other projects conducted at the unit-level planning scale:

**Conserve sufficient acreages and distribution of occupied UPD habitat on federal, state, tribal, and private lands.**

**2.1.** Prioritize UPD habitat for protection and management.

**2.3.** Manage and improve UPD habitat on federal lands.

Continuing to maintain and improve habitat for UPD on federal lands is a critical priority for the species. Habitat improvement projects may consist of increasing plant diversity with warm and cool season grasses, forbs, and shrubs and altering ground cover and canopy cover to ensure optimum foraging and visual surveillance conditions. These activities also coincide with the goals of the translocation program.

**2.3.1.** Plan and implement vegetation treatments in strategic locations (including translocation sites) that benefit UPD and their habitat.

Currently occupied as well as historic UPD habitat can be improved with vegetation treatments, such as thinning dense sagebrush via mechanical or other methods and reseeded with mixes beneficial to UPD. Both the Forest Service and BLM have completed several projects of this kind that focus on benefiting UPD.

**2.3.2.** Develop and implement guidelines to minimize adverse impacts on UPD and their habitat from various activities on federal lands.

Multiple uses on public lands need to be balanced with minimizing adverse effects on UPD and their habitat. This goal can be accomplished via established guidelines for project proposals that can be incorporated into project descriptions and Section 7 consultations.

**2.3.3.** Amend or update federal land use plans to include these guidelines when appropriate.

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Incorporating guidelines that minimize adverse impacts on UPD into federal land use plans is key to demonstrating that regulatory mechanisms are in place to conserve the species after delisting.

**Effects of the Action**

Management direction under both the BLM proposed plan and the Forest Service proposed action contain elements that pertain to vegetation management (e.g., pinyon-juniper removal), wildland fire suppression, and fuels management that may generate effects on UPD; however, the BLM proposed plan contains a management action statement that will accommodate UPD habitat management in GRSG habitats. In addition, in the Panguitch PHMA BLM will be adjusting a utility corridor to align with where there currently is a power line in the area. The following proposed action/proposed plan elements are pertinent to potential UPD direct or indirect effects:

**Forest Service Proposed Action Elements**

Habitat Management

*GRSG-GRSGH-ST-028 – Design habitat restoration projects to move towards desired conditions (Table 6) and incorporate the concepts outlined in GRSG FEIS Appendix K.*

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

**Table 6. Seasonal Habitat Desired Conditions for Greater Sage-Grouse**

ATTRIBUTE	INDICATORS	DESIRED CONDITION
<b>BREEDING AND NESTING<sup>1,2,3</sup> (Seasonal Use Period March 1-June 15) Apply 4 miles from active leks.<sup>4</sup></b>		
Lek Security	Proximity of trees <sup>5</sup>	Trees or other tall structures are none to uncommon within 1.86 miles of leks <sup>6,7</sup>
	Proximity of sagebrush to leks <sup>6</sup>	Adjacent protective sagebrush cover within 328 feet of lek <sup>6</sup>
Cover	Seasonal habitat extent <sup>7</sup>	>80% of the breeding and nesting habitat
	Sagebrush canopy cover <sup>6,7,8</sup>	15 to 25%
	Sagebrush height <sup>7</sup>	
	Arid sites <sup>6,7,9</sup>	12 to 32 inches
	Mesic sites <sup>6,7,10</sup>	16 to 32 inches
	Predominant sagebrush shape <sup>6</sup>	>50% in spreading <sup>11</sup>
	Perennial grass canopy cover <sup>6,7</sup>	
	Arid sites <sup>7,9</sup>	≥10%
Mesic sites <sup>7,10</sup>	≥15%	
Perennial grass height <sup>6,7,8</sup>	Provide overhead and lateral concealment from predators <sup>7,15</sup>	
Perennial forb canopy cover <sup>6,7,8</sup>		
Arid sites <sup>9</sup>	≥5% <sup>6,7</sup>	
Mesic sites <sup>10</sup>	≥10% <sup>6,7</sup>	
<b>BROOD-REARING/SUMMER<sup>1</sup> (Seasonal Use Period June 16-October 31)</b>		
Cover	Seasonal habitat extent <sup>7</sup>	>40% of the brood-rearing/summer habitat
	Sagebrush canopy cover <sup>6,7,8</sup>	10 to 25%
	Sagebrush height <sup>7,8</sup>	16 to 32 inches
	Perennial grass canopy cover and forbs <sup>7,8</sup>	>15%
	Riparian areas/mesic meadows	Proper Functioning Condition <sup>12</sup>
	Upland and riparian perennial forb availability <sup>6,7</sup>	Preferred forbs are common with several preferred species present <sup>13</sup>
<b>WINTER<sup>1</sup> (Seasonal Use Period November 1-February 28)</b>		
Cover and Food	Seasonal habitat extent <sup>6,7,8</sup>	>80% of the winter habitat
	Sagebrush canopy cover above snow <sup>6,7,8</sup>	>10%
	Sagebrush height above snow <sup>6,7,8</sup>	>10 inches <sup>14</sup>

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ATTRIBUTE	INDICATORS	DESIRED CONDITON
		<p><sup>1</sup>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.</p> <p><sup>2</sup>Doherty, K. 2008. <i>Sage-grouse and Energy Development: Integrating Science with Conservation Planning to Reduce Impacts</i>. University of Montana. Missoula, MT.</p> <p><sup>3</sup>Holloran and Anderson. 2005. <i>Spatial Distribution of Greater Sage-grouse nests in relatively contiguous sagebrush habitats</i>. Condor 107:742-752.</p> <p><sup>4</sup>Buffer distance may be changed only if 3 out of 5 years of telemetry studies indicate the 4 miles is not appropriate.</p> <p><sup>5</sup>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. <i>Saving sage-grouse from trees: A proactive solution to reducing a key threat to a candidate species</i>. Biological Conservation 167: 233-241.</p> <p><sup>6</sup>Stiver et al. 2015 <i>In Press</i>.</p> <p><sup>7</sup>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.</p> <p><sup>8</sup>Connelly, J. K. Reese, and M. Schroder. 2003. <i>Monitoring of Greater sage-grouse habitats and populations</i>. Station Bulletin 80, Contribution 979. University of Idaho, College of Natural Resources Experiment Station. Moscow, ID.</p> <p><sup>9</sup>10–12 inch precipitation zone; <i>Artemisia tridentata wyomingensis</i> is a common big sagebrush subspecies for this type site (Stiver et al. 2015).</p> <p><sup>10</sup>≥12 inch precipitation zone; <i>Artemisia tridentata vaseyana</i> is a common big sagebrush subspecies for this type site (Stiver et al. 2015).</p> <p><sup>11</sup>Sagebrush plants with a spreading shape provide more protective cover than sagebrush plants that are more tree- or columnar shaped (Stiver et al. 2015 <i>In Press</i>).</p> <p><sup>12</sup>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 GRSG habitat requirements.</p> <p><sup>13</sup>Preferred forbs are listed in Table III-2 of the Sage-Grouse Habitat Assessment Framework (Stiver et al. 2015 <i>In Press</i>). 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 of the Sage-Grouse Habitat Assessment Framework (Stiver et al. 2015 <i>In Press</i>).</p> <p><sup>14</sup>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.</p> <p><sup>15</sup>Projects will be designed to provide overhead and lateral concealment of nests on a site specific basis.</p>

*GRSG-GRSGH-GL-032 - To facilitate safe and effective fire management actions, in PHMA, SFA, GHMA, and Anthro Mountain, 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 GRSG-GEN-DC-003) 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 6).*

*GRSG-GRSGH-GL-033 - In PHMA, SFA, GHMA, and Anthro Mountain, native plant species should be used, when possible, to restore, enhance, or maintain desired habitat condition (table 6).*

*GRSG-GRSGH-GL-034 – In PHMA, SFA, and Anthro Mountain, vegetation treatment projects should only be conducted if they restore, enhance, or maintain desired conditions (table 6).*

Lands and Realty

*GRSG-LR-SUA-ST-013 – In PHMA, SFA, and Anthro Mountain, restrict issuance of new lands special use authorizations (SUAs) that authorize 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.*

*GRSG-LR-SUA-ST-015 – In PHMA, SFA, GHMA, and Anthro Mountain, 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.*

Fire and Fuels Management

*GRSG-FM-ST-045 – In PHMA, SFA, GHMA, and Anthro Mountain, if it is necessary to use prescribed fire to facilitate site preparation for restoration of GRSG habitat consistent with desired conditions (Table 6), the associated NEPA analysis must identify how the project would move*

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*towards GRSG desired conditions, why alternative techniques were not selected, and how potential threats to GRSG habitat would be minimized.*

*GRSG-FM-GL-046 – 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 – In PHMA, SFA, GHMA, and Anthro Mountain, when reseeding in fuel breaks, fire resistant native plant species should be used if available, or consider using fire resistance non-native species to meet resource objectives, if analysis demonstrates that nonnative plants will not damage GRSG habitat in the long-term.*

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

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

*GRSG-FM-GL-006-Guideline – In priority and general habitat management areas and sagebrush focal areas, burnout operation areas should be avoided by constructing direct fire lines, whenever safe and practical to do so, to improve suppression effectiveness and minimize loss of existing sagebrush habitat as determined by fireline leadership, incident commanders, etc.*

*GRSG-FM-GL-058– 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- Line officers should be involved in setting pre-season wildfire response priorities and, during periods of multiple fires, prioritizing protection of PHMA, SFA, and GHMA.*

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

*GRSG-FM-GL-061 – In PHMA, SFA, GHMA, and Anthro Mountain, 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.*

## **BLM Proposed Plan Elements**

### Habitat Management

*MA-GRSG-4 – In PHMA and in adjacent opportunity areas, maintain, improve and restore GRSG habitat to support GRSG populations and to maintain or enhance connectivity. Vegetation treatments would be applied to meet GRSG habitat objectives and provide additional GRSG habitat (Table 7).*

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**Table 7. Seasonal Habitat Desired Conditions for Greater Sage-grouse.**

ATTRIBUTE	INDICATORS	DESIRED CONDITION
<b>Breeding and Nesting (February 15-June 15)<sup>1, 2, 3, 4, 5, 6</sup></b>		
Lek Security	Proximity of trees	Trees absent or uncommon on shrub/grassland ecological sites within 1.8 miles (approx. 3 km) of occupied leks. <sup>6, 7, 8</sup>
	Proximity of sagebrush to leks	Has adjacent sagebrush cover. <sup>6</sup>
Cover	% of seasonal habitat meeting desired conditions	>80% of the mapped nesting habitat meets the recommended vegetation characteristics, where appropriate (relative to ecological site potential, etc.). <sup>8</sup>
	Sagebrush canopy cover	≥15% <sup>6, 8, 9</sup>
	Total shrub cover <sup>6, 8, 9</sup>	15-30%: Box Elder, Parker Mountain, Bald Hills, Hamlin Valley, Panguitch, Uintah south of Hwy 40 15-35%: Rich, Carbon, Emery, Sheeprocks, Ibapah, Uintah north of Highway 40
	Sagebrush height <sup>6, 8, 9</sup>	>12 inches (30 cm): Box Elder, Bald Hills, Hamlin Valley, Sheeprocks, Ibapah >10 inches (25 cm): Rich, Carbon, Emery, Uintah north of Highway 40 >8 inches (20 cm): Parker Mountain, Panguitch, Uintah south of Highway 40
	Predominant sagebrush shape <sup>10</sup>	>50% in spreading (applicable to the specific sagebrush types prone to columnar vs. spreading shape e.g., Wyoming, not black sage) <sup>6</sup>
	Perennial grass cover <sup>6, 8, 9</sup>	>10%: Box Elder, Bald Hills, Hamlin Valley, Rich, Carbon, Emery, Sheeprocks, Ibapah, Uintah north of Highway 40 >5%: Parker Mountain, Panguitch, Uintah south of Highway 40
	Perennial grass and forb height <sup>6, 8, 9</sup>	Provide overhead and lateral concealment from predators. <sup>11</sup>
	Perennial forb canopy cover <sup>6, 8, 9</sup>	>5%: Box Elder, Bald Hills, Hamlin Valley, Rich, Carbon, Emery, Sheeprocks, Ibapah, Uintah north of Highway 40 >3%: Parker Mountain, Panguitch, Uintah south of Highway 40
<b>Brood-Rearing/Summer (April 15-August 15)<sup>1</sup></b>		
Cover	% of Seasonal habitat meeting desired condition	>40% of the mapped brood-rearing/summer habitat meets recommended habitat characteristics where appropriate (relative to ecological site potential, etc.) <sup>8</sup>
	Sagebrush canopy cover <sup>6, 8, 9</sup>	>10%
	Total shrub cover <sup>6, 8, 9</sup>	10-25%: Box Elder, Bald Hills, Hamlin Valley, Panguitch, Rich, Sheeprocks, Ibapah, Parker Mountain, Uintah 10-30%: Carbon, Emery,
	Sagebrush height <sup>6, 8, 9</sup>	>12 inches (30 cm): Box Elder, Bald Hills, Hamlin Valley, Sheeprocks, Ibapah >10 inches (25 cm): Rich, Carbon, Emery, Uintah north of Highway 40 >8 inches (20 cm): Parker Mountain, Panguitch, Uintah south of Highway 40
	Perennial grass canopy cover and forbs <sup>6, 8, 9</sup>	>15% (Grass: >10%; Forb: >5%): Box Elder, Rich, Sheeprocks, Ibapah, Parker Mountain, Panguitch, Uintah, Carbon, Emery >15% (Grass: >8%; Forb: >7%): Bald Hills, Hamlin Valley,
	Riparian areas/mesic meadows	Proper Functioning Condition <sup>6</sup>
	Upland and riparian perennial forb availability	Preferred forbs are common with several preferred species present <sup>6, 12</sup>
<b>Winter (November 15-March 15)<sup>1</sup></b>		
Cover and Food	% of seasonal habitat meeting desired conditions	>80% of the mapped wintering habitat meets winter habitat characteristics where appropriate (relative to ecological site, etc.). <sup>8</sup>
	Sagebrush canopy cover above snow <sup>6, 8</sup>	>10%
	Sagebrush height above snow <sup>6, 8, 9, 13</sup>	>10 inches (25 cm): Box Elder, Bald Hills, Hamlin Valley, Rich, Carbon, Emery, Sheeprocks, Ibapah, Uintah north of Highway 40 >8 inches (20 cm): Parker Mountain, Panguitch, Uintah south of Highway 40
Notes: <sup>1</sup> Specific dates would be based on site-specific conditions and may be modified due to documented local variations (e.g., higher/lower elevations) or annual climactic fluctuations (e.g., early/late spring, long and/or heavy winter), in coordination with the State of Utah. <sup>2</sup> Utah Greater Sage-Grouse Working Group 2013 <sup>3</sup> Doherty 2008 <sup>4</sup> Doherty et al. 2010 <sup>5</sup> Holloran and Anderson 2005 <sup>6</sup> Stiver et al. 2015 <i>In Press</i>		

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ATTRIBUTE	INDICATORS	DESIRED CONDITION
7 Baruch-Mordo et al. 2013 8 Connelly et al. 2000		
9 Unpublished data, Utah Community-Based Conservation Program Greater Sage-grouse Statewide Database, Utah State University, Logan, Utah and Brigham Young University, Provo, Utah. Summarization and analysis of nesting and brood-rearing habitat characteristics from data collected through Utah State University and Brigham Young University research efforts. Researchers located the nest and brood sites using radio-marked telemetry methods. Shortly after the site was used by the marked bird (after hatch or use by a brood), vegetation characteristics on the site were measured using the line intercept method for shrub canopy cover and Daubenmire frames for herbaceous cover. Researchers across the various study areas used methods that followed the guidelines identified in Connelly et al. (2003).		
10 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. 2015 <i>In Press</i> ). 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.		
11 Specific height requirements needed to meet the objective will be set at the time of watershed assessments.		
12 Preferred forbs are listed in Stiver et al. 2015 <i>In Press</i> . Overall total forb cover may be greater than that of preferred forb cover since not all forb species are listed as preferred.		
13 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.		

*MA-GRSG-6 – Outside of PHMA, but within SGMAs and PACs, avoid removal of sagebrush and minimize development that would create a physical barrier to GRSG movement; these areas may be used by GRSG to connect to other populations or seasonal habitat areas.*

*MA-VEG-1 – In PHMA, where necessary to meet GRSG habitat objectives, treat areas to maintain and expand healthy GRSG habitat (e.g., conifer encroachment areas, annual grasslands).*

*In PHMA, prioritize implementation of restoration/treatment projects based on environmental variables that improve chances for project success in areas most likely to benefit GRSG (e.g., proximity to existing GRSG populations, ecological site potential, resistance and resilience), documented in **Appendix K**.*

*In PHMA, prioritize restoration in seasonal habitats that are identified as the limiting factor for GRSG distribution and/or abundance.*

*In PHMA, avoid sagebrush reduction treatments within GRSG nesting and winter habitat unless the project plan and associated NEPA document demonstrate a biological need for the treatment to maintain or improve habitat for the GRSG population. Coordinate with the State of Utah and USFWS prior to conducting sagebrush treatment projects within nesting and winter habitat.*

*MA-VEG-2 – Remove conifers encroaching into sagebrush habitats. When conducting conifer treatments:*

- *Prioritize treatments closest to occupied GRSG habitats and near occupied leks, and where juniper encroachment is phase I or phase II.*
- *Treat areas in late Phase II or Phase III condition to create movement corridors, connect habitats, or to break up hazardous fuels and reduce the potential for catastrophic fire.*
- *Prioritize methods to reduce conifer canopy cover to those that maintain the understory vegetation as the preferred treatment methods (e.g., mechanical, lop and scatter).*
- *Require that vegetation treatments conducted within 0.6 miles of a lek include an objective of reducing conifer, where technically feasible, to less than 5 percent canopy cover, with preference for complete removal.*
- *Include stipulations to avoid removing old-growth pinyon/juniper stands (e.g., Tausch et al. 2009; Miller et al. 1999).*
- *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.*

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*MA-VEG-4 – In PHMA, include GRSG habitat objectives in restoration/treatment projects. Treatment objectives should include short-term and long-term habitat conditions, and they should include specific objectives for the establishment of sagebrush cover and height, as well as cover and heights for understory perennial grasses and forbs necessary for GRSG seasonal habitats (Table 7). Make meeting the GRSG objectives for the restoration/treatment project one of the primary priorities for the project and subsequent land uses, recognizing that managing for other special status species may result in treatment objectives that may not meet GRSG seasonal habitat objectives (e.g., winter habitat cover requirements vs. creation of Utah prairie dog habitat). Where GRSG habitat overlaps with that of federally listed threatened or endangered species (e.g., Utah prairie dogs), coordinate with species-specific experts to develop conservation and recovery objectives and allow habitat treatments that will benefit both species.*

*MA-VEG-5 – In PHMA, prioritize the use of native seeds for restoration based on availability, adaptation (ecological site potential), and probability of success. Where probability of success or adapted seed availability is low, desirable non-native seeds may be used as long as they support GRSG habitat objectives. Re-establishment of appropriate sagebrush species/subspecies and important understory plants, relative to site potential, should be the principle objective for rehabilitation efforts.*

Wildland Fire Management (General)

*MA-FIRE-1 – In collaboration with the USFWS and relevant state agencies, complete and maintain GRSG Landscape Wildland Fire and Invasive Species Habitat Assessments to prioritize at risk habitats, and identify fuels management, preparedness, suppression and restoration priorities necessary to maintain sagebrush habitat to support interconnecting GRSG populations. These assessments and subsequent assessment updates would also be a collaborative effort to take into account other GRSG priorities identified in this plan. **Appendix K** describes a minimal framework example and suggested approach for this assessment.*

Wildland Fire Management (Fuels Management)

*MA-FIRE-3 – In PHMA, fuel treatments will be designed through an interdisciplinary process to expand, enhance, maintain, or protect GRSG habitat.*

- *In collaboration with USFWS and relevant state agencies, BLM planning units with large blocks of GRSG habitat will develop, using the assessment process described in **Appendix K**, 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.*
- *Use green strips and/or fuel breaks to protect GRSG habitat from fire events.*
- *When possible, locate fuel breaks along existing roads, ROWs, and other suitable topographic or natural features (e.g., areas devoid of vegetation, rock outcrops).*
- *Avoid constructing fuel breaks through large areas of intact GRSG habitat, unless the associated NEPA document demonstrates a biological need for the fuel break to maintain or protect habitat for the GRSG population. Coordinate with the State of Utah and USFWS prior to constructing fuel breaks within nesting and winter habitat.*

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- *Using an interdisciplinary approach, a full range of fuel reduction techniques will be available. Fuel reduction techniques such as conifer reduction, grazing, prescribed fire, chemical, biological, and mechanical treatments may be acceptable, given site-specific variables.*
- *Remove encroaching conifer stands as a fuels management tool, where environmental review documents it would protect or improve GRSG habitat.*
- *Prioritize the use of native seeds for fuels management treatment based on availability, adaptation (site potential), and probability of success. Where probability of success for native seed availability is low, desirable non-native seeds may be used to meet GRSG habitat objectives to trend toward restoring the fire regime. When reseeding, use fire resistant native and desirable non-native species, as appropriate, to provide for fire breaks.*
- *Upon project completion, monitor and manage fuels projects to ensure long-term success, including persistence of seeded species and/or other treatment components, such as implementing maintenance actions. Control invasive vegetation post-treatment.*
- *Apply seasonal restrictions, as needed, for implementing fuels management treatments according to the type of seasonal habitats present (see MA-GRSG-3G).*

*In PHMA, avoid sagebrush reduction fuels treatments within GRSG nesting and winter habitat unless the project plan and associated NEPA document demonstrate a biological need for the treatment to maintain or improve habitat for the GRSG population. Treatments in winter habitat should be designed to maintain sagebrush, especially tall sagebrush (sagebrush capable of standing above heavier than normal snowfall), which would be available to GRSG above snow during a severe winter. Prior to conducting fuels treatments in winter habitat, coordinate with the State of Utah and USFWS to design the treatment to strategically reduce wildfire risk around or in the winter habitat.*

*MA-FIRE-4 – In 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.*

*Prescribed fire as a vegetation or fuels treatment shall only be considered 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 GRSG habitat in PHMA (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).*

*Prescribed fire in known winter range shall only be considered 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.*

*Wildland Fire Management (Suppression)*

*MA-FIRE-8 – Fire fighter and public safety are the highest priority. GRSG habitat in PHMA will be prioritized commensurate with property values and other critical habitat to be protected, with the*

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*goal to restore, enhance, and maintain areas suitable for GRSG across the range of GRSG habitat consistent with LUP direction.*

*PHMA will be viewed as more valuable than GHMA when priorities are established. When suppression resources are widely available, maximum efforts will be placed on limiting fire growth in GHMA polygons as well. These priority areas will be further refined following completion of the GRSG Landscape Wildland Fire Invasive Species Habitat Assessments described in **Appendix K**.*

*In GHMA or areas where treatment/seeding has occurred to improve habitat, prioritize suppression where wildfires threaten adjacent PHMA.*

*MA-FIRE-9 – Within acceptable risk levels use 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 LUP direction.*

*In PHMA, burnout operations areas should be avoided by constructing direct fire lines, whenever safe and practical to do so.*

*Lands and Realty (Transmission Lines)*

*MA-LAR-2 – PHMA are designated as avoidance areas for high voltage transmission line ROWs (100kV or greater). All authorizations in these areas, other than the excepted projects, must comply with the conservation measures outlined in this plan, including the RDFs and avoidance criteria presented in MA-GRSG-03 (see GRSG FEIS **Appendix G**).*

*In PHMA, high voltage transmission lines (100 kV or greater) would be avoided if possible. If avoidance is not possible, they would be placed in designated corridors where technically feasible. Where not technically feasible, lines should be located adjacent to existing infrastructure, unless using a different alignment better minimizes impacts on GRSG. New ROWs constructed adjacent to existing infrastructure will be constructed as close as technically feasible to existing infrastructure to limit disturbance to the smallest footprint.*

## **Utah Prairie Dog—Project Design Features/Conservation Measures**

### **Common to All Proposed Actions**

#### **Habitat Management**

**1.1** In order to sustain Utah prairie dog recovery in perpetuity, the Service recommends creating and maintaining a minimum of 50 percent of the suitable<sup>6</sup> and potentially suitable habitat<sup>7</sup> within the Utah

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<sup>6</sup> Suitable Habitat: Habitat capable of supporting Utah prairie dogs including grassland or low-density sagebrush sites, agricultural fields, vacant lots, and other areas as identified by the Authorizing Federal Agency. Habitat previously mapped by the Utah Division of Wildlife Resources must be treated as suitable, regardless of current vegetative status.

<sup>7</sup> Potentially Suitable Habitat: Utah prairie dog habitat including areas that are mapped, occupied, or currently unoccupied or unmapped that can benefit from habitat treatments. Specifically, these are areas that are sagebrush-steppe grasslands with deep and well-drained soils and a good existing understory (USFWS 2009) that could support prairie dogs with management actions such as reducing sagebrush canopy cover to <10%.

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prairie dog Management Units (MU) (UPDRIP 2013, 2014)<sup>8,9</sup> by meeting current Utah prairie dog habitat guidelines (USFWS 2009)<sup>10</sup>. Where sage-grouse priority and general habitat overlap the Utah prairie dog MUs or other important areas identified as necessary for UPD conservation in coordination with the Service, vegetation treatments will be developed and implemented consistent with the above Utah prairie dog recovery recommendations. These areas would be managed to consist of perennial grassland with a minimum contiguous patch size of 250 acres. Treatments may include sagebrush density reduction or removal to achieve desired UPD habitat conditions. Indicators and desired vegetation conditions for perennial grassland patch areas are provided in Table 8.

The Utah prairie dog MUs overlap with a small percentage (4.6%) of the greater sage-grouse priority and general habitat in Utah, and the two species are sympatric and easily co-managed throughout most of the Utah prairie dog range in Southern Utah. Once the Utah prairie dog requirements are met as described above, then the remaining acreage within the Utah prairie dog MU's and Greater sage-grouse priority and general overlap areas may be managed to meet Greater sage-grouse needs as described in the Proposed Action/Proposed Plan of this Biological Assessment.

**Table 8. UPD Desired Future Conditions and Maintenance**

<b>Vegetation Indicator</b>	<b>Desired Condition</b>
Shrub Canopy Cover <sup>11</sup>	0-3%
Pinyon Pine and Juniper Composition	0%
Perennial cool & warm season grass canopy cover	15-40%
Perennial cool season grass species richness	> 3 native species
Perennial warm season grass species richness	> 1 native species
Perennial forb canopy cover	1-10%
Perennial forb species richness	4-8 native species
Total grass and forb species diversity (native/non-natives, annuals/perennials)	>10 species

**1.2** Only hand tools will be used within 1100 feet of occupied Utah prairie dog habitat<sup>12</sup> when removing conifers that are encroaching into greater sage-grouse habitat.

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<sup>8</sup> Utah Prairie Dog Recovery Implementation Program. 2013. Population structure for Utah prairie dog recovery. White paper. Utah Prairie Dog Recovery Implementation Program, Southern Utah University, Cedar City, UT. 10 pp.

<sup>9</sup> Utah Prairie Dog Recovery Implementation Program. 2014. Utah prairie dog 5-year management unit plans: The Path to Recovery 2014-2018. Utah Prairie Dog Recovery Implementation Program, Southern Utah University, Cedar City, UT. 70 pp.

<sup>10</sup> U.S. Fish and Wildlife Service Utah Prairie Dog Recovery Team. 2009. Recommended translocation procedures for Utah prairie dog. U.S. Fish and Wildlife Service, West Valley City, UT. 19 pp.

<sup>11</sup> Sub-shrubs or low stature shrubs may be present on site if height is less than 12 inches.

<sup>12</sup> Occupied Utah prairie dog habitat-: During the Active Season: Any area where Utah prairie dogs are seen or heard, or any Functional Utah prairie dog burrows (see definition of Functional Burrow) are found and show evidence of recent prairie dog activity (fresh digging, scat, fresh tracks). During the Dormant Season: Any Utah prairie dog burrows (functional or not functional), or any Utah prairie dog mound system (see definition of mound system) is found, even if no other signs of Utah prairie dogs are present.

### **Wildfire Suppression and Emergency Stabilization and Rehabilitation**

**2.1** Wildfires will be suppressed before they reach a prairie dog colony<sup>13</sup> or after they exit a colony to avoid direct adverse impacts to UPD, unless the burn is consistent with UPD recovery goals. Active suppression efforts may not occur within a colony unless human health and safety or structures are at risk.

**2.2** Only hand lines will be authorized within colonies.

**2.3** Normally, only water shall be used on fires that occur within prairie dog colonies. If the fire Incident Commander decides that the situation requires use of chemical retardants in order to protect life and property, they may be used. The chemical composition will be supplied to the U.S. Fish and Wildlife Service during emergency consultation.

**2.4** All vehicles shall stay on existing roads within colonies, except as stated in (2.5). Storage of equipment and materials shall not occur within ¼ mile of colonies. Vehicle maintenance shall not occur within these areas.

**2.5** The Resource Advisor, biologist, or biological monitor (someone who is either qualified with a biological background or has been trained by the Resource Advisor) ensures that prairie dogs and their burrows are protected or avoided by walking in front of engines, tracked vehicles, or other firefighting related vehicles within occupied prairie dog colonies.

**2.6** Vehicles shall not exceed a speed of 10 miles per hour (cross country) in occupied Utah prairie dog colonies unless a higher speed is determined to be prudent for safety reasons.

**2.7** Within colonies, precautions shall be taken to ensure that contamination of the site by fuels, motor oils, grease, etc. does not occur and that such materials are contained and properly disposed of off-site. Inadvertent spills of petroleum based or other toxic materials shall be cleaned up and removed immediately, unless during an emergency event (wildfire suppression). In which case the spill shall be cleaned up as soon as practical after the emergency situation is controlled.

**2.8** Camps associated with fire suppression activities shall be situated outside occupied habitat.

**2.9** During fire ESR activities, sagebrush seed WILL NOT be included in the seed mix when rehabilitation activities are occurring within Utah prairie dog MU's and the Utah prairie dog habitat requirements as described in Conservation Measure (1.1) have not been met. Sagebrush seed will not be included in the seed mix when rehabilitation activities are occurring within occupied Utah prairie dog habitat.

### **Fuels Treatments**

**3.1** Surveys according to approved protocols and procedures will be required prior to surface disturbance unless species occupancy and distribution information is complete, current, and available. Surveys would be conducted by USFWS-approved biologists. In the event species occurrence is verified, the project proponent may be required to modify operational plans, at the discretion of the authorized officer, to include additional, appropriate protection measures or practices for the minimization of impacts to the Utah prairie dog and its habitat.

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<sup>13</sup> "Prairie dog colony" refers to any occupied Utah prairie dog colony

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- 3.2** Prescribed burns may be allowed in priority and general habitat management areas, if deemed necessary to meet Utah prairie dog requirements described above (1.1).
- 3.3** Proposed treatments within suitable Utah prairie dog habitat would be surveyed in accordance with USFWS protocols or in coordination with USFWS prior to implementation.
- 3.4** All project personnel would be required to attend an environmental training prior to initiating Project construction. The training would address environmental concerns, applicable environmental laws, and requirements for compliance with the project.
- 3.5** All staging areas (e.g. vehicles, trailers, and materials) would be located outside of a 350 foot buffer of areas that were identified as mapped Utah prairie dog habitat.
- 3.6** Project related vehicles would not exceed a speed of 15 miles per hour within mapped Utah prairie dog habitat.
- 3.7** A qualified Utah prairie dog biologist or certified Utah prairie dog surveyor<sup>14</sup>, approved by the action agency, would be required to be on-site during all work within mapped Utah prairie dog habitat. The biologist would document compliance with design features and any take that may occur and would have the authority to halt activities which may be in violation of these stipulations.
- 3.8** All vehicle maintenance activities shall be conducted in maintenance facilities or in the event of emergency vehicle maintenance at least 350 feet from mapped Utah prairie dog habitat in previously disturbed areas. Precautions shall be taken to ensure that contamination of maintenance sites by fuels, motor oils, grease, etc. does not occur and that such material are contained and properly disposed of off-site. Inadvertent spills of petroleum based or other toxic materials shall be cleaned up and removed immediately or upon completion of the project.
- 3.9** Habitat treatments within occupied Utah prairie dog habitat would occur during the extended active season (April 1st – September 30th) unless otherwise determined in coordination with USFWS and UDWR.
- 3.10** Use spot applications or low-boom broadcast applications for herbicides within Utah prairie dog habitat, where possible, to limit the probability of contaminating non-target food and water sources, especially vegetation over areas larger than the treatment area.
- 3.11** All project personnel would be required to attend an environmental training prior to initiating Project construction. The training would address environmental concerns, applicable environmental laws, and requirements for compliance with the project.
- 3.12** If a dead or injured Utah prairie dog is located, initial notification must be made to the Service's Division of Law Enforcement, Salt Lake City, Utah, at telephone (801) 975-3330, to the UDWR at telephone number (435) 865-6100, and to the Authorized Officer at (435) 865-3000. Instruction for proper handling and disposition of such specimens would be issued by the Division of Law Enforcement. Care must be taken in handling sick or injured animals to ensure effective treatment and care and in handling dead specimens to preserve biological material in the best possible state.

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<sup>14</sup> Certified Utah prairie dog surveyor is an individual who has completed the U.S. Fish and Wildlife Service approved Utah Prairie Dog Surveyor Course within the last 4 years.

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**3.13** BLM and/or FS would re-initiate consultation with the USFWS if it is determined through site-specific coordination, USFWS protocol level surveys, etc. that impacts vary from what has been consulted on.

**Habitat Management Effects**

Management direction elements under the Forest Service proposed action and BLM proposed plan that may impact UPD are those that prescribe habitat management objectives for GRSG habitat win UPD suitable<sup>15</sup> habitats (i.e. grass-dominated areas). Management actions resulting from direction aimed at retaining or restoring shrub components at levels described in Tables 6 and 7 above may result reduce opportunity for UPD habitat restoration but will be coordinated with UPD recovery team to ensure that UPD recovery goals are not impeded. Management direction for removing encroaching conifers may cause short-term disturbances, such as human presence, vehicle traffic, and mechanized equipment. However, project design features (see below) incorporated into the proposed action/proposed plan would reduce or minimize potential disturbance. In addition, conifer removal is expected to benefit UPD in the long-term when conducted in suitable UPD habitat.

Consideration and allowances for managing UPD habitats in GRSG mapped habitats is provided in one BLM management action (listed below). These are species that have coexisted and coevolved in these landscapes (see management action below), so management actions will not be precluded as a result of the GRSG LUP Amendment.

*Habitat Management (BLM)*

*Make meeting the GRSG objectives for the restoration/treatment project one of the primary priorities for the project and subsequent land uses, recognizing that managing for other special status species may result in treatment objectives that may not meet GRSG seasonal habitat objectives (e.g., winter habitat cover requirements vs. creation of Utah prairie dog habitat). Where GRSG habitat overlaps with that of federally listed threatened or endangered species (e.g., Utah prairie dogs), coordinate with species-specific experts to develop conservation and recovery objectives and allow habitat treatments that will benefit both species.*

No UPD-specific habitat considerations are provided in the Forest Service proposed action. Given the distribution overlap of UPD and GRSG and threat factors associated with UPD, project design features (applicable to both BLM and Forest Service proposed alternatives) are included to avoid or minimize impacts from prescribed vegetation management conducted to benefit GRSG. With these design features, the proposed alternatives are consistent with elements prescribed in the UPD Recovery Plan (see below).

Incorporating UPD design features would ensure UPD recovery by managing to maintain a minimum of 50 percent of the suitable and potentially suitable habitat in the UPD MU (UPDRIP 2013, 2014). However, managing for GRSG habitat considerations in MUs, where at least 50 percent of suitable and potentially suitable UPD habitat has been achieved, may adversely impact local UPD individuals and habitats where portions of MUs are managed for suitable GRSG shrub densities.

UPD design features are not expected to limit opportunities for GRSG habitat management at the planning area scale. As stated above, UPD MUs occur in only about 4 percent of GRSG mapped habitats in Utah. In addition, the design features allow for retention of shrub cover in MUs of up to 50 percent of

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<sup>15</sup>Suitable habitat is that capable of supporting UPD and includes grassland or low-density sagebrush sites, agricultural fields, vacant lots, and other areas identified by the authorizing federal agency. Habitat previously mapped by the UDWR must be treated as suitable, regardless of current vegetation status.

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the usable area, thereby reducing the area of potential impacts on GRSG to about 2 percent of Utah mapped GRSG habitat. Areas managed for UPD would function similar to brood-rearing habitat where some level of shrubs is retained. Where pure grassland patches are managed, the edges of these areas would remain functional during the brood-rearing period.

### **Wildfire Suppression Effects**

Management direction in both the Forest Service proposed action and BLM proposed plan emphasize wildfire suppression in mapped GRSG habitats and fuels treatments designed to reduce wildfire potential and lessen the risk of impacts on sagebrush availability. Fire suppression methods may involve fireline construction, suppression agents and retardants, and water withdrawals. Fuels treatments aimed at reducing wildfire risk may involve conifer reduction, grazing, prescribed fire, chemical, and biological; mechanical treatments may be acceptable, given site-specific variables.

UPD and suitable habitat occur in grassland and sagebrush habitats. All components of fire management could be used in potentially suitable or occupied UPD habitat. Wildfire suppression methods and associated activities may have direct short-term negative effects on UPD as well as negative impacts on occupied or suitable habitat (see list below). Suppression may harass, displace, injure, or kill prairie dogs from smoke or fire during backfires, surface disturbance, or human-caused disturbance. Wildland fire suppression operations may adversely affect prairie dogs or colonies if unintentionally exposed to fire retardant. Following a fire, short-term adverse impacts may occur from a reduction in food supplies, loss of surface cover, an increased potential for colonization by invasive plant species, and increased predation. Long-term indirect effects are a mix of potentially positive and negative impacts associated with suppression, emergency rehabilitation, and fire severity.

The following short-term and long-term effects could occur on the UPD or its habitat from wildland fire suppression:

#### *Short-term direct effects*

- Visual or auditory disturbance or displacement of individuals from low-flying aircraft, vehicles, heavy equipment, and humans during operations or treatments, affecting foraging, roosting, or reproduction
- Mortality and displacement or injury of adults or young from smoke inhalation or from vehicles or equipment
- Removal of key habitat components for burrowing, foraging, or cover due to equipment or operational tactics, including
  - tree and shrub removal and soil disturbance during fire line construction
  - vegetation removal and soil disturbance during helipad or base camp construction
  - vegetation removal and soil disturbance during temporary or permanent road construction for project access
- Injury or mortality due to inadvertent strikes during aerial drops, including fire retardant
- Illness or mortality due to inadvertent chemical contamination of terrestrial species or aquatic habitats and species (special status species or prey species) during aerial applications, including fire retardant

#### *Long-term effects*

- UPD habitat could benefit from letting fire burn sagebrush and other habitat types; therefore, interdependent effects of wildland fire suppression that prevents the loss of suitable GRSG habitat from catastrophic wildland fires could limit the benefits of fire for UPD

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- Wildfire suppression could negatively impact UPD habitat where the effects of wildfire would otherwise maintain suitable grass/forb habitat characteristics
- UPD and their habitat could experience positive interrelated effects from post-fire emergency stabilization and rehabilitation (ESR) efforts in or near occupied sites, which would avoid or minimize further negative indirect effects on populations or key habitat components from either the wildland fire or fire suppression operations
- Long-term changes in quality or quantity of habitat when key habitat components are slow to recover, affecting the ability of a federally protected species to continue occupying a site, including extensive or severe damage to seedbanks, substrates, vegetative composition, or structure of habitats for plant species

Because alteration, damage, removal, or fragmentation of key habitat components from fire suppression would generally be mitigated as part of either fire suppression (implementation of resource protection measures) or ESR, negative long-term effects on habitat quality or quantity would typically be avoided or limited in scope and intensity.

**Fuels Treatments Effects**

Fuels treatments using prescribed fire or other means in grassland and sagebrush habitats could negatively affect UPD from smoke, fire, noise, or other human-caused disturbance, resulting in harassment, displacement, injury, or possibly mortality; or immediate post-project alteration of key habitat components (e.g., forage or vegetative cover) or prairie dog colonies from surface-disturbing activities. Any effects would be short term and of low intensity due to the implementation of resource protection measures, including pre-project surveys and avoiding critical periods for the UPD (e.g., hibernation and when pups are in the burrows). The immediate initial loss of forage and cover after a prescribed fire would be followed by vigorous regrowth of forb species in the growing seasons that follow (less than five years).

The following short-term and long-term effects could occur on the UPD or its habitat from prescribed fire and non-fire fuels treatments:

*Short-term direct effects*

- Burrow abandonment or mortality of young, resulting in the loss of one year's recruitment
- High levels of fuel loading at some sites would cause some adaptively managed wildland fires or prescribed fires to burn at higher than natural intensities, even when fire prescriptions were designed to maintain lower intensities
- Consumption of large woody debris and removal of shrub cover would be greater than typically found in the natural range of variation for an area, while creation of habitat mosaics would be less than typical
- Soil or ground disturbance from vehicles or heavy equipment during treatments, resulting in disturbance or destruction of vegetation (federally protected plant species and habitats for wildlife or fish) and subsurface dens or burrows
- When using domestic ungulates as the tool to implement biological vegetation treatments, trampling of plants or small animals could occur

*Long-term effects*

- Long-term changes in quality or quantity of habitat when key habitat components are slow to recover, affecting the ability of a federally protected species to continue occupying a site,

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including extensive or severe damage to seedbanks, substrates, vegetative composition, or structure of habitats for plant species

- Long-term beneficial effects on species from the following:
  - Decreased risk for large, catastrophic fires through fuels reduction and the gradual transition to a more natural fire regime
  - Restoration of habitats that have been altered due to invasion of nonnative species, or long-term exclusion of fire (in fire-adapted vegetation communities)
  - Long-term positive effects could benefit a species' reproduction, numbers, or distribution and, in some cases, facilitate the return of a species to its historic range

There is the potential for indirect effects (effects caused by the action but at a later time) from future site-specific ground-disturbing actions associated with fuels treatments. However, at this programmatic planning level, these future actions are currently unknown, and any possible effects are too speculative to evaluate at this time and are not reasonably certain to occur. All future site-specific projects will include an environmental analysis through the NEPA process and ESA Section 7 consultation. Potential adverse effects on UPD would be avoided, minimized, or mitigated through site-specific analysis of the details of such actions.

**Lands and Realty Effects (Transmission Lines)**

Under the existing plans, an existing designated utility corridor is aligned to intersect two major leks in the Panguitch area. This corridor does not have any power lines in a portion of it. Under the proposed plan, the portion vacant of power lines is being re-aligned to where there are currently existing power lines and closer to Highway 89. As a result of this realignment, if a new transmission line (100kV or greater) cannot avoid PHMA, which is the principle management approach, the next option would be to locate it in a designated corridor. By placing a potential new line next to an existing power line, there would be less overall new disturbance and impacts would be concentrated where there is already some disturbance. While this is avoiding impacts to GRSG leks and nesting habitat, it increases the possibility of localized impacts to UPD because the adjusted alignment and existing power lines go over an existing UPD colony. However, the existing Kanab RMP management decisions that pertain to UPD (and are not being amended in this process) state that no surface disturbance or surface occupancy can occur within 0.5 miles of active UPD habitats, and that renewed or amended ROWs on public lands that have the potential to disturb active and inactive Utah prairie dog colonies should be rerouted. Though a designated utility corridor does not guarantee a power line will be built in the area, it increases the likelihood, relative to other areas outside the designated corridor. In addition to complying with the GRSG lands actions directing avoidance of this area, any potential power line would have to also comply with the UPD actions in the Kanab RMP, including in the realigned corridor. Further, the Kanab RMP does not restrict power lines to designated corridors; neither does the proposed Plan. As such, any new potential power lines, while more likely to be located within the realigned corridor, would still need to comply with other GRSG and UPD management RMP actions (see Kanab RMP language below).

**Kanab RMP Language for Utah Prairie Dog**

- Implement conservation measures (Kanab RMP - Appendix 9) on actions affecting Utah prairie dogs or their habitat.
- Permit no surface disturbing activities or surface occupancy within ½ mile of active, suitable (currently inactive), or potential reintroduction (BLM 2002b) Utah prairie dog habitats/sites.
- Seismic activities would avoid these areas, particularly during the active season (April 1 to September 30).
- Allow introduction, augmentation, restocking, translocations, transplantation, and/or reestablishments of special status species in cooperation and collaboration with USFWS,

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UDWR, and other agencies as necessary, subject to guidance provided by BLM's 6840 policy and by existing or future memoranda of understanding (MOU).

- Require deterrent devices designed to prevent raptors from perching on powerline structures on all new construction (including upgrades and reconstruction) to discourage predation on Utah prairie dogs.
- Reroute renewed or amended ROWs on public land that have the potential to disturb active and inactive Utah prairie dog colonies.
- Preclude cross-country OHV use in occupied or inactive Utah prairie dog colonies.
- Allow for the treatment of plague and other diseases that may impact Utah prairie dogs.

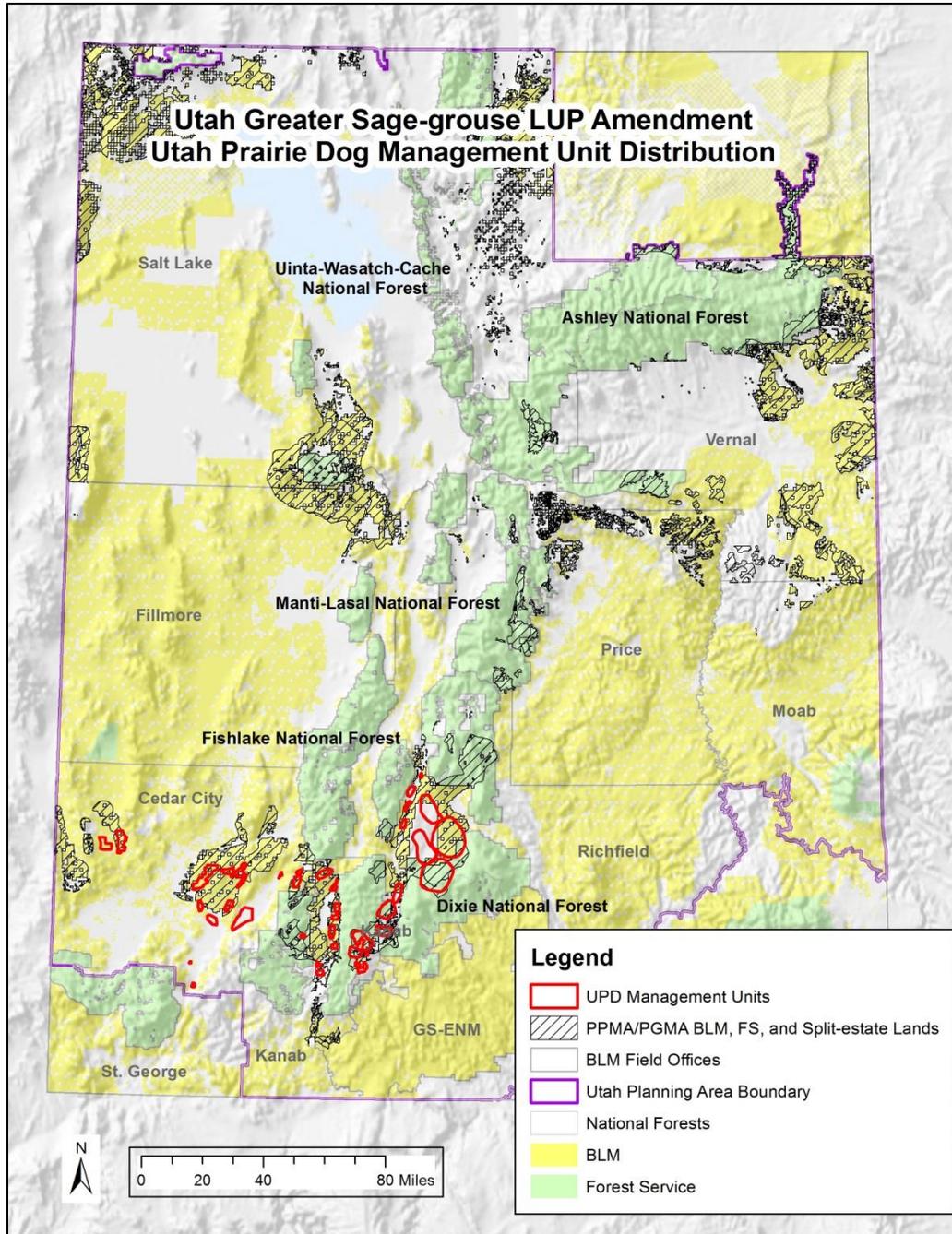
### *Cumulative Effects*

To evaluate cumulative effects, the future state, tribal, local, or private actions that are reasonably certain to occur in the decision area are identified and their effects are added to the anticipated effects of the current proposal. While the decision area for the current proposal encompasses mapped GRSG habitats on BLM- and Forest Service-administered lands as well as split-estate lands under other ownerships, the elements considered here as potentially affecting UPD (i.e., habitat management, wildfire management, and fuels management) are to BLM- and Forest Service-administered lands only. Because only federal actions are expected to occur in the focus area, no cumulative effects are expected as a result of actions on state, tribal, local, or private lands in the decision area.

### *Summary Determination of Effects on Utah Prairie Dog*

The Forest Service proposed action and BLM proposed plan both contain elements associated with wildfire management, fuels management, and vegetation management that may affect UPD. The BLM proposed plan specifically acknowledges that where GRSG and UPD overlap, site-specific consideration of projects will be necessary, in collaboration with local biologists, to ensure that projects benefit both species. In addition, the shifting of the utility corridor may have adverse impacts to UPD. For all projects in UPD habitat, BLM and Forest Service will incorporate Service-recommended UPD design features, to the extent possible, to avoid and minimize impacts; however, it is possible that not all UPD design features will be possible to incorporate. Therefore, **the Utah GRSG LUP Amendment and EIS may affect, and is likely to adversely affect, UPD.**

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**Figure 3. Utah Prairie Dog and GRSG Mapped Habitat Distribution**

**Mexican Spotted Owl (*Strix occidentalis lucida*)—Threatened**

Designated critical habitat for Mexican Spotted Owl (MSO) exists on lands administered by the BLM Price, Cedar City, GSENM, Kanab, and Richfield Field Offices but overlap with GRSG PHMA/GHMA primarily exists within the Price FO. Of the approximately 10,482 acres of MSO critical habitat that overlaps with PHMA on BLM lands, 998 acres are within the Price FO. MSO modeled habitat on BLM-administered lands overlaps PHMA/GHMA on approximately 23,530 acres in the Price and Vernal Field Offices. An additional 13,426 acres of PHMA/GHMA on split-estate lands overlaps with modeled MSO habitat in the same field office boundaries (Table 9). Modeled habitats overlapping GRSG mapped habitats on the Manti-La Sal and Dixie National Forests total 5,291 acres.

**Table 9. MSO Modeled Habitat and GRSG Mapped Habitat Overlap**

Administrating Unit	Modeled Habitat (BLM- and Forest Service- Administered Lands in Acres)	Modeled Habitat (Split-Estate Lands in Acres)	Designated Critical Habitat (BLM- and Forest Service- Administered Lands in Acres)	Designated Critical Habitat (Split-Estate Lands in Acres)
Cedar City Field Office	0	0		
GSENM				
Price Field Office <sup>1</sup>	23,423	11,930		998
Vernal Field Office <sup>1</sup>	107	1,496		0
Dixie NF <sup>2</sup>	302	0		0
Manti-La Sal NF*	4,989	0		0
<b>Totals</b>	<b>28,821</b>	<b>13,426</b>		<b>998</b>

<sup>1</sup>Acres based on 2000 Statewide habitat model

<sup>2</sup>Acres based on MSO habitat modeled specifically by the Dixie National Forest

**Mexican Spotted Owl—Project Design Features**

- Where management activities designed to maintain or enhance GRSG habitat occur in MSO-designated critical habitat, avoid negative impacts on MSO critical habitat primary constituent elements.
- For management activities designed to maintain or enhance GRSG habitat that occur within 0.5 mile of suitable MSO breeding habitat, survey for MSO presence before implementation. Apply appropriate management buffers around known MSO active sites during potential disturbance to breeding MSOs. If no surveys occur, apply appropriate management buffers around unsurveyed suitable breeding habitat during potential disturbance to breeding MSOs, or conduct proposed activities between September 1 and February 28 (outside of the breeding season).

**Habitat Management Effects**

No direct impacts to nesting areas will occur from proposed actions. Though, the habitat management and wildfire management actions could impact foraging habitats. Due to the generalized nature of MSO foraging, it is deemed that the scope of the actions proposed in this plan amendment will not have adverse direct or indirect impacts to MSO.

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*Cumulative Effects*

To evaluate cumulative effects, the future state, tribal, local, or private actions that are reasonably certain to occur in the decision area are identified and their effects are added to the anticipated effects of the current proposal. The decision area for the current proposal is limited to PHMA and GHMA on BLM- and Forest Service-administered lands. No state, tribal, local, or private lands exist in the decision area, and no state, tribal, local, or private actions are planned or expected to occur in the decision area. Only federal actions are expected to occur in the decision area; therefore, no cumulative effects are expected.

*Summary Determination of Effects on Mexican Spotted Owl and Critical Habitat*

**The Utah GRSG LUP Amendment and EIS may affect, but will not likely adversely affect, MSOs or MSO critical habitat** because any proposed actions that may adversely affect this species and/or its habitats will be further evaluated at the project level, and adverse impacts would be avoided.

**California condor (*Gymnogyps californianus*)—Endangered and Experimental/Nonessential Population**

California condors are primarily a cavity-nesting species, typically in cavities on steep rock formations or in the burned-out hollows of old-growth conifers. Roosting sites are ridgelines, rocky outcrops, steep canyons, and tall trees or snags near foraging grounds. In search of carrion, typical foraging behavior is long-distance reconnaissance flights usually over more open terrain. Records from 1992 to 2012 show the cause of condor mortality in nearby Arizona was predominately lead exposure (USFWS 2013a). Other less prevalent mortality factors are (in order of frequency) predation, starvation, shooting, and power line collision.

Condors are not known to nest in the decision area. Suitable nest sites (cliffs and hollowed portions of old-growth conifer) are unlikely to coincide with suitable GRSG habitat. However, the decision area may serve as condor foraging habitat.

There would be no direct effect on California condors as a result of the proposed action. The single most significant threat to this species is lead ingestion (USFWS 2013a). Elements in the proposed action would have no indirect effect on condor exposure to lead.

There is a potential for indirect effects on foraging habitat from management direction under both the BLM and Forest Service proposed alternatives. Management actions and standards and guidelines designed to maintain or enhance GRSG habitat would also maintain healthy open ecosystems favorable to California condor foraging. In addition, management direction listed below pertaining to installation of anti-perching devices on towers and tall structures would apply to power lines. California condors have been known to use transmission towers and other tall structures for perching (USFWS 2013a), and there is a risk of collision and electrocution associated with these structures. Retrofitting such structures to prevent perching would likely reduce risk to condors, thereby providing a beneficial effect on the species.

*BLM MA-LAR-5 – Work with ROW holders to retrofit existing towers with perch deterrents or other anti-perching devices, where appropriate, to limit GRSG predation.*

*USFS GRSG-LR-SUA-ST-016 – In PHMA, SFA, GHMA, and Anthro Mountain, 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).*

### *Cumulative Effects*

To evaluate cumulative effects, the future state, tribal, local, or private actions that are reasonably certain to occur in the decision area are identified and their effects are added to the anticipated effects of the current proposal. The decision area for the current proposal is limited to PHMA and GHMA on BLM- and Forest Service-administered lands. No state, tribal, local, or private lands exist in the decision area, and no state, tribal, local, or private actions are planned or expected to occur in the decision area. Only federal actions are expected to occur in the decision area; therefore, no cumulative effects are expected.

### *Summary Determination of Effects on California Condor*

**The Utah GRSG LUP Amendment and EIS may affect, but will not likely adversely affect, California condor where it is federally listed as endangered and is not likely to jeopardize California condor in the Experimental Population Area.** This is because the anticipated effects to the species and suitable habitat existing in the decision area would be beneficial due to the reduced risk associated with use of transmission lines as perch sites and overall management for open vegetation in GRSG habitats. Any proposed actions that may adversely affect this species and/or its habitats will be further evaluated at the project level, and adverse impacts would be avoided.

## **B. Plants**

### *Autumn Buttercup (*Ranunculus aestivalis*)*

Autumn buttercup is a rare endemic species that occurs on a piece of private land within PHMA in the Panguitch Valley, approximately one-fourth mile from the BLM lands managed under the Kanab Field Office. No plants are known to occur on either BLM- or Forest Service-administered lands. There is approximately 20 acres of this habitat type on BLM lands in the area, near the TNC property (identified known location currently vacant), but the BLM habitats are drier. In the event that any actions under this GRSG LUP Amendment are proposed that may adversely affect this species and/or its habitats will be further evaluated at the project level, and adverse impacts would be avoided.

Due to the rarity of this species, there are only two known occurrences in the project area. Potential effects would result from GRSG conservation measures, which are largely restrictive, and would likely be beneficial to autumn buttercup habitat.

### *Cumulative Effects*

To evaluate cumulative effects, the future state, tribal, local, or private actions that are reasonably certain to occur in the decision area are identified and their effects are added to the anticipated effects of the current proposal. The decision area for the current proposal is limited to PHMA and GHMA on BLM- and Forest Service-administered lands. No State, tribal, local, or private lands exist in the decision area, and no state, tribal, local, or private actions are planned or expected to occur in the decision area. Only federal actions are expected to occur in the decision area; therefore, no cumulative effects are expected.

### *Summary Determination of Effects on Autumn Buttercup*

**The Utah GRSG LUP Amendment and EIS may affect, but will not likely adversely affect, autumn buttercup.** This is because any proposed actions that may adversely affect this species and/or its habitats will be further evaluated at the project level, and adverse impacts would be avoided.

Because no suitable habitats for autumn buttercup are suspected to occur in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Richfield, Price, or Vernal, or Salt Lake Field Offices or

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the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-Cache National Forests, there would be no effects on autumn buttercup in these areas.

### Clay phacelia (*Phacelia argillacea*)

Clay phacelia, their occupied habitats, and modeled habitats do not overlap PHMA or GHMA. This narrow endemic species currently exists in three populations on 74 acres (70 acres The Nature Conservancy property and 4 acres on Uinta-Wasatch-Cache Forest Service lands). The nearest known clay phacelia occurrences are approximately 4.1 miles from PHMA federal lands (3.5 miles from PHMA on non-federal lands). Through modeling efforts, Forest Service has identified 1,352 acres of potential clay phacelia where some of the area has been ground-truthed but has not yet documented new occupied clay phacelia habitats. The modeled habitat occurs approximately 1.5 miles of PHMA on BLM lands under the jurisdiction of the Salt Lake City Field Office (near Starvation Creek off of Highway 6 through Spanish Fork).

Through, the greatest existing and potential threats to this species are transportation and transmission line development and maintenance and herbivory (USFWS 2013c). Ground disturbance in association with these threats has the potential to damage individuals and degrade habitat. While clay phacelia, their occupied habitat, and their modeled habitat do not overlap with PHMA or GHMA, other concurrent 500 kV transmission projects have been developing their alignments in anticipation of Utah GRSG LUP amendments. Therefore, the planning of these two transmission lines has identified preferred alignments that may cross modeled clay phacelia habitat. Future site-specific analysis of impacts for these two projects will occur in compliance with NEPA and ESA.

### Summary Determination of Effects on Clay Phacelia

Clay phacelia known occurrences and modeled habitat do not overlap GRSG habitat.

**The Utah GRSG LUP Amendment and EIS may affect, but will not likely adversely affect, clay phacelia.** This is because there will be no adverse direct or indirect impacts from the plan amendment because there is no overlap of currently occupied or modeled habitat but the proposed TWE and EGS transmission lines avoided impacting GRSG and by doing so, will cross modeled clay phacelia habitat.

Because no suitable habitats for clay phacelia are suspected to occur in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Richfield, Price, or Vernal Field Offices or the Ashley, Dixie, Fishlake, or Manti-LaSal National Forests, there would be no effects on clay phacelia in these areas.

### Clay Reed-Mustard (*Schoenocrambe argillacea*)

Clay reed-mustard is a rare endemic species that is known to exist in six populations along 13 miles of the Green River to Willow Creek in the BLM Vernal Field Office. The only known occurrence of Clay reed-mustard within a GRSG habitat area is the eastern portion of its distribution near Willow Creek and is in GHMA on BLM-administered lands. The GHMA habitat overlaps near Willow Creek, but the clay reed-mustard populations and suitable habitat areas are steep sparsely-vegetated slopes and would not be targeted for future GRSG conservation actions.

### Cumulative Effects

To evaluate cumulative effects, the future state, tribal, local, or private actions that are reasonably certain to occur in the decision area are identified and their effects are added to the anticipated effects of the current proposal. The decision area for the current proposal is limited to PHMA and GHMA on BLM- and Forest Service-administered lands. No state, tribal, local, or private lands exist in the decision area,

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and no state, tribal, local, or private actions are planned or expected to occur in the decision area. Only federal actions are expected to occur in the decision area; therefore, no cumulative effects are expected.

***Summary Determination of Effects on Clay Reed-Mustard***

**The Utah GRSG LUP Amendment and EIS may affect, but will not likely adversely affect, clay reed-mustard.** This is because clay reed-mustard is found within GHMA area in the Vernal Field Office but does not exist in GRSG habitats. However, in the event that any actions under this GRSG LUP Amendment are proposed that may adversely affect this species and/or its habitats will be further evaluated at the project level, and adverse impacts would be avoided. Because no suitable habitats for clay reed-mustard are expected in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Price, or Salt Lake Field Offices or the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-Cache National Forests, there would be no effects on clay reed-mustard in these areas.

***Last Chance Townsendia (Townsendia aprica)***

Last Chance townsendia occurs in two locations in PHMA in the Lower Last Chance Creek area on Forest Service lands within the jurisdiction of Fishlake National Forest in the Parker population area. In addition, Last Chance townsendia overlaps with PHMA/GHMA in the BLM Richfield Field Office. Species occurrences are known in the Price Field Office and the Dixie National Forest but are outside PHMA and GHMA. Management decisions are not anticipated to have direct or indirect adverse impacts to Last Chance townsendia, but in the event that any actions under this GRSG LUP Amendment are proposed that may adversely affect this species and/or its habitats will be further evaluated at the project level, and adverse impacts would be avoided.

The current primary threats to Last Chance townsendia are trampling from livestock and wild horses and burros, energy and mineral-related development, range improvements, and ORV use (USFWS 2013d). Ground disturbance in association with these threats has the potential to damage individuals and degrade habitat. In the event that any actions under this GRSG LUP Amendment are proposed that may adversely affect this species and/or its habitats will be further evaluated at the project level, and adverse impacts would be avoided.

ORV use is a threat to Last Chance townsendia because individuals can be damaged resulting in reduced seed production or individual mortality. Indirectly, soil disturbance as a result of ORV use can increase soil erosion and promote invasive species. The following action may, under BLM MA-TTM-2 states that *PHMA and GHMA that do not have designated routes in a Travel Management Plan would be managed as limited to existing routes until a Travel Management Plan designates routes (unless they are already designated as limited to designated routes or closed to OHV use)*. Thus, if any areas of occupied or suitable habitat for Last Chance townsendia in PHMA or GHMA are currently open to ORV use, concurrent restrictions would be placed on the vehicle operators to use only existing routes.

***Cumulative Effects***

To evaluate cumulative effects, the future state, tribal, local, or private actions that are reasonably certain to occur in the decision area are identified and their effects are added to the anticipated effects of the current proposal. The decision area for the current proposal is limited to PHMA and GHMA occurring on BLM- and Forest Service-administered lands. No state, tribal, local, or private lands exist in the decision area, and no state, tribal, local, or private actions are planned or expected to occur in the decision area. Only federal actions are expected to occur in the decision area; therefore, no cumulative effects are expected.

### *Summary Determination of Effects on Last Chance Townsendia*

A potential beneficial effect on Last Chance townsendia may result in PHMA/GHMA from the action of restricting vehicle use to existing roads and trails (where travel planning has not previously been completed – BLM MA-TTM-2).

**The Utah GRSG LUP Amendment and EIS may affect, but will not likely adversely affect Last Chance townsendii.** This is because the anticipated effects to species occurrences and suitable habitat that exist in PHMA and GHMA in the Richfield Field Office and the Fishlake National Forest would be beneficial due to the reduced threat from ORVs. Any proposed actions that may affect this species and/or its habitats will be further evaluated at the project level, and adverse impacts would be avoided.

Because no suitable habitats for Last Chance townsendia are suspected to occur in PHMA or GHMA in the Price Field Office or the Dixie National Forest, and suitable habitats are not suspected at all on the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Salt Lake, or Vernal Field Offices or the Ashley, Manti-LaSal, or Uinta-Wasatch-Cache National Forests, there would be no effects on Last Chance townsendia in these areas.

### *Shrubby Reed-Mustard (Schoenocrambe suffrutescens)*

Shrubby reed-mustard is a rare endemic that occurs in seven populations in Uintah and Duchesne counties with known occurrences in GHMA (none on PHMA) on BLM lands within the jurisdiction of the Vernal Field Office. Known sites are about 5 miles from PHMA. Seven of 63 documented sites overlap GHMA on BLM-administered lands in the Johnson Draw area, Vernal Field Office. Other shrubby reed-mustard suitable habitat areas exist nearby and are in the decision area of the proposed land use plan amendments. The small dry desert-like habitats of shrubby reed-mustard would not likely be targeted for GRSG conservation actions. In the event that any actions under this GRSG LUP Amendment are proposed that may adversely affect this species and/or its habitats will be further evaluated at the project level, and adverse impacts would be avoided.

### *Cumulative Effects*

To evaluate cumulative effects, the future state, tribal, local, or private actions that are reasonably certain to occur in the decision area are identified and their effects are added to the anticipated effects of the current proposal. The decision area for the current proposal is limited to PHMA and GHMA occurring on BLM- and Forest Service-administered lands. No state, tribal, local, or private lands exist in the decision area, and no state, tribal, local, or private actions are planned or expected to occur in the decision area. Only federal actions are expected to occur in the decision area; therefore, no cumulative effects are expected.

### *Summary Determination of Effects on Shrubby Reed-Mustard*

**The Utah GRSG LUP Amendment and EIS may affect, but will not likely adversely affect, shrubby reed-mustard.** This is because the species exists within GHMA but there are no anticipated effects on occurrences and suitable habitat. In addition, any impacts from this proposed plan that may affect this species would be evaluated at the project level and all adverse effects avoided.

Because no suitable habitats for shrubby reed-mustard are suspected to occur in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Price, or Salt Lake Field Offices or the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-Cache National Forests, there would be no effects on shrubby reed-mustard in these areas.

### **Uinta Basin Hookless Cactus (*Sclerocactus wetlandicus*)**

Uinta Basin hookless cactus is known to occur in the Price and Vernal Field Offices; no occurrences or habitat are suspected to occur in PHMA. Only one documented site is in GHMA, near Nine Mile Canyon in the Vernal Field Office.

At the time of the original listing of the Uinta Basin hookless cactus complex, ongoing and foreseeable threats included mineral and energy development, illegal collection, recreational ORV use, and grazing. New threats identified since original listing are climate change, parasitism by the cactus-borer beetle, and invasive weeds. This GRSG LUP Amendment is not anticipated to substantially change these threats in GHMA in the Vernal Field Office.

#### ***Cumulative Effects***

To evaluate cumulative effects, the future state, tribal, local, or private actions that are reasonably certain to occur in the decision area are identified and their effects are added to the anticipated effects of the current proposal. The decision area for the current proposal is limited to PHMA and GHMA occurring on BLM and Forest Service administered lands. No state, tribal, local, or private lands exist in the decision area, and no state, tribal, local, or private actions are planned or expected to occur in the decision area. Only federal actions are expected to occur in the decision area; therefore, no cumulative effects are expected.

#### **Determination of Effects on Uinta Basin Hookless Cactus**

**The Utah GRSG LUP Amendment and EIS may affect, but will not likely adversely affect, Uinta Basin hookless cactus.** This is because there are no anticipated effects to the species or suitable habitat that exist in PHMA and GHMA in the Vernal Field Office. Any impacts from this proposed plan would be evaluated at the project level and all adverse effects avoided. Because no suitable habitats for Uinta Basin hookless cactus are suspected to occur in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Richfield, or Salt Lake Field Offices or the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-Cache National Forests, there would be no effects on Uinta Basin hookless cactus in these areas.

### **Ute Ladies'-Tresses (*Spiranthes diluvialis*)**

Ute ladies'-tresses is known to occur in the Uinta-Wasatch-Cache National Forest, the Grand Staircase-Escalante National Monument, the Vernal Field Office and is suspected in the Salt Lake Field Office and the Fishlake National Forest. Occurrences on the Uinta-Wasatch-Cache National Forest do not overlap GRSG habitat.

#### ***Current Conservation/Protection Measures for Ute Ladies'-Tresses***

##### **Grand Staircase/Escalante National Monument Plan**

**SSP-4:** The allotment evaluation process will address the protection of endangered species, including the incorporation of the latest research and information in the protection of these species, consistent with the BLM-wide grazing permit review process. Section 7 consultation will be conducted for all allotments that may affect listed species.

**SSP-9:** Communication sites, utility and road ROWs will not be permitted in known special status species populations. As permits are granted for these sites and ROWs, surveys will be completed to determine the presence of special status species in the area. If they are found, these activities will be moved to another location.

*Measures Specifically for Ute Ladies'-tresses (Spiranthes diluvialis)*

**SSP-18:** The information in the water section describes a strategy for ensuring water availability. Under that strategy, priority will be to maintain natural flows and floods. In addition, the maintenance of instream flows will provide adequate water for natural structure and function of riparian vegetation. Ute ladies'-tresses relies on these natural floods to colonize new areas and maintain healthy and viable populations.

**SSP-19:** Surveys for this species began in the 1999 growing season, and the results will be used to determine any further actions.

**SSP-20:** Appropriate actions will be taken to prevent trampling of the plants by visitors in high-use areas. These actions may include replanting native vegetation or constructing barriers.

**SSP-21:** Areas may be closed if necessary to protect these plants. Barriers will be constructed and restoration work initiated to stabilize the soil and banks and provide the best possible habitat for this plant.

**SSP-22:** No expansion of current or new facilities will be permitted where this plant grows.

**SSP-23:** Trails in areas where this plant grows will be relocated away from the plants and potential habitat when possible. These protection measures apply to current as well as future potential habitat areas for this species.

**SSP-24:** Interpretive materials will be developed to educate the public about Ute ladies'-tresses and the actions being implemented to protect it.

**SSP-25:** Restoration of the social trails in known populations will be initiated, including obliterating the trail by planting native species and moving soil to return the area to its natural grade. Group size restrictions, allocations, or other measures will be initiated if continued monitoring indicates that visitor use in the area is causing impacts.

**Uinta National Forest**

**Sub-goal-2-15 (G-2-15):** Ute ladies'-tresses colonies are managed so as to contribute to the protection and recovery of the species in the Diamond Fork watershed. If necessary, these colonies will serve as propagation stock for new habitats in this watershed. Bee (pollinator) habitat will be identified and protected in association with these plant colonies.

**WL&F-16 Guideline:** Where feasible, pollinator habitat will be provided next to Ute ladies'-tresses colonies by avoiding the removal of down woody material in the course of any management activities in the lower 7.5 miles of the Diamond Fork River corridor. Where removal cannot be avoided, a portion of down woody material greater than 3 inches in diameter will be salvaged and relocated to sunny openings next to Ute ladies'-tresses colonies.

Riparian habitat along Diamond Fork Creek is managed to achieve and maintain healthy, dynamic, sustainable communities in which the Ute ladies'-tresses orchid is an integral, if not dominant, component.

Threats to Ute ladies'-tresses are ORV use, competition with aggressive nonnative plants, alteration of hydrologic regimes through stream management, urbanization (conversion of potential habitat and increasing demands for water), drought, trampling from livestock, wild horses, and burros, and

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recreational use. (USFWS 1995). Any projects proposed as a result of this plan amendment that could potentially adversely affect Ute ladies'-tresses would be avoided.

Beneficial effects, such as reduced impacts from grazing and invasive species, are possible from proposed actions, but the extent of benefit and likelihood of occurrence are too speculative to quantify.

In addition, the specific conservation measure BLM MA-TTM-2 states *that PHMA and GHMA that do not have designated routes in a Travel Management Plan would be managed as limited to existing routes until a Travel Management Plan designates routes (unless they are already designated as limited to designated routes or closed to OHV use)*. Thus, if any areas of occupied or suitable habitat for Ute ladies'-tresses in PHMA or GHMA are currently open to ORV use, restrictions would be placed on the vehicle operators to use only existing routes. This would provide a small but contemporaneous beneficial effect on Ute ladies'-tresses by reducing the likelihood of damage from ORVs.

### *Cumulative Effects*

To evaluate cumulative effects, the future state, tribal, local, or private actions that are reasonably certain to occur in the decision area are identified, and their effects are added to the anticipated effects of the current proposal. The decision area for the current proposal is limited to PHMA and GHMA occurring on BLM- and Forest Service-administered lands. No state, tribal, local, or private lands exist in the decision area, and no state, tribal, local, or private actions are planned or expected to occur in the decision area. Only federal actions are expected to occur in the decision area; therefore, no cumulative effects are expected.

### *Summary Determination of Effects on Ute ladies'-tresses*

A potential beneficial effect on Ute ladies'-tresses may result in PHMA/GHMA from restricting vehicle use to existing roads and trails (where travel planning has not previously been completed – BLM MA-TTM-2). Any proposed actions that may affect this species and/or its habitats will be further evaluated at the project level, and adverse impacts would be avoided.

**The Utah GRSG LUP Amendment and EIS may affect, but will not likely adversely affect, Ute ladies'-tresses.** This is because the estimated effects on occurrences and suitable habitat that exist in PHMA and GHMA in the project area would be beneficial due to the reduced impacts from ORVs. Any proposed actions as a result of this plan amendment that may affect this species and/or its habitats will be further evaluated at the project level, and adverse impacts would be avoided

Because no suitable habitats for Ute ladies'-tresses are suspected to occur in the Cedar City, Fillmore, Price, Richfield, or Salt Lake Field Offices or the Ashley, Dixie, or Manti-LaSal National Forests, there would be no effects on Ute ladies'-tresses in these areas.

## DETERMINATIONS OF EFFECTS SUMMARY BY SPECIES

**Table 10. Summary of determinations**

Species	Status <sup>16</sup>	Determination <sup>17</sup>	Rationale
<b>Black-footed ferret</b> <i>Mustela nigripes</i>	Exp.	NLJ	<p>The Utah GRSG LUP Amendment and FEIS decision is not likely to jeopardize the black-footed ferret in the Vernal Field Office. Activities implemented at the project-level may occur in proximity to black-footed ferrets and any proposed actions that may affect this species and/or its habitats will be further evaluated at the project level, and adverse impacts would be avoided.</p> <p>The Utah GRSG LUP Amendment and EIS will not affect black-footed ferret because there are no occurrences or identified reintroduction areas in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Price, Richfield, or Salt Lake Field Offices or the Ashley, Dixie, Fishlake, Manti-Lasal, or Uinta-Wasatch-Cache National Forests.</p>
<b>Canada lynx</b> <i>Lynx canadensis</i>	T	NLAA	<p>The Utah GRSG LUP Amendment and FEIS decision may affect, but is not likely to adversely affect Canada lynx in the Vernal Field Office or the Uinta-Wasatch-Cache or Ashley National Forests. Primary habitats for Canada lynx and GRSG are generally separate. Overlapping habitat is relegated to secondary status. Any proposed actions that may affect this species and/or its habitats will be further evaluated at the project level, and adverse impacts would be avoided.</p> <p>There would be no effect on Canada lynx in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Price, Richfield, or Salt Lake Field Offices or the Ashley, Dixie, Fishlake, Manti-Lasal, or Uinta-Wasatch-Cache National Forests due to lack of species occurrence, lack of suitable habitat, and lack of potential impact on the species and its habitat.</p>
<b>Canada lynx critical habitat</b>	Designated	NE	The Utah GRSG LUP Amendment and FEIS decision will not affect Canada lynx critical habitat because there is no Canada lynx critical habitat designated in the Planning Area.
<b>Utah prairie dog</b> <i>Cynomys parvidens</i>	T	LAA	The Utah GRSG LUP Amendment and FEIS decision may affect, and is likely to adversely affect, UPD in the Cedar City, Fillmore, Kanab, and Richfield Field Offices and the Dixie and Fishlake National Forests. Overlapping habitat does occur, with a potential for effects. There are mitigation measures for UPD, but adverse effects on UPD may still result from activities associated with wildfire suppression and from management actions associated with transmission line ROWs.

<sup>16</sup>E = Endangered; T = Threatened; P-T = Proposed Threatened

<sup>17</sup>NE = No effect (will not affect the species); NLJ = Not likely to jeopardize the continued existence of the species; NLAA = May affect, but is not likely to adversely affect; LAA = May affect, likely to adversely affect

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			The project would not affect UPD in the Grand Staircase-Escalante National Monument, Price, Salt Lake, and Vernal Field Offices, and the Ashley, Manti-Lasal, and Uinta-Wasatch-Cache National Forests due to a lack of overlap between UPD occurrence and UPD management areas and the decision area.
<b>California condor</b> <i>Gymnogyps californianus</i>	E	NLAA	<p>The Utah GRSG LUP Amendment and FEIS decision may affect, but is not likely to adversely affect, California condor in the Cedar City, Kanab, and Richfield Field Offices and the Dixie and Fishlake National Forests. There is no overlap of known or potential nest sites with GRSG mapped habitats that constitute the decision area. Overlapping of potential foraging habitat with GRSG mapped habitat does occur, but any proposed actions that may affect this species and/or its habitats will be further evaluated at the project level, and adverse impacts would be avoided.</p> <p>The project would not affect California condor in the Fillmore, Grand Staircase-Escalante National Monument, Price, Salt Lake, and Vernal Field Offices, and the Ashley, Manti-Lasal, and Uinta-Wasatch-Cache National Forests due to a lack of overlap between known occurrence and the decision area.</p>
<b>California condor</b> <i>Gymnogyps californianus</i> 10(j) area	Exp.	NLJ	<p>The Utah GRSG LUP Amendment and FEIS decision may affect, but is not likely jeopardize, California condor in the Cedar City, Kanab, and Richfield Field Offices and the Dixie and Fishlake National Forests. There is no overlap of known or potential nest sites with GRSG mapped habitats that constitute the decision area. Overlapping of potential foraging habitat with GRSG mapped habitat does occur, but any proposed actions that may affect this species and/or its habitats will be further evaluated at the project level, and adverse impacts would be avoided.</p> <p>The project would not affect California condor in the Fillmore, Grand Staircase-Escalante National Monument, Price, Salt Lake, and Vernal Field Offices, and the Ashley, Manti-Lasal, and Uinta-Wasatch-Cache National Forests due to a lack of overlap between breeding occurrence and the decision area or lack of overlap lands and the 10(j) area. There is no overlap of known or potential sites with GRSG mapped habitats that constitute the decision area. Overlapping of potential foraging habitat with GRSG mapped habitat does occur, but any proposed actions that may affect this species and/or its habitats will be further evaluated at the project level, and adverse impacts would be avoided.</p>
<b>Mexican spotted owl</b> <i>Strix occidentalis lucida</i>	T	NLAA	The Utah GRSG LUP Amendment and FEIS decision may affect, but is not likely to adversely affect, MSO in the Price and Vernal Field Offices and the Manti-Lasal National Forest due to occurrence of MSO modeled suitable habitat within

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			<p>0.5 mile of GRSG mapped habitat in the decision area. Cedar City, Kanab, and Richfield Field Offices and the Dixie and Fishlake National Forests. Any proposed actions that may affect this species and/or its habitats will be further evaluated at the project level, and adverse impacts would be avoided.</p> <p>The project would not affect MSO in the Cedar City, Fillmore, Grand Staircase-Escalante National Monument, Price, Richfield and Salt Lake Field Offices, and the Ashley, Dixie, Fishlake, and Uinta-Wasatch-Cache National Forests due to a lack of MSO modeled suitable habitat within 0.5 mile of GRSG mapped habitats in the decision area.</p>
<p><b>Mexican spotted owl</b> critical habitat</p>	Designated	NLAA	<p>The Utah GRSG LUP Amendment and FEIS decision may affect, but is not likely to adversely affect, Mexican spotted owl critical habitat. To ensure there would be no adverse impacts, design features would be incorporated when in areas with overlapping MSO critical habitat and GRSG mapped habitats on BLM and split-estate lands on 11,480 acres.</p> <p>The project will not affect MSO critical habitat on the Cedar City, Grand Staircase-Escalante National Monument, Kanab, and Richfield Field Offices, and Dixie and Fishlake National Forests due to overlap of critical habitat and GRSG mapped habitat in the decision area.</p>
<p><b>Southwestern willow flycatcher</b>  <i>Empidonax traillii extimus</i></p>	E	NE	<p>The Utah GRSG LUP Amendment and FEIS decision will not affect the southwestern willow flycatcher on the Cedar City, Fillmore, Grand Staircase-Escalante National Monument, Kanab, Price, Richfield, and Vernal Field Offices, and the Ashley, Dixie, Fishlake, Manti-Lasal, and Uinta-Wasatch-Cache National Forests. There is no overlap of known southwestern willow flycatcher occurrence with GRSG mapped habitat in the decision area. There are no actions in this LUP amendment decision that would impact suitable riparian habitats.</p>
<p><b>Southwestern willow flycatcher</b> critical habitat</p>	Designated	NE	<p>The Utah GRSG LUP Amendment and FEIS decision will not affect southwestern willow flycatcher critical habitat because there is no overlap of designated critical habitat with GRSG mapped habitats in the decision area.</p>
<p><b>Western yellow-billed cuckoo</b> <i>Coccyzus americanus</i></p>	T	NE	<p>The Utah GRSG LUP Amendment and FEIS decision will not affect the western yellow-billed cuckoo on the Cedar City, Fillmore, Grand Staircase-Escalante National Monument, Kanab, Price, Richfield, and Vernal Field Offices, and the Ashley, Dixie, Fishlake, Manti-Lasal, and Uinta-Wasatch-Cache National Forests. There is no overlap of known species occurrence with GRSG mapped habitat in the decision area during the last 19 years. There are no actions in this LUP amendment decision that would impact suitable riparian habitats.</p>

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<b>Western yellow-billed cuckoo</b> critical habitat	Proposed	NE	The Utah GRSG LUP Amendment and FEIS decision will not affect western yellow-billed cuckoo proposed critical habitat on the Cedar City, Fillmore, Grand Staircase-Escalante National Monument, Kanab, Price, Richfield, Salt Lake, and Vernal Field Offices and the Ashley, Dixie, Fishlake, Manti-Lasal, and Uinta-Wasatch-Cache National Forests. There is no overlap between proposed critical habitat and GRSG mapped habitats in the decision area.
<b>Kanab ambersnail</b> <i>Oxyloma haydeni</i> <i>kanabensis</i>	E	NE	The Utah GRSG LUP Amendment and FEIS decision will not affect the Kanab ambersnail on the Cedar City, Fillmore, Grand Staircase-Escalante National Monument, Kanab, Price, Richfield, Salt Lake, and Vernal Field Offices and the Ashley, Dixie, Fishlake, Manti-Lasal, and Uinta-Wasatch-Cache National Forests. There are no occurrences in GRSG mapped habitats in the decision area.
<b>Bonytail chub</b> <i>Gila elegans</i>	E	NE	The Utah GRSG LUP Amendment and FEIS decision will not affect the bonytail chub on the Cedar City, Fillmore, Grand Staircase-Escalante National Monument, Kanab, Price, Richfield, Salt Lake, and Vernal Field Offices and the Ashley, Dixie, Fishlake, Manti-Lasal, and Uinta-Wasatch-Cache National Forests. There is no known occurrence on lands that constitute the decision area. There are no actions in this LUP amendment decision that would impact aquatic habitat or deplete water in main stem rivers of the Colorado River Basin.
<b>Bonytail chub</b> critical habitat	Designated	NE	The Utah GRSG LUP Amendment and FEIS decision will not affect bonytail chub critical habitat on the Cedar City, Fillmore, Grand Staircase-Escalante National Monument, Kanab, Price, Richfield, Salt Lake, and Vernal Field Offices and the Ashley, Dixie, Fishlake, Manti-Lasal, and Uinta-Wasatch-Cache National Forests. There is no overlap between critical habitat polygons and lands that constitute the decision area. There are no actions in this LUP amendment decision that would impact aquatic habitat or deplete water in main stem rivers of the Colorado River Basin.
<b>Colorado pikeminnow</b> <i>Ptychocheilus lucius</i>	E	NE	The Utah GRSG LUP Amendment and FEIS decision will not affect the Colorado pikeminnow on the Cedar City, Fillmore, Grand Staircase-Escalante National Monument, Kanab, Price, Richfield, Salt Lake, and Vernal Field Offices and the Ashley, Dixie, Fishlake, Manti-Lasal, and Uinta-Wasatch-Cache National Forests. There is no known occurrence on lands that constitute the decision area. There are no actions in this LUP amendment decision that would impact aquatic habitat or deplete water in main stem rivers of the Colorado River Basin.
<b>Colorado pikeminnow</b> critical habitat	Designated	NE	The Utah GRSG LUP Amendment and FEIS decision will not affect Colorado pikeminnow critical habitat on the Cedar City, Fillmore, Grand Staircase-Escalante National Monument, Kanab, Price, Richfield, Salt Lake, and Vernal Field

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			Offices and the Ashley, Dixie, Fishlake, Manti-Lasal, and Uinta-Wasatch-Cache National Forests. There is no overlap between critical habitat polygons and lands that constitute the decision area. There are no actions in this LUP amendment decision that would impact aquatic habitat or deplete water in main stem rivers of the Colorado River Basin.
<b>Greenback cutthroat trout</b> <i>Oncorhynchus clarki stomias</i>	T	NE	The Utah GRSG LUP Amendment and FEIS decision will not affect the greenback cutthroat trout on the Cedar City, Fillmore, Grand Staircase-Escalante National Monument, Kanab, Price, Richfield, Salt Lake, and Vernal Field Offices and the Ashley, Dixie, Fishlake, Manti-Lasal, and Uinta-Wasatch-Cache National Forests. There is no known occurrence on lands that constitute the decision area. There are no actions in this LUP amendment decision that would impact aquatic habitat.
<b>Humpback chub</b> <i>Gila cypha</i>	E	NE	The Utah GRSG LUP Amendment and FEIS decision will not affect the humpback chub on the Cedar City, Fillmore, Grand Staircase-Escalante National Monument, Kanab, Price, Richfield, Salt Lake, and Vernal Field Offices and the Ashley, Dixie, Fishlake, Manti-Lasal, and Uinta-Wasatch-Cache National Forests. There is no known occurrence on lands that constitute the decision area. There are no actions in this LUP amendment decision that would impact aquatic habitat or deplete water in main stem rivers of the Colorado River Basin.
<b>Humpback chub critical habitat</b>	Designated	NE	The Utah GRSG LUP Amendment and FEIS decision will not affect humpback chub critical habitat on the Cedar City, Fillmore, Grand Staircase-Escalante National Monument, Kanab, Price, Richfield, Salt Lake, and Vernal Field Offices and the Ashley, Dixie, Fishlake, Manti-Lasal, and Uinta-Wasatch-Cache National Forests. There is no overlap between critical habitat polygons and lands that constitute the decision area. There are no actions in this LUP amendment decision that would impact aquatic habitat or deplete water in main stem rivers of the Colorado River Basin.
<b>June sucker</b> <i>Chasmistes liorus</i>	E	NE	The Utah GRSG LUP Amendment and FEIS decision will not affect the June sucker on the Cedar City, Fillmore, Grand Staircase-Escalante National Monument, Kanab, Price, Richfield, Salt Lake, and Vernal Field Offices and the Ashley, Dixie, Fishlake, Manti-Lasal, and Uinta-Wasatch-Cache National Forests. There are no actions in this LUP amendment decision that would impact aquatic habitat.
<b>June sucker critical habitat</b>	Designated	NE	The Utah GRSG LUP Amendment and FEIS decision will not affect razorback sucker critical habitat on the Cedar City, Fillmore, Grand Staircase-Escalante National Monument, Kanab, Price, Richfield, Salt Lake, and Vernal Field Offices and the Ashley, Dixie, Fishlake, Manti-Lasal, and Uinta-Wasatch-Cache National Forests. There is no overlap between critical habitat

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			polygons and lands that constitute the decision area. There are no actions in this LUP amendment decision that would impact aquatic habitat or deplete water.
<b>Lahontan cutthroat trout</b> <i>Oncorhynchus clarkii</i> ssp. <i>henshawi</i>	T	NE	The Utah GRSG LUP Amendment and FEIS decision will not affect the Lahontan cutthroat trout on the Cedar City, Fillmore, Grand Staircase-Escalante National Monument, Kanab, Price, Richfield, Salt Lake, and Vernal Field Offices and the Ashley, Dixie, Fishlake, Manti-Lasal, and Uinta-Wasatch-Cache National Forests. There are no actions in this land use plan amendment decision that would impact aquatic habitat.
<b>Razorback sucker</b> <i>Xyrauchen texanus</i>	E	NE	The Utah GRSG LUP Amendment and FEIS decision will not affect the razorback sucker on the Cedar City, Fillmore, Grand Staircase-Escalante National Monument, Kanab, Price, Richfield, Salt Lake, and Vernal Field Offices and the Ashley, Dixie, Fishlake, Manti-Lasal, and Uinta-Wasatch-Cache National Forests. There is no known occurrence on lands that constitute the decision area. There are no actions in this LUP amendment decision that would impact aquatic habitat or deplete water in main stem rivers of the Colorado River Basin.
<b>Razorback sucker critical habitat</b>	Designated	NE	The Utah GRSG LUP Amendment and FEIS decision will not affect razorback sucker critical habitat on the Cedar City, Fillmore, Grand Staircase-Escalante National Monument, Kanab, Price, Richfield, Salt Lake, and Vernal Field Offices and the Ashley, Dixie, Fishlake, Manti-Lasal, and Uinta-Wasatch-Cache National Forests. There is no overlap between critical habitat polygons and lands that constitute the decision area. There are no actions in this LUP amendment decision that would impact aquatic habitat or deplete water in main stem rivers of the Colorado River Basin.
<b>Autumn Buttercup</b> <i>Ranunculus aestivalis</i>	E	NLAA	The Utah GRSG LUP Amendment and EIS may affect, but would not likely adversely affect, autumn buttercup. This is because it exists within PHMA in the Kanab Field Office. Any proposed actions that may affect this species and/or its habitats will be further evaluated at the project level, and adverse impacts would be avoided. The Utah GRSG LUP Amendment and EIS would not be likely to affect autumn buttercup in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Price, Richfield, Salt Lake, or Vernal field offices, or the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-Cache national forests because the species is not known or suspected to occur in those areas.
<b>Barneby reed-mustard</b> <i>Schoenocrambe barnebyi</i>	E	NE	The Utah GRSG LUP Amendment and EIS will not affect Barneby reed-mustard. This is because there are no occurrences or suitable habitat for Barneby reed-mustard in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Richfield, Salt Lake, or Vernal Field Offices or the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-Cache National Forests, and there

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			is no overlap between Barneby reed-mustard occurrences or suitable habitat and PHMA/GHMA in the Price Field Office.
<b>Barneby ridge-cress</b> <i>Lepidium barnebyanum</i>	E	NE	The Utah GRSG LUP Amendment and EIS will not affect Barneby reed-mustard. This is because there are no occurrences or suitable habitat for Barneby reed-mustard in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Price, Richfield, or Salt Lake Field Offices or the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-Cache National Forests, and there is no overlap between Barneby reed-mustard occurrences or suitable habitat and PHMA/GHMA in the Vernal Field Office.
<b>Clay phacelia</b> <i>Phacelia argillacea</i>	E	NLAA	<p>The Utah GRSG LUP Amendment and EIS may affect, but will not likely adversely affect, clay phacelia. This is because it exists within 2 miles of PHMA in the Salt Lake Field Office and on the Uinta National Forest and an acknowledgement that the proposed action may be increasing the likelihood of the alignment of two reasonably foreseeable projects (TWE and EGS transmission lines) in or near clay phacelia habitat. Any proposed actions under proposed management decisions that may impact this species and its habitats will be further evaluated at the project level, and adverse impacts would be avoided.</p> <p>The Utah GRSG LUP Amendment and EIS would not affect clay phacelia or suitable habitat for the species in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Price, Richfield, or Vernal Field Offices, or the Ashley, Dixie, Fishlake, or Manti LaSal National Forests. This is because there are no known or suspected occurrences of clay phacelia in those areas.</p>
<b>Clay reed-mustard</b> <i>Schoenocrambe argillacea</i>	T	NLAA	<p>The Utah GRSG LUP Amendment and EIS may affect, but will not likely adversely affect, clay reed-mustard. This is because it exists in PHMA and GHMA in the Vernal Field Office. Any proposed actions near this species and its habitats will be further evaluated at the project level, and adverse impacts would be avoided.</p> <p>Because no suitable habitats for clay reed-mustard are suspected to occur in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Price, or Salt Lake Field Offices or the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-Cache National Forests, there would be no effects on clay reed-mustard in these areas.</p>
<b>Deseret milk-vetch</b> <i>Astragalus desereticus</i>	T	NE	The Utah GRSG LUP Amendment and EIS will not affect Deseret milk-vetch because there are no occurrences or suitable habitat for Deseret milk-vetch in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Price, Salt Lake, or Vernal Field Offices or the Ashley, Dixie, or Fishlake National Forests. There is no overlap between Deseret milk-vetch occurrences or suitable habitat and PHMA/GHMA

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			in the Richfield Field Office or the Manti-LaSal or Uinta-Wasatch-Cache National Forests.
<b>Heliotrope milk-vetch</b> <i>Astragalus montii</i>	T	NE	The Utah GRSG LUP Amendment and EIS will not affect Heliotrope milk-vetch. This is because there are no occurrences or suitable habitats for Heliotrope milk-vetch in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Price, Richfield, Salt Lake, or Vernal Field Offices or the Ashley, Dixie, Fishlake, or Uinta-Wasatch-Cache National Forests. There is no overlap between Heliotrope milk-vetch occurrences and suitable habitat and PHMA/GHMA in the Manti-LaSal National Forest.
<b>Heliotrope milk-vetch</b> <i>Astragalus montii</i> critical habitat	Designated	NE	The Utah GRSG LUP Amendment and EIS will not affect heliotrope milk-vetch designated critical habitat. This is because there is no designated critical habitat for heliotrope milk-vetch in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Price, Richfield, Salt Lake, or Vernal Field Offices or the Ashley, Dixie, Fishlake, or Uinta-Wasatch-Cache National Forests. There is no overlap between heliotrope milk-vetch designated critical habitat and PHMA/GHMA in the Manti-LaSal National Forest.
<b>Jones cycladenia</b> <i>Cycladenia humilis</i> var. <i>jonesii</i>	T	NE	The Utah GRSG LUP Amendment and EIS will not affect Jones cycladenia because there are no occurrences or suitable habitat for it in the Cedar City, Fillmore, Kanab, Salt Lake, or Vernal Field Offices or the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-Cache National Forests. There is no overlap between Jones cycladenia occurrences or suitable habitat and PHMA/GHMA in the Grand Staircase/Escalante National Monument, Price or Richfield Field Offices.
<b>Kodachrome bladderpod</b> <i>Lesquerella tumulosa</i>	E	NE	The Utah GRSG LUP Amendment and EIS will not affect Kodachrome bladderpod. This is because there are no occurrences or suitable habitat for Kodachrome bladderpod in the Cedar City, Fillmore, Kanab, Price, Richfield, Salt Lake, or Vernal Field Offices or the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-Cache National Forests. There is no overlap between Kodachrome bladderpod occurrences or suitable habitat and PHMA or GHMA in the Grand Staircase/Escalante National Monument.
<b>Last Chance townsendia</b> <i>Townsendia aprica</i>	T	NLAA	The Utah GRSG LUP Amendment and EIS may affect, but will not likely adversely affect Last Chance townsendia. This is because it exists in PHMA and GHMA in the Richfield Field Office and the Fishlake National Forest. Effects would likely be beneficial due to the reduced threats related to ORVs. Any proposed actions near this species and its habitats will be further evaluated at the project level, and adverse impacts would be avoided.  Because no suitable habitats for Last Chance townsendia are suspected to occur in PHMA or GHMA in the Price Field Office or the Dixie National Forest, and suitable habitats are not suspected at all on the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab,

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			Salt Lake, or Vernal Field Offices or the Ashley, Manti-LaSal, or Uinta-Wasatch-Cache National Forests, there would be no effects on Last Chance townsendia in these areas.
<b>Maguire primrose</b> <i>Primula maguirei</i>	T	NE	The Utah GRSG LUP Amendment and EIS will not affect Maguire primrose. Even though, it is in the Uinta-Wasatch-Cache National Forest, Maguire primrose does not occur within 9 miles of PHMA.
<b>Pariette cactus</b> <i>Sclerocactus brevispinus</i>	T	NE	The Utah GRSG LUP Amendment and EIS will not affect Pariette cactus. This is because there are no occurrences or suitable habitat for Pariette cactus in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Price, Richfield, or Salt Lake Field Offices or the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-Cache National Forests. There is no overlap between Pariette cactus occurrences or suitable habitat and PHMA/GHMA in the Vernal Field Office.
<b>San Rafael cactus</b> <i>Pediocactus despainii</i>	E	NE	The Utah GRSG LUP Amendment and EIS will not affect San Rafael cactus. This is because there are no occurrences or suitable habitat for San Rafael cactus in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Salt Lake, or Vernal Field Offices or the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-Cache National Forests. There is no overlap between San Rafael cactus occurrences or suitable habitat and PHMA/GHMA in the Price or Richfield Field Offices.
<b>Shrubby reed-mustard</b> <i>Schoenocrambe suffrutescens</i>	E	NLAA	<p>The Utah GRSG LUP Amendment and EIS may affect, but will not likely adversely affect, shrubby reed-mustard. This is because there are no anticipated adverse effects on occurrences and suitable habitat that exist in PHMA and GHMA in the Vernal Field Office. Any proposed actions near this species and its habitats will be further evaluated at the project level, and adverse impacts would be avoided.</p> <p>Because no suitable habitats for shrubby reed-mustard are suspected to occur in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Price, Richfield, or Salt Lake Field Offices or the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-Cache National Forests, there would be no effects on shrubby reed-mustard in these areas.</p>
<b>Siler pincushion</b> <i>Pediocactus sileri</i>	T	NE	The Utah GRSG LUP Amendment and EIS will not affect Siler pincushion. This is because there are no occurrences or suitable habitat for Siler pincushion in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Price, Richfield, Salt Lake, or Vernal Field Offices or the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-Cache National Forests. There is no overlap between Siler pincushion occurrences or suitable habitat and PHMA/GHMA in the Kanab Field Office.

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<b>Uinta Basin hookless cactus</b> <i>Sclerocactus wetlandicus</i>	T	NLAA	The Utah GRSG LUP Amendment and EIS may affect, but will not likely adversely affect, Uinta Basin hookless cactus. This is because the species exists in PHMA and GHMA in the Vernal Field Office. Any proposed actions near this species and its habitats will be further evaluated at the project level, and adverse impacts would be avoided. Because no suitable habitats for Uinta Basin hookless cactus are suspected to occur in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Richfield, or Salt Lake Field Offices or the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-Cache National Forests, there would be no effects on Uinta Basin hookless cactus in these areas.
<b>Ute ladies'-tresses</b> <i>Spiranthes diluvialis</i>	T	NLAA	The Utah GRSG LUP Amendment and EIS may affect, but will not likely adversely affect, Ute ladies'-tresses. Suitable habitat exists in PHMA and GHMA in the Grand Staircase-Escalante National Monument, Salt Lake, and Vernal Field Offices and the Fishlake and Uinta-Wasatch-Cache National Forests but proposed action may be beneficial due to reducing impacts from ORVs. Any proposed actions near this species and its habitats will be further evaluated at the project level, and adverse impacts would be avoided. No suitable habitats for Ute ladies'-tresses are suspected to occur in the Cedar City, Fillmore, Kanab, Price, or Richfield Field Offices or the Ashley, Dixie, or Manti-LaSal National Forests, therefore, there would be no effects on Ute ladies'-tresses in these areas.
<b>Welsh's milkweed</b> <i>Asclepias welshii</i>	T	NE	The Utah GRSG LUP Amendment and EIS will not affect Welsh's milkweed. This is because there are no occurrences or suitable habitat for Welsh's milkweed in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Price, Richfield, Salt Lake, or Vernal Field Offices or the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-Cache National Forests. There is no overlap between Welsh's milkweed occurrences or suitable habitat and PHMA or GHMA in the Kanab Field Office.
<b>Welsh's milkweed</b> <i>Asclepias welshii</i> critical habitat	Designated	NE	The Utah GRSG LUP Amendment and EIS will not affect Welsh's milkweed designated critical habitat. This is because there is no designated critical habitat for Welsh's milkweed in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Price, Richfield, Salt Lake, or Vernal Field Offices or the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-Cache National Forests. There is no overlap between Welsh's milkweed designated critical habitat and PHMA or GHMA in the Kanab Field Office.
<b>Winkler cactus</b> <i>Pediocactus winkleri</i>	T	NE	The Utah GRSG LUP Amendment and EIS will not affect Winkler cactus. This is because there are no occurrences or suitable habitat for Winkler cactus in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Salt Lake, or Vernal Field Offices or the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-

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			Cache National Forests. There is no overlap between Winkler cactus occurrences or suitable habitat and PHMA or GHMA in the Price or Richfield Field Offices.
<b>Wright fishhook cactus</b> <i>Sclerocactus wrightiae</i>	E	NE	The Utah GRSG LUP Amendment and EIS will not affect Wright fishhook cactus. This is because there are no occurrences or suitable habitat for Wright fishhook cactus in the Cedar City, Fillmore, Grand Staircase/Escalante National Monument, Kanab, Salt Lake, or Vernal Field Offices or the Ashley, Dixie, Fishlake, Manti-LaSal, or Uinta-Wasatch-Cache National Forests. There is no overlap between Wright fishhook cactus occurrences or suitable habitat and PHMA or GHMA in the Price or Richfield Field Offices.

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## **Attachment A: ADDITIONAL RATIONALE BEHIND NO EFFECT DETERMINATIONS FOR SELECT SPECIES OR GROUPS OF SPECIES IN TABLES 1 AND 2**

### **Black-footed Ferret**

The black-footed ferret is listed as an experimental, non-essential population within the decision area. Black-footed ferrets have been documented only on the Vernal Field Office within the last 15 years as a result of reintroduction efforts in the Coyote Basin Reintroduction Area. As of 2012, the black-footed ferret population in Coyote Basin was estimated to consist of one breeding adult, down from a total of 25 breeding adults in 2008. Average estimate of breeding adults from 2008 to 2012 was seven individuals (USFWS 2013e).

The Utah GRS LUP Amendment decisions are not likely to jeopardize the black-footed ferret. The primary threats to this species, loss of its prairie dog prey due to eradication as well as lack of regulatory mechanisms (USFWS 2013e), are not directly influenced by elements contained in this land use plan amendment. Secondary threats, such as oil and gas development, will not be authorized as part of this decision. Conservation measures specific to leased and unleased fluid minerals generally include stipulations either preventing new leasing or surface occupancy near leks or within PHMAs or GHMAs, timing restrictions, and disturbance caps. Although these measures may have the potential to increase the likelihood of fluid minerals development into adjacent areas, this potential effect is currently too speculative to analyze because there are no site-specific project projects currently proposed. Furthermore, site-specific effects analysis for NEPA and ESA compliance, including the potential for oil and gas development in adjacent areas, will be conducted at the project level, and an effects determination for the black-footed ferret will be made at that time.

### **Southwestern willow flycatcher**

Southwestern willow flycatcher suitable habitat consists of patchy to dense riparian habitats along streams and wetlands near or adjacent to surface water or saturated soils.

The primary cause of the flycatcher's decline is loss and modification of habitat. Riparian ecosystems have declined from reductions in water flow, interruptions in natural hydrological events and cycles, physical modifications to streams, modification of native plant communities by invasion of exotic species, and direct removal of riparian vegetation (USFWS 2002a).

There is currently no known use of sage-grouse PHMA and/or GHMA within the planning area by southwestern willow flycatchers. While the decision area may overlap with riparian habitat, there are no actions within this LUP Amendment decision that would alter risk factors or habitat conditions for the species. There is no overlap between designated critical habitat and the decision area. Therefore, the Utah GRS LUP Amendment and EIS will not affect southwestern willow flycatcher or its habitat.

### **Yellow-billed cuckoo**

Yellow-billed cuckoos require large blocks of riparian woodlands (50 acres/20 hectares or more) within low to moderate elevation arid to semiarid landscapes.

Primary threat to the species is loss of suitable habitats. Principal causes of riparian habitat losses are conversion to agricultural and other uses, dams and river flow management, stream channelization and stabilization, and livestock grazing. Available breeding habitats for cuckoos have also been substantially

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reduced in area and quality by groundwater pumping and the replacement of native riparian habitats by invasive non-native plants, particularly tamarisk. Much of the remaining habitat is in poor condition and heavily affected by human use. Fragmentation effects include the loss of patches large enough to sustain local populations, leading to local extinctions, and the potential loss of migratory corridors, affecting the ability to recolonize habitat patches. The threats facing the western US population of the yellow-billed cuckoo continue as a result of habitat loss from clearing and removal, or alteration and fragmentation of riparian forest for agriculture, urban development, flood control, and as a result of invasion of habitat by exotic species. The majority of the habitat for the cuckoo is on private lands and continues to be affected through land use conversion and grazing (USFWS 2011c).

There is currently no known use of sage-grouse PHMA and/or GHMA within the planning area by yellow-billed cuckoos. While the decision area may overlap with riparian habitat, there are no actions within this Land Use Plan Amendment decision that would alter risk factors or habitat conditions for the species. In addition, there is no critical habitat proposed within the planning area. Therefore, the Utah GRSG LUP Amendment and EIS will not affect yellow-billed cuckoo or its habitat

### **Colorado River Fishes (Bonytail chub, Humpback chub, Colorado pikeminnow, Razorback sucker)**

Streamflow regulation, water depletion, and associated habitat modification are identified as primary threats to Colorado River listed fish populations (USFWS 1990, 2002b, 2002c, 2002d). There are no actions within this LUP Amendment decision that would impact aquatic habitat or cause streamflow alterations, modifications, or water depletions in these drainages. There is no overlap between designated critical habitats and the decision area. In addition, site-specific analysis will be conducted at the project level and a determination of effects for each of the Colorado River fish species will be made at that time. Therefore, the Utah GRSG LUP Amendment and FEIS decision will not affect the bonytail chub, humpback chub, Colorado pikeminnow, razorback sucker, or their habitat.

### **June sucker**

June sucker habitat is low gradient streams and lakes with good water quality. Three populations have been introduced to locations off-forest to attempt to ensure species survival: one population each in Camp Creek Reservoir in Box Elder County, Red Butte Reservoir on the Wasatch-Cache National Forest; and at the Ogden Nature Center in Weber County. The refuge population in Box Elder County (lake habitat) overlaps GRSG mapped habitat on Split-estate land.

Threats to the species include habitat alteration and the introduction of nonnative fishes. Habitat alterations include the following: (1) water development has altered natural flow events, reduced annual lake-level stability, and blocked migration corridors; (2) changes in water quality have resulted in higher monthly river and lake temperatures, reduced dissolved oxygen levels, increased sedimentation rates and levels of dissolved solids, and increased turbidity; and (3) urbanization has resulted in development of the Provo River flood plain, channelization of the river and a reduction in available nursery habitat. The introduction of nonnative fishes has resulted in competition and predation as well as water quality changes such as increased turbidity. Loss of recruitment has resulted from a combination of the above factors (USFWS 1999).

There are no actions within this LUP Amendment decision that would impact aquatic habitat or cause water depletions, flow reductions or diversions, water quality, or presence of introduced fish species. There is no overlap between designated critical habitats and the decision area. Therefore, the Utah GRSG LUP Amendment and FEIS decision will not affect the June sucker or its habitat.

### **Lahontan cutthroat trout**

Lahontan cutthroat trout inhabits both lakes and streams, but is an obligatory stream spawner in habitat that is characterized by well-vegetated and stable streambanks, stream bottoms with relatively silt-free gravel/rubble substrate, cool water, and pools in close proximity to cover and velocity breaks. Known occurrences overlap GRSG mapped habitat on BLM and Split-estate lands on Salt Lake Field Office.

Major impacts to Lahontan cutthroat trout habitat and abundance include: 1) Reduction and alteration of stream discharge; 2) alteration of stream channels and morphology; 3) degradation of water quality; 4) reduction of lake levels and concentrated chemical components in natural lakes; and 5) introductions of non-native fish species (USFWS 1995). There are no actions within this LUP Amendment decision that would alter water availability, decrease water quality, or affect the distribution of non-native fishes. Therefore, the Utah GRSG LUP Amendment and EIS will not affect Lahontan cutthroat trout or its habitat.

### **Barneby reed-mustard, Barneby ridge cress, Jones cycladenia, Kodachrome bladderpod, Maguire primrose, Pariette cactus, Siler pincushion, Welsh's milkweed, and Winkler cactus**

These nine species are not suspected of occurring in any PHMA/GHMA because the species' ranges are considerably outside the range of GRSG (See Figure 4 below), with at least 5 miles between the proposed PHMA/GHMA and known occurrences. Their suitable habitats are not expected to occur in PHMA/GHMA. Enough distance separates these species from PHMA/GHMA that no direct or indirect effects are expected, and the proposed LUP amendments would not affect these plants or their habitats.

Barneby reed-mustard occurs within about 22 miles of PHMA.

Barneby ridge cress occurs within about 8 miles of PHMA.

Jones cycladenia occurs within about 25 miles of PHMA.

Kodachrome bladderpod occurs within about 13 miles of PHMA.

Maguire primrose occurs within about 9 miles of PHMA.

Pariette cactus occurs within about 5 miles of PHMA.

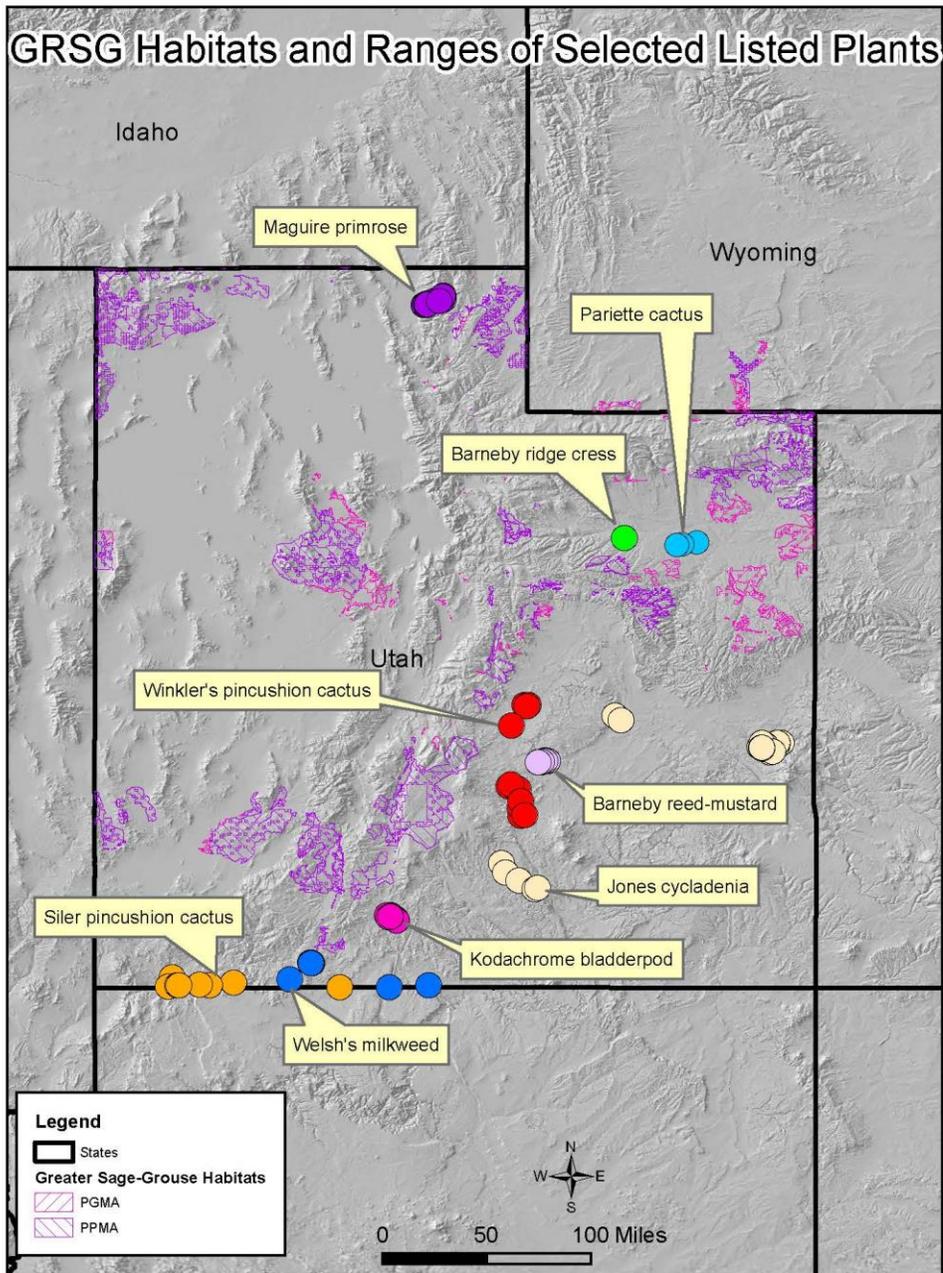
Siler pincushion occurs within about 16 miles of PHMA.

Welsh's milkweed and occurs within about 6 miles of PHMA.

Welsh's milkweed critical habitat occurs within about 6 miles of PHMA.

Winkler cactus occurs within about 11 miles of PHMA.

With no overlap or interaction between the decision areas of the proposed LUP amendments (PHMA/GHMA on BLM and FS managed lands) and suitable habitats for these species, no effects are expected for Barneby ridge cress, Barneby reed-mustard, Jones cycladenia, Kodachrome bladderpod, Maguire primrose, Siler pincushion, Welsh's milkweed, Welsh's milkweed critical habitat, and Winkler cactus. In addition, Any proposed actions that may affect these species and their habitats will be further evaluated at the project level, and adverse impacts would be avoided.



**Figure 4. Plant species with ranges considerably outside Greater Sage-grouse habitat**

**Deseret milkvetch**

Deseret milkvetch was considered extinct for decades until its rediscovery in 1981. It was listed in 1999 by the USFWS as threatened. In 2007, the USFWS gave advanced notice of intention to remove Deseret

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milkvetch from the list of endangered and threatened plants in the near future (USFWS 2007a). It was determined that previous threats were not as significant as once believed, and that the species is not likely to become in danger of extinction throughout all or a significant portion of its range in the foreseeable future. Surveys conducted in 2006 indicated that the known population had increased by 31 percent since the time of listing (USFWS 2007a). Approximately 67 percent of the species' range is managed by the UDWR as part of the Northwest Manti Wildlife Management Area. UDWR management provides protection against anticipated threats (rural development, cattle grazing and impacts on pollinator habitat), thus mitigating concern for the species.

Deseret milkvetch is known from a single location in Utah County, Utah in the Thistle Creek watershed east of Birdseye, Utah. The total occupied area covers approximately 345 acres (USFWS 2007a). This species is restricted to steep, sandy, west and south facing slopes of the Moroni Formation at elevations from 5,400 to 5,600 feet. The associated vegetation is an open pinyon-juniper community with sagebrush, bitterbrush, Indian ricegrass, and needle-and-thread. The one known location is over 3 miles from the nearest PHMA/GHMA, and the plant's apparent habitat is restricted to the Thistle Creek watershed near Birdseye, UT. Because suitable habitat for this species is not suspected to occur within PHMA/GHMA, the proposed LUP amendments would not affect Deseret milkvetch.

### **Heliotrope milkvetch**

Heliotrope milkvetch occurs only on the Manti-LaSal National Forest, at three locations. All suitable habitat (high elevation, limestone barrens derived from the Flagstaff Geological Formation) has been surveyed for this species, and only the three known occurrences have been found (USFWS 1995). Designated critical habitat is located at the western Heliotrope Mountain population, and this site is about 3.9 miles from PHMA and about 6.5 miles from GHMA. The other two locations (eastern Heliotrope Mountain and White Mountain populations) are closer to PHMA and GHMA, but do not overlap. The eastern Heliotrope Mountain population is about 3.5 miles from PHMA and about 5.1 miles from GHMA. The White Mountain population is about 1.8 miles from PHMA and about 9.5 miles from GHMA. Because there is no overlap between the decision area (PHMA/GHMA) and Heliotrope milkvetch populations or its habitat of high elevation limestone barrens, the Utah GRSG LUP Amendment and EIS will not affect Heliotrope milkvetch .

### **Heliotrope milkvetch Designated Critical Habitat**

Designated critical habitat for Heliotrope milkvetch is located at the western Heliotrope Mountain population, and this site is about 3.9 miles from PHMA and about 6.5 miles from GHMA. Because there is no overlap between the decision area (PHMA/GHMA) and Heliotrope milkvetch designated critical habitat, the Utah GRSG LUP Amendment and EIS will not affect Heliotrope milkvetch designated critical habitat.

### **Maguire primrose**

Maguire primrose is a small, herbaceous, perennial forb with an estimated population size of about 3,000 individuals in six populations, all in Logan Canyon, Utah. The entire known habitat of Maguire primrose lies within Federal lands managed by the Logan Ranger District of the Wasatch-Cache National Forest. It was listed as a threatened species in 1985.

Maguire primrose is found in cool, moist microclimates on dolomitic limestone derived soils. It is found on north facing exposures in cracks and crevices of cliff and boulder faces from 4,800 to 6,000 feet elevation. Known occurrences are all in Logan Canyon, and PHMA is about 9.4 miles from the nearest occurrence.

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Vulnerable due to its restricted habitat and small population size, Maguire primrose primary threats include habitat loss due to road construction and recreational activities. The greatest threats to Maguire's primrose are from habitat loss as a result of highway construction and other activities (USFWS 1990). Maintenance and improvements of water pipelines through Logan Canyon could also impact the species. Other threats include camping, rock climbing and horticultural plant collecting.

No change in the current management for Maguire primrose habitats is expected from the proposed LUP amendments. None of the above threats would be influenced by the proposed LUP amendments. Because Maguire primrose grows on steep, rocky, often inaccessible substrates and the habitat would not likely be targeted for GRSG habitat management activities, no effects are anticipated from the Utah GRSG LUP Amendment and EIS. Any proposed actions near this species and its habitats will be further evaluated at the project level, and adverse impacts would be avoided.

Existing conservation measures: Wasatch-Cache NF - Special management has been initiated in Logan Canyon so that rock climbers do not impact the Maguire's Primrose, a threatened plant species. Protective measures will be provided for Maguires Primrose and Frank Smith's Violet populations in the lower portions of Logan Canyon. Wheeler's Angelica habitat will be improved through targeted noxious weed programs and riparian conservation. The Forest Service requirements of the Maguires Primrose Recovery Plan and the Bear River Endemics Conservation Agreement with USFWS will be met.

### San Rafael cactus

San Rafael cactus is endemic to Emery and Wayne counties in central Utah. It occurs on benches, hilltops, and gentle slopes in open piñon-juniper and salt desert scrub communities between 6,000 to 6,700 feet in elevation, restricted to limestone gravels, shales, clays and silty substrates of the Mancos, Morrison, Moenkopi and Carmel formations (USFWS 2013d). It is known from five population centers including Mussentuchit, McKay Flat, Wedge, Short Canyon, and Ferron (USFWS 2007b). The species range is centered on the San Rafael Swell and extends into southwestern Emery County.

The threats facing San Rafael cactus described through the listing process included collection for horticultural purposes; ORV and livestock trampling; mineral exploration, including uranium, gypsum, and clay mining; drought; natural herbivory and predation; and known extant areas with fragile ecosystems that are easily degraded. Additional factors reported since the time of listing are global climate change, low fruit/seed output, and the impacts of exotic plant species (USFWS 2007b).

No overlap with GRSG habitat occurs with San Rafael cactus; however a few known sites are within about 1 mile of PHMA, on the gentle slopes below South Horn Mountain. Habitat for San Rafael cactus does not extend up the steep slopes to the higher elevations of South Horn Mountain where PHMA is present on the Manti-LaSal National Forest. No effects, adverse or beneficial, are expected for San Rafael cactus populations or habitat from the proposed LUP amendments due to the distance separating them from the proposed decision area (PHMA/GHMA). Because suitable habitat for this species is not suspected to occur within PHMA/GHMA, the proposed LUP amendments would not affect San Rafael cactus. Any proposed actions near this species and its habitats will be further evaluated at the project level, and adverse impacts would be avoided.

### Wright fishhook cactus

Wright fishhook cactus (*Sclerocactus wrightiae*) is a small barrel shaped cactus, with short central spines, listed as endangered in 1979. It occurs in Emery, Sevier, Wayne, and Garfield Counties, Utah. It has been found on soil formations such as Emery sandstone, Mancos shale, Dakota sandstone, Morrison, Summerville, Curtis, Entrada sandstone, Carmel, Moenkopi, and alluvium. Vegetation associations

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include semi-barren sites within desert scrub or open pinyon juniper woodland communities at 4,200 to 7,600 feet in elevation.

The primary threats to Wright fishhook cactus at listing included exploration and development of energy and mineral resources, OHV use, illegal collection, and small population sizes. Recreational use, including OHV, grazing, high mortality to recruitment ratios, predation, and drought related impacts are the largest threats today (USFWS 2012b). Illegal collection is still a concern.

No overlap occurs between Wright fishhook cactus habitat and PHMA/GHMA. The species occurs in much the same area as San Rafael cactus described above, being centered in the San Rafael Swell. The western edge of Wright fishhook cactus' range approaches to within about 1 mile of PHMA near South Horn Mountain and within about 1.7 miles of PHMA near Last Chance Creek. Habitat for Wright fishhook cactus does not extend up the steep slopes to the higher elevations of South Horn Mountain or to the top of the limestone cliffs near Last Chance Creek, where PHMA is present on the Manti-LaSal National Forest. No effects, adverse or beneficial, are expected for Wright fishhook cactus populations or habitat from the proposed LUP amendments due to the distance separating it from the proposed decision area (PHMA/GHMA). Because suitable habitat for this species is not suspected to occur within PHMA/GHMA, the proposed LUP amendments would not affect Wright fishhook cactus. Any proposed actions near this species and its habitats will be further evaluated at the project level, and adverse impacts would be avoided.

## **Attachment B: BUREAU OF LAND MANAGEMENT PLAN COMPONENTS**

*See accompanying document with the BLM proposed Land Use Plan Amendment components, which is an excerpt from Chapter 2 of the FEIS. This excerpt is provided to facilitate USFWS review of this document.*

# Bureau of Land Management Proposed Plan Amendment

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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. Land use plan decisions fall into two categories, which establish the base structure for desired outcomes (goals and objectives), and allowable uses and management 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.
- Management Actions identify measures or criteria to achieve desired objectives, including actions to maintain, restore, or improve land health.

RDFs are means, measures, or practices intended to reduce or avoid adverse environmental impacts. This LUPA proposes a suite of design features that would establish the minimum specifications for mineral-related 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 (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 G, Required Design Features.

### **Goal**

#### **Goal GRSG-1**

Maintain and/or increase GRSG abundance and distribution by conserving, enhancing or restoring the sagebrush ecosystem upon which populations depend in collaboration with other conservation partners.

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**Objectives**

**Objective GRSG-1**

Designate PHMA for each WAFWA MZ 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.

Protect PHMA from anthropogenic disturbances that will reduce distribution or abundance of GRSG. Enhance or improve GRSG habitat (e.g., through restoration or rehabilitation activities) within PHMA that has been impaired or altered.

**Objective GRSG-2**

In all GRSG habitat, manage activities that result in habitat loss and degradation to provide a net conservation gain of GRSG habitat. Exceptions to net conservation gain for GRSG may be made for vegetation treatments to benefit Utah prairie dog.

**Objective GRSG-3**

In all GRSG habitat, where sagebrush is the current or potential dominant vegetation type or is a primary species within the various states of the ecological site description (ESD), maintain or restore vegetation to provide habitat for lekking, nesting, brood rearing, and winter habitats.

The Habitat Objectives for Greater Sage-Grouse – BLM Proposed Plan (see Table Objective GRSG-3) summarize the characteristics that research has found represent the seasonal habitat needs for GRSG. The specific seasonal components identified in Table Objective GRSG-3 were adjusted based on local science and monitoring data to define the range of characteristics used in the Utah 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 **Appendix C**). 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.

<b>Table Objective GRSG-3</b>		
<b>Habitat Objectives for Greater Sage-Grouse – BLM Proposed Plan</b>		
ATTRIBUTE	INDICATORS	DESIRED CONDITION
<b>Breeding and Nesting (February 15-June 15)<sup>1, 2, 3, 4, 5, 6</sup></b>		
Lek Security	Proximity of trees	Trees absent or uncommon on shrub/grassland ecological sites within 1.8 miles (approx. 3 km) of occupied leks. <sup>6, 7, 8</sup>
	Proximity of sagebrush to leks	Has adjacent sagebrush cover. <sup>6</sup>
Cover	% of seasonal habitat meeting desired conditions	>80% of the mapped nesting habitat meets the recommended vegetation characteristics, where appropriate (relative to ecological site potential, etc.). <sup>8</sup>
	Sagebrush canopy cover	≥15% <sup>6, 8, 9</sup>
	Total shrub cover <sup>6, 8, 9</sup>	15-30%: Box Elder, Parker Mountain, Bald Hills, Hamlin Valley, Panguitch, Uintah south of Hwy 40 15-35%: Rich, Carbon, Emery, Sheeprocks, Ibapah, Uintah north of Highway 40
	Sagebrush height <sup>6, 8, 9</sup>	>12 inches (30 cm): Box Elder, Bald Hills, Hamlin Valley, Sheeprocks, Ibapah >10 inches (25 cm): Rich, Carbon, Emery, Uintah north of Highway 40 >8 inches (20 cm): Parker Mountain, Panguitch, Uintah south of Highway 40

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<b>Table Objective GRSG-3</b>		
<b>Habitat Objectives for Greater Sage-Grouse – BLM Proposed Plan</b>		
ATTRIBUTE	INDICATORS	DESIRED CONDITION
	Predominant sagebrush shape <sup>10</sup>	>50% in spreading (applicable to the specific sagebrush types prone to columnar vs. spreading shape e.g., Wyoming, not black sage) <sup>5</sup>
	Perennial grass cover <sup>6, 8, 9</sup>	>10%: Box Elder, Bald Hills, Hamlin Valley, Rich, Carbon, Emery, Sheeprocks, Ibapah, Uintah north of Highway 40 >5%: Parker Mountain, Panguitch, Uintah south of Highway 40
	Perennial grass and forb height <sup>6, 8, 9</sup>	Provide overhead and lateral concealment from predators. <sup>11</sup>
	Perennial forb canopy cover <sup>6, 8, 9</sup>	>5%: Box Elder, Bald Hills, Hamlin Valley, Rich, Carbon, Emery, Sheeprocks, Ibapah, Uintah north of Highway 40 >3%: Parker Mountain, Panguitch, Uintah south of Highway 40
<b>Brood-Rearing/Summer (April 15-August 15)<sup>1</sup></b>		
Cover	% of Seasonal habitat meeting desired condition	>40% of the mapped brood-rearing/summer habitat meets recommended habitat characteristics where appropriate (relative to ecological site potential, etc.) <sup>8</sup>
	Sagebrush canopy cover <sup>6, 8, 9</sup>	>10%
	Total shrub cover <sup>6, 8, 9</sup>	10-25%: Box Elder, Bald Hills, Hamlin Valley, Panguitch, Rich, Sheeprocks, Ibapah, Parker Mountain, Uintah 10-30%: Carbon, Emery,
	Sagebrush height <sup>6, 8, 9</sup>	>12 inches (30 cm): Box Elder, Bald Hills, Hamlin Valley, Sheeprocks, Ibapah >10 inches (25 cm): Rich, Carbon, Emery, Uintah north of Highway 40 >8 inches (20 cm): Parker Mountain, Panguitch, Uintah south of Highway 40
	Perennial grass canopy cover and forbs <sup>6, 8, 9</sup>	>15% (Grass: >10%; Forb: >5%): Box Elder, Rich, Sheeprocks, Ibapah, Parker Mountain, Panguitch, Uintah, Carbon, Emery >15% (Grass: >8%; Forb: >7%): Bald Hills, Hamlin Valley,
	Riparian areas/mesic meadows	Proper Functioning Condition <sup>6</sup>
	Upland and riparian perennial forb availability	Preferred forbs are common with several preferred species present <sup>6, 12</sup>
<b>Winter (November 15-March 15)<sup>1</sup></b>		
Cover and Food	% of seasonal habitat meeting desired conditions	>80% of the mapped wintering habitat meets winter habitat characteristics where appropriate (relative to ecological site, etc.). <sup>8</sup>
	Sagebrush canopy cover above snow <sup>6, 8</sup>	>10%
	Sagebrush height above snow <sup>6, 8, 9, 13</sup>	>10 inches (25 cm): Box Elder, Bald Hills, Hamlin Valley, Rich, Carbon, Emery, Sheeprocks, Ibapah, Uintah north of Highway 40 >8 inches (20 cm): Parker Mountain, Panguitch, Uintah south of Highway 40
Notes:		
<sup>1</sup> Specific dates would be based on site-specific conditions and may be modified due to documented local variations (e.g., higher/lower elevations) or annual climactic fluctuations (e.g., early/late spring, long and/or heavy winter), in coordination with the State of Utah. <sup>2</sup> Utah Greater Sage-Grouse Working Group 2013 <sup>3</sup> Doherty 2008 <sup>4</sup> Doherty et al. 2010 <sup>5</sup> Holloran and Anderson 2005 <sup>6</sup> Stiver et al. 2015 <i>In Press</i> <sup>7</sup> Baruch-Mordo et al. 2013 <sup>8</sup> Connelly et al. 2000 <sup>9</sup> Unpublished data, Utah Community-Based Conservation Program Greater Sage-grouse Statewide Database, Utah State University, Logan, Utah and Brigham Young University, Provo, Utah. Summarization and analysis of nesting and brood-rearing habitat characteristics from data collected through Utah State University and Brigham Young University research efforts. Researchers located the nest and brood sites using radio-marked telemetry methods. Shortly after the site was used by the marked bird (after hatch or use by a brood), vegetation characteristics on the site were measured using the line intercept method for shrub canopy cover and Daubenmire frames for herbaceous cover. Researchers across the various study areas used methods that followed the guidelines identified in Connelly et al. (2003). <sup>10</sup> 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. 2015 <i>In Press</i> ). 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. <sup>11</sup> Specific height requirements needed to meet the objective will be set at the time of watershed assessments.		

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<b>Table Objective GRSG-3</b>		
<b>Habitat Objectives for Greater Sage-Grouse – BLM Proposed Plan</b>		
<b>ATTRIBUTE</b>	<b>INDICATORS</b>	<b>DESIRED CONDITION</b>
<sup>12</sup> Preferred forbs are listed in Stiver et al. 2015 <i>In Press</i> . Overall total forb cover may be greater than that of preferred forb cover since not all forb species are listed as preferred.		
<sup>13</sup> 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.		

When using the above indicators and desired conditions to guide management actions or during land health assessments, consider that they are sensitive to the ecological processes operating at the scale of interest and that a single habitat indicator does not necessarily define habitat suitability for an area or particular scale. Indicators must be collectively reviewed, assessed based on the site potential, and put into spatial and temporal context to correctly determine habitat suitability, which will include more than one scale and multiple indicators.

**Objective GRSG-4**

Within PHMA, increase the amount and functionality of seasonal habitats by:

- Maintaining or increasing sagebrush in perennial grasslands, where needed to meet the Habitat Objectives for Greater Sage-Grouse (Table Objective GRSG-3), unless there is a conflict with Utah prairie dog.
- Reducing conifer (e.g., pinyon/juniper) from areas that are most likely to support GRSG at a rate that is at least equal to the rate of encroachment.
- Reducing the extent of annual grasslands.
- Maintaining or improving corridors for migration or movement between seasonal habitats, as well as for long-term genetic connections between populations.
- Maintaining or improving understory (grass, forb) and/or riparian condition within breeding and late brood-rearing habitats.
- Conducting vegetation treatments based on the following 10-year (decadal) acreage objectives:

<b>Population Areas</b>	<b>Mechanical Treatment<sup>1</sup></b>	<b>Annual Grass Treatment<sup>1</sup></b>
Box Elder	9,300	17,800
Ibapah; Hamlin Valley	17,900	2,100
Rich; Uintah	40,700	6,800
Carbon	2,600	200
Bald Hills; Panguitch	43,900	8,900
Parker Mountain	32,800	2,200
Sheeprocks	33,700	10,000
<i>Statewide</i>	<i>180,900</i>	<i>48,000</i>

<sup>1</sup> These acreage figures, based on VDDT modeling, represent an objective for treatment on BLM-administered lands over a 10-year (decadal) timeframe to support achievement or progress toward GRSG habitat objectives (see **Appendix V**, Great Basin Vegetation Modeling using Vegetation Dynamics Development Tool). This accounts for variations in yearly funding availability and does not reflect a maximum or minimum acreage for any one treatment type or total treatment acreage, should funding and site specific conditions allow for more or less treatment acreage than described in order to meet habitat objectives.

Outside PHMA (in adjacent opportunity areas) improve and restore historical GRSG habitat to support GRSG populations and to maintain or enhance connectivity. Statewide, complete a decadal average of 170,200 acres of mechanical treatments and 33,000 acres of annual grass treatments. Prioritization is for completion of treatments within PHMA before treating areas outside.

**Objective GRSG-5**

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Participate in local GRSG conservation efforts (e.g., UDWR, NRCS, local working groups) to implement landscape-scale habitat conservation, to implement consistent management to benefit GRSG, and to gather and use local research and monitoring to promote the conservation of GRSG.

**Management Actions**

**MA-GRSG-1**

Identify PHMA and GHMA as follows (**Map 2.6**, Greater Sage-Grouse Priority/General Habitat Management Areas and Sagebrush Focal Areas–Proposed Plan):

Population Area	Acres					
	PHMA			GHMA		
	Total Surface <sup>1</sup>	BLM/FS Surface <sup>2</sup>	Split Estate Minerals <sup>3</sup>	Total Surface <sup>1</sup>	BLM/FS Surface <sup>2</sup>	Split Estate Minerals <sup>3</sup>
Uintah	566,800	341,800	62,200	991,500	301,600	74,200
Carbon	260,100	52,200	115,500	198,700	83,400	18,700
Emery	85,500	81,400	2,700	11,400	7,100	2,600
Parker Mountain	741,300	512,700	79,800	12,900	7,000	420
Panguitch	343,900	222,900	31,300	0	0	0
Bald Hills	326,400	259,400	5,200	21,200	8,300	1,200
Hamlin Valley	143,700	101,500	6,600	0	0	0
Sheeprocks	534,600	419,500	18,100	296,500	106,800	21,200
Ibapah	88,800	48,000	750	10,800	10,100	0
Box Elder	1,135,700	439,200	112,000	0	0	0
Rich	1,051,000	218,800	126,600	197,900	4,400	16,500
Lucerne	0	0	0	37,500	2,300	9,200
Strawberry	161,500	40,900	0	20,600	0	480
WY-Uinta	1,100	1,100	0	20,900	20,900	0
WY-Blacks Fork	23,700	23,700	0	31,100	31,100	0
Statewide	5,464,100	2,763,100	560,750	1,851,000	583,000	144,500
% PHMA/ GHMA	75%	82%	79%	25%	18%	21%

<sup>1</sup> Acreage associated with total PHMA/GHMA polygon, regardless of land ownership.  
<sup>2</sup> Acreage within PHMA/GHMA where the BLM and Forest Service have managerial authority on the surface estate.  
<sup>3</sup> Acreage where the surface and mineral estates are owned by separate entities. These acres show where the surface estate is not BLM or Forest Service, but that have a federal mineral estate. Minerals decisions apply to the combination of the BLM and Forest Service surface and mineral estates.

Minor adjustments to PHMA/GHMA external boundaries should be made if BLM biologists, in coordination with state of Utah biologists, determine site-specific conditions warrant such changes to more accurately depict existing or potential GRSG habitat. The appropriate planning process (i.e., plan maintenance or plan amendment) would be used, as determined on a case-by-case basis considering site-specific issues. See additional information and protocol on adjusting occupied habitat and PHMA/GHMA boundaries in **Appendix N**, Greater Sage-Grouse Habitat Baseline and Habitat Update Protocol.

In the mapped PHMA and GHMA there may be areas that lack the principle habitat components necessary for GRSG, including but not limited to rock outcrops, alkaline flats, and pinyon-juniper ecological sites. Areas of non-habitat would be identified during site-specific project review by agency biologists, in discussion with the State of Utah and other agencies, as appropriate. Decisions would apply to existing sagebrush areas and areas with ecological sagebrush potential within PHMA or GHMA, as well as non-habitat if the following conditions are not met.

Application of decisions in non-habitat areas may be excepted in GRSG areas (PHMA/GHMA) if it can be shown that the action would occur in non-habitat and all the following conditions are met:

- access through GRSG existing and potential habitat to the activity in non-habitat occurs only on existing roads, and no improvements to roads would be required in GRSG habitat that would

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change road classification;

- no activity would be permitted or authorized if it would establish a valid existing right that would subsequently require construction of new roads within GRSG habitat, unless the activity is allowed in GRSG habitat within PHMA as described in the decisions below;
- the non-habitat does not provide important connectivity between habitats;
- indirect impacts on GRSG habitat and associated populations within the PHMA are reduced or eliminated through onsite mitigation (e.g., sound, tall structures) to the extent that the associated NEPA document demonstrates the project would not impair the function of adjacent seasonal habitats or of the life-history or behavioral needs of the GRSG population.

### **MA-GRSG-2**

Designate SFA as shown on **Map 2.6**, Greater Sage-Grouse Priority/General Habitat Management Areas and Sagebrush Focal Areas—Proposed Plan (228,500 acres of BLM and Forest Service surface estate; 4,900 acres split-estate federal minerals). SFA will be managed as PHMA, with the following additional management:

- Recommended for withdrawal from the Mining Law 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.

### **MA-GRSG-3**

In PHMA, apply the following management to all discretionary activities not otherwise excluded or closed to minimize and mitigate effects on GRSG and its habitat from the project/activity:

#### A- Net Conservation Gain

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, 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. Exceptions to net conservation gain for GRSG may be made for vegetation treatments to benefit Utah prairie dog.

All mitigation would be conducted according to the mitigation framework contained in **Section 2.7.3**, Regional Mitigation, and in **Appendix D**.

#### B- Disturbance Cap

In PHMA, manage discrete anthropogenic disturbances, whether temporary or permanent, so they cover less than 3 percent of 1) biologically significant units (BSU) (total PHMA area associated with a GRSG population area) and 2) within proposed project analysis area. See **Appendix E** for additional information on implementing the disturbance cap, including what is and is not considered disturbance and how to calculate the proposed project analysis area.

If the 3 percent anthropogenic disturbance cap is exceeded on all lands (regardless of land ownership) within GRSG PHMA in any given BSU, then no further discrete anthropogenic disturbances (subject to applicable laws and regulations, such as the Mining Law of 1872 {as amended}, valid existing rights, etc.) will be permitted by the BLM within GRSG PHMA in any given BSU until the disturbance has been reduced to less than the cap.

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If the 3 percent disturbance cap is exceeded on all lands (regardless of land ownership) within a proposed project analysis area in PHMA, then no further anthropogenic disturbance will be permitted by the 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 Mining Law of 1872 {as amended}, valid existing rights, etc.).

An area with disturbance is not excluded from the 3 percent until it has been restored to provide GRSG habitat. The objective of successful restoration is to provide for the needs of GRSG, as evidenced by one of the following:

- Vegetative cover is consistent with the GRSG habitat objectives and the ESD (Objective GRSG-2), or
- Monitoring indicates the area is regularly used by GRSG to sustain one or more seasonal habitat requirements (nesting, brood-rearing, winter).

Final restoration success and approval for abandonment for disturbances will be subject to an interdisciplinary review of available monitoring data and final monitoring reports.

C- Density of Energy/Mining Facilities

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 PHMA 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 collocated into an existing disturbed area (subject to applicable laws and regulations, such as the Mining Law of 1872 {as amended}, valid existing rights, etc.). Energy and mining facilities to which this action applies are:

- Oil and gas wells and development facilities,
- Coal mines,
- Wind towers,
- Solar fields,
- Geothermal wells/developments, and
- Active locatable, leasable, and saleable developments.

D- Predation

In PHMA, eliminate or minimize external food sources for corvids, particularly dumps, or waste transfer facilities. Apply BMPs to development activities to reduce opportunities for GRSG predators (e.g., limiting food sources, nest/perches deterrents, road kill).

Apply habitat management practices (e.g. grazing management, vegetation treatments) that decrease the effectiveness of predators.

Collaborate with applicable government entities to implement programs to control predator populations of GRSG (e.g., ravens, red fox, badgers, raccoons, raptors).

E- Noise Restrictions

In PHMA, limit noise from discretionary activities (during construction, operation, or maintenance) to not exceed 10 decibels above ambient sound levels at occupied leks from 2 hours before to 2 hours after

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official sunrise and sunset during breeding season (e.g., while males are strutting); support the establishment of ambient baseline noise levels for PHMA habitat area leks.

Limit project related noise in other PHMA habitats and seasons where it would be expected to reduce functionality of habitats that support associated GRSG populations.

As additional research and information emerges, specific new limitations appropriate to the type of projects being considered would be evaluated and appropriate measures would be implemented where necessary to minimize potential for noise impacts on PHMA GRSG population behavioral cycles.

#### F- Tall Structure Restrictions

In PHMA, limit the placement of permanent tall structures within GRSG breeding and nesting habitats.

For the purposes of this restriction, a tall structure is any man-made structure that provides for perching/nesting opportunities for predators (e.g., raptors, ravens) that are naturally absent, or that decreases the use of an area by GRSG. A determination as to whether something is considered a tall structure would be made based on local conditions such as existing vegetation or topography.

#### G- Seasonal Restrictions

In PHMA, in coordination with state of Utah biologists, apply seasonal restrictions during the period specified below to manage discretionary surface disturbing activities and uses on public lands to prevent disturbance to GRSG during seasonal life cycle periods as follows:

- In breeding (leks), nesting and early brood-rearing habitat from Feb 15 – Jun 15
- In brood rearing habitat from Apr 15 – Aug 15
- In winter habitat from Nov 15 – Mar 15

Specific time and distance determinations would be based on site-specific conditions and may be modified due to documented local variations (e.g., higher/lower elevations) or annual climactic fluctuations (e.g., early/late spring, long and/or heavy winter) in order to better protect GRSG, in coordination with state of Utah biologists.

#### H- Buffers

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 F**, Applying Lek-Buffer Distances.

#### I- Required Design Features

In PHMA, apply the RDFs from the applicable sections identified in **Appendix G** when authorizing/permitting site-specific activities/projects for wildland fire management actions, travel and transportation, lands and realty, fluid minerals, nonenergy leasable minerals, coal, mineral materials, and locatable minerals (consistent with applicable law).

The applicability and overall effectiveness of each RDF cannot be fully assessed until the project level when the project location and design are known. Because of site- specific circumstances, some RDFs may not apply to some projects and/or may require slight variations. All variations in RDFs would require that at least one of the following be demonstrated in the NEPA analysis associated with the project/activity:

- A specific RDF is documented to not be applicable to the site-specific conditions of the project/activity (e.g. due to site limitations or engineering considerations). Economic

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considerations, such as increased costs, do not necessarily require that an RDF be varied or rendered inapplicable;

- An alternative RDF is determined to provide equal or better protection for GRSG or its habitat;
- A specific RDF will provide no additional protection to GRSG or its habitat.

**MA-GRSG-4**

In PHMA and in adjacent opportunity areas, maintain, improve and restore GRSG habitat to support GRSG populations and to maintain or enhance connectivity.

Vegetation treatments would be applied to meet GRSG habitat objectives and provide additional GRSG habitat.

Adjust PHMA boundaries to include additional restored GRSG habitat and habitat identified during survey or inventory work. Changes to maps and associated management would occur through the appropriate BLM planning processes (e.g., plan maintenance or plan amendment), as described in **Appendix N**.

**MA-GRSG-5**

In GHMA, apply the following management to meet the objective of a net conservation gain for discretionary actions that could result in habitat loss and degradation:

A- Existing Management

Implement GRSG management actions included in the existing RMPs and project- specific mitigation measures associated with existing decisions.

B- Net Conservation Gain

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, 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. Exceptions to net conservation gain for GRSG may be made for vegetation treatments to benefit Utah prairie dog.

All mitigation would be conducted according to the mitigation framework contained in **Section 2.7.3**, Regional Mitigation, and in **Appendix D**.

C- Buffers

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 F**.

D- Required Design Features

In GHMA, apply the fluid mineral RDFs that are associated with GHMA identified in **Appendix G** when authorizing/permitting site-specific fluid mineral development activities/projects.

The applicability and overall effectiveness of each RDF cannot be fully assessed until the project level when the project location and design are known. Because of site- specific circumstances, some RDFs may not apply to some projects and/or may require slight variations. All variations in RDFs would require that at least one of the following be demonstrated in the NEPA analysis associated with the project/activity:

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- A specific RDF is documented to not be applicable to the site-specific conditions of the project/activity (e.g. due to site limitations or engineering considerations). Economic considerations, such as increased costs, do not necessarily require that an RDF be varied or rendered inapplicable;
- An alternative RDF is determined to provide equal or better protection for GRSG or its habitat;
- A specific RDF will provide no additional protection to GRSG or its habitat.

### **MA-GRSG-6**

#### Sage-Grouse Management outside PHMA/GHMA

Proposed projects within State of Utah SGMAs and USFWS PACs, as well as adjacent to PHMA outside these areas, will consider impacts on GRSG and implement measures to mitigate impacts when preparing site-specific planning and environmental compliance documents.

Outside of PHMA, prior to site-specific authorizations, the BLM would evaluate habitat conditions and may require surveys to determine if the project area contains GRSG habitat (FLPMA, 43 USC 1701 Sec. 201 (a); BLM Manual 6840.04 D3; BLM-M-E2). Surveys would be required prior to authorizing discrete anthropogenic disturbances within 4 miles of an occupied lek that is located in PHMA, but only in existing sagebrush.

If an area is determined to be GRSG habitat (e.g., nesting, brood-rearing, winter, transition), mitigation will be considered as part of the project level NEPA analysis and will be attached as conditions of approval (COAs) to new discretionary actions, if deemed necessary to protect the habitat (BLM Manual 6840.04 D 5). Measures that may be considered include those identified in **Appendix G**.

Outside of PHMA, but within SGMAs and PACs, avoid removal of sagebrush and minimize development that would create a physical barrier to GRSG movement; these areas may be used by GRSG to connect to other populations or seasonal habitat areas

Outside of PHMA, but within SGMAs and PACs, consider noise and permanent structure stipulations around leks.

Outside PHMA, portions of opportunity areas (**Map 2.4** and **Map 2.6**) within 4 miles of a lek that is located in PHMA would be managed with the following allocations:

- Fluid minerals would be open for leasing with controlled surface use (CSU) stipulations (noise and tall structures).
- Lands ROWs, permits, and leases would be avoided, applying avoidance criteria for noise and tall structures.

Do not site wind energy development in opportunity areas within 5 miles from occupied GRSG leks that are in PHMA.

Outside of PHMA, discrete anthropogenic disturbances should not be authorized in areas that have been treated with the intent of improving or creating new GRSG habitat, unless the NEPA document associated with the action demonstrates it would have a neutral or beneficial effect on GRSG.

### **MA-GRSG-7**

#### Adaptive Management

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As described in **Section 2.7.1** this plan establishes soft and hard triggers for both GRSG populations and habitat. The specific triggers and additional detail on the management responses are identified in **Appendix B**.

If monitoring indicates the soft-trigger is met, the BLM will determine if there is a specific cause or causes that are contributing to the decline. If it is determined that the decline is related to a natural population variation, no specific management actions would be required. However, if BLM management actions are determined to cause or contribute to the decline, the BLM manager would apply measures within their implementation-level discretion to mitigate the decline of populations and/or habitats to the area where the trigger has been met. These measures would apply more conservative or restrictive implementation conservation conditions, terms, or decisions within the agencies' discretion to mitigate the decline of populations and/or habitats.

If monitoring indicates the hard trigger is met, a set of specific management actions from the BLM Proposed Plan will immediately be replaced with or adjusted by different management actions in the area where the trigger has been met. Table B.1 of **Appendix B** identifies the management actions from the BLM Proposed Plan, and the corresponding new management actions that will be immediately implemented to the specific area in the event a hard trigger is met. In addition to these specific changes, the BLM will review available and pertinent data for the area, in coordination GRSG biologists from multiple agencies including the UDWR, USFWS, and NRCS, to determine the causal factor(s) and implement a corrective strategy. The final strategy associated with a hard trigger being met would be the changes identified in Table B.1 of **Appendix B**, and could also include the need to further amend or revise the RMP to address the situation and modify management accordingly, for the area where the trigger was met.

## Vegetation

### **Objective**

#### **Objective VEG-1**

In all SFA and PHMA, 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).

### **Management Actions**

#### **MA-VEG-1**

In PHMA, where necessary to meet GRSG habitat objectives, treat areas to maintain and expand healthy GRSG habitat (e.g., conifer encroachment areas, annual grasslands).

In PHMA, prioritize implementation of restoration/treatment projects based on environmental variables that improve chances for project success in areas most likely to benefit GRSG (e.g., proximity to existing GRSG populations, ecological site potential, resistance and resilience), documented in **Appendix K**.

In PHMA, prioritize restoration in seasonal habitats that are identified as the limiting factor for GRSG distribution and/or abundance.

Apply seasonal restrictions to avoid treating areas during seasons of use, as needed, when implementing vegetation treatments (see MA-GRSG-3G).

In PHMA, avoid sagebrush reduction treatments within GRSG nesting and winter habitat unless the project plan and associated NEPA document demonstrate a biological need for the treatment to maintain or improve habitat for the GRSG population. Coordinate with the State of Utah and USFWS prior to conducting sagebrush treatment projects within nesting and winter habitat.

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Use collaborative planning efforts to develop and implement habitat restoration projects. Expertise and ideas from entities such as local landowners, local GRSG working groups, and other federal, state, county, and private organizations should be solicited and considered in development of restoration projects.

In PHMA, implement project design features that will contribute to the most favorable conditions for success when planning and implementing restoration/vegetation treatment projects. Examples include, but are not limited to the following:

- Review of available plant species and their adaptation to the site when developing seed mixes.
- The need to reduce non-native annual grass densities and competition through herbicide, targeted grazing, tillage, etc.
- Assessment of on-site vegetation to ascertain if enough desirable perennial vegetation exists to consider the use of passive restoration techniques.
- 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 sources.
- The need for post-treatment control of non-native annual grass and other invasive species.

Upon completion of vegetation treatments, monitor and manage the project area to ensure long-term success, including persistence of seeded species and/or other treatment components, such as implementing maintenance treatments.

**MA-VEG-2**

Remove conifers encroaching into sagebrush habitats. When conducting conifer treatments:

- Prioritize treatments closest to occupied GRSG habitats and near occupied leks, and where juniper encroachment is phase I or phase II.
- Treat areas in late Phase II or Phase III condition to create movement corridors, connect habitats, or to break up continuous, hazardous fuels and reduce the potential for catastrophic fire.
- Prioritize methods to reduce conifer canopy cover to those that maintain the understory vegetation as the preferred treatment methods (e.g., mechanical, lop and scatter).
- Require that vegetation treatments conducted within 0.6 miles of a lek include an objective of reducing conifer, where technically feasible, to less than 5 percent canopy cover, with preference for complete removal.
- Include stipulations to avoid removing old-growth pinyon/juniper stands (e.g., Tausch et al. 2009; Miller et al. 1999).
- 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.

**MA-VEG-3**

In PHMA 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.

**MA-VEG-4**

In PHMA, include GRSG habitat objectives in restoration/treatment projects. Treatment objectives should include short-term and long-term habitat conditions, and they should include specific objectives for the establishment of sagebrush cover and height, as well as cover and heights for understory perennial grasses and forbs necessary for GRSG seasonal habitats (see Objective-GRSG-3).

Make meeting the GRSG objectives for the restoration/treatment project one of the primary priorities for the project and subsequent land uses, recognizing that managing for other special status species may result in treatment objectives that may not meet GRSG seasonal habitat objectives (e.g., winter habitat cover

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requirements vs. creation of Utah prairie dog habitat). Where GRSG habitat overlaps with that of federally listed threatened or endangered species (e.g., Utah prairie dogs), coordinate with species-specific experts to develop conservation and recovery objectives and allow habitat treatments that will benefit both species.

**MA-VEG-5**

In PHMA, prioritize the use of native seeds for restoration based on availability, adaptation (ecological site potential), and probability of success. Where probability of success or adapted seed availability is low, desirable non-native seeds may be used as long as they support GRSG habitat objectives. Re-establishment of appropriate sagebrush species/subspecies and important understory plants, relative to site potential, should be the principle objective for rehabilitation efforts.

**MA-VEG-6**

In 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, as well as monitoring and maintaining the treated area.

**MA-VEG-7**

In PHMA, limit commercial seed or live plant collection to levels that ensure long-term maintenance of the GRSG habitat objectives. Locations, species allowed for collection, and limits on the amounts to be collected will be developed on a case-by-case basis following environmental review of annual site-specific conditions. Commercial collection during sensitive seasonal periods (see MA-GRSG-3G) will include mitigation, developed to reflect the site-specific conditions on the ground, that could include, but is not necessarily limited to, restrictions on the timing and method of collection activities, limiting the number of individuals collecting, providing portions of collected seeds for use in local restoration projects, etc.

**MA-VEG-8**

In PHMA, allow for seed collection and use in restoration/reclamation activities. Prioritize use of seed from areas as close as possible to where the seed will be used to capture local adaptations.

**MA-VEG-9**

In PHMA, diversify the perennial grass and forb components through additional seeding in areas where historical seedings (e.g., crested wheatgrass) have been recolonized by sagebrush.

**MA-VEG-10**

Follow the applicable and technically feasible RDFs in **Appendix G** for vegetation projects/activities (fuels management) at the site-level unless at least one of the following can be demonstrated in the NEPA analyses associated with the project/activity:

- A specific RDF is documented to not be applicable to the site-specific conditions of the project/activity;
- An alternative RDF is determined to provide equal or better protection for GRSG or its habitat;
- A specific RDF will provide no additional protection to GRSG or its habitat.

**MA-VEG-11**

In PHMA, design post Emergency Stabilization and Rehabilitation/Burn Area Emergency Rehabilitation 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 Emergency Stabilization and Rehabilitation projects to benefit GRSG (Eiswerth and Shonkwiler 2006).

Monitor and control invasive vegetation post-wildfire for at least 3 years.

**MA-VEG-12**

Integrated Invasive Species Management

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In PHMA, integrated Vegetation Management would be used to control, suppress, and eradicate noxious and invasive species per BLM Handbook H-1740-2.

**MA-VEG-13**

In PHMA, treatments of Mormon cricket outbreaks would be collaborated with partners at the federal, state, and local levels to maintain and enhance GRSG habitats.

*Fire Management*

**Management Actions**

**MA-FIRE-1**

In collaboration with the USFWS and relevant state agencies, complete and maintain GRSG Landscape Wildland Fire and Invasive Species Habitat Assessments to prioritize at risk habitats, and identify fuels management, preparedness, suppression and restoration priorities necessary to maintain sagebrush habitat to support interconnecting GRSG populations. These assessments and subsequent assessment updates would also be a collaborative effort to take into account other GRSG priorities identified in this plan.

**Appendix K** describes a minimal framework example and suggested approach for this assessment.

Implementation actions will be tiered to the local GRSG Landscape Wildland Fire and Invasive Species Assessment, using best available science related to the conservation of GRSG.

In collaboration with USFWS and relevant state agencies, BLM planning units would 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 would be coordinated across state/regional scales and across jurisdictional boundaries for long-term conservation of GRSG.

Annually complete a review of landscape assessment implementation efforts with appropriate USFWS and state agency personnel.

**MA-FIRE-2**

Fuels Management

Follow the applicable and technically feasible RDFs in **Appendix G** for fuels management at the site-level unless at least one of the following can be demonstrated in the NEPA analyses associated with the project/activity:

- A specific RDF is documented to not be applicable to the site-specific conditions of the project/activity;
- An alternative RDF is determined to provide equal or better protection for GRSG or its habitat;
- A specific RDF will provide no additional protection to GRSG or its habitat.

**MA-FIRE-3**

In PHMA, fuel treatments will be designed through an interdisciplinary process to expand, enhance, maintain, or protect GRSG habitat.

- In collaboration with USFWS and relevant state agencies, BLM planning units with large blocks of GRSG habitat will develop, using the assessment process described in **Appendix K**, 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

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wildfires if the action is not taken.

- Use green strips and/or fuel breaks to protect GRSG habitat from fire events.
- When possible, locate fuel breaks along existing roads, ROWs, and other suitable topographic or natural features (e.g., areas devoid of vegetation, rock outcrops).
- Avoid constructing fuel breaks through large areas of intact GRSG habitat, unless the associated NEPA document demonstrates a biological need for the fuel break to maintain or protect habitat for the GRSG population. Coordinate with the State of Utah and USFWS prior to constructing fuel breaks within nesting and winter habitat.
- Using an interdisciplinary approach, a full range of fuel reduction techniques will be available. Fuel reduction techniques such as conifer reduction, grazing, prescribed fire, chemical, biological, and mechanical treatments may be acceptable, given site-specific variables.
- Remove encroaching conifer stands as a fuels management tool, where environmental review documents it would protect or improve GRSG habitat.
- Prioritize the use of native seeds for fuels management treatment based on availability, adaptation (site potential), and probability of success. Where probability of success for native seed availability is low, desirable non-native seeds may be used to meet GRSG habitat objectives to trend toward restoring the fire regime. When reseeding, use fire resistant native and desirable non-native species, as appropriate, to provide for fire breaks.
- Upon project completion, monitor and manage fuels projects to ensure long-term success, including persistence of seeded species and/or other treatment components, such as implementing maintenance actions. Control invasive vegetation post-treatment.
- Apply seasonal restrictions, as needed, for implementing fuels management treatments according to the type of seasonal habitats present (see MA-GRSG-3G).

In PHMA, avoid sagebrush reduction fuels treatments within GRSG nesting and winter habitat unless the project plan and associated NEPA document demonstrate a biological need for the treatment to maintain or improve habitat for the GRSG population. Treatments in winter habitat should be designed to maintain sagebrush, especially tall sagebrush (sagebrush capable of standing above heavier than normal snowfall), which would be available to GRSG above snow during a severe winter. Prior to conducting fuels treatments in winter habitat, coordinate with the State of Utah and USFWS to design the treatment to strategically reduce wildfire risk around or in the winter habitat.

#### **MA-FIRE-4**

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.

Prescribed fire as a vegetation or fuels treatment shall only be considered 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 GRSG habitat in PHMA (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).

Prescribed fire in known winter range shall only be considered 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.

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**MA-FIRE-5**

In PHMA, during fuels management project design, consider the use of targeted livestock grazing to strategically reduce fine fuels and, if used, implement grazing management that will accomplish this objective. If implementing targeted grazing, implement measures to minimize impacts on native perennial grasses.

**MA-FIRE-6**

Preparedness

Follow the applicable and technically feasible RDFs in **Appendix G** for fire and fuels management at the site-level unless at least one of the following can be demonstrated in the NEPA analyses associated with the project/activity:

- A specific RDF is documented to not be applicable to the site-specific conditions of the project/activity;
- An alternative RDF is determined to provide equal or better protection for GRSG or its habitat;
- A specific RDF will provide no additional protection to GRSG or its habitat.

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.

Develop wildfire prevention plans that explain the resource value of GRSG habitat and include fire prevention messages and actions to reduce human-caused ignitions.

**MA-FIRE-7**

Fire Management – (Suppression)

Follow the applicable and technically feasible RDFs in **Appendix G** for fire and fuels management at the site-level unless at least one of the following can be demonstrated in the NEPA analyses associated with the project/activity:

- A RDF is documented to not be applicable to the site-specific conditions of the project/activity;
- An alternative RDF is determined to provide equal or better protection for GRSG or its habitat;
- A specific RDF will provide no additional protection to GRSG or its habitat.

**MA-FIRE-8**

Fire fighter and public safety are the highest priority. GRSG habitat in PHMA 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 across the range of GRSG habitat consistent with LUP direction.

PHMA will be viewed as more valuable than GHMA when priorities are established. When suppression resources are widely available, maximum efforts will be placed on limiting fire growth in GHMA polygons as well. These priority areas will be further refined following completion of the GRSG Landscape Wildland Fire Invasive Species Habitat Assessments described in **Appendix K**.

In GHMA or areas where treatment/seeding has occurred to improve habitat, prioritize suppression where wildfires threaten adjacent PHMA.

**MA-FIRE-9**

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Within acceptable risk levels use 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 LUP direction.

In PHMA, burnout operations areas should be avoided by constructing direct fire lines, whenever safe and practical to do so.

*Livestock Grazing/Range Management*

**Management Actions**

**MA-GRA-1**

PHMA and GHMA would be available for livestock grazing. Active animal unit months (AUMs) for livestock grazing would be 329,521 on BLM lands. Make adjustments to permitted AUMs consistent with regulation and the remaining grazing direction. In addition, on an annual basis livestock numbers and the season of use can be adjusted within the terms and conditions of the permit.

Make adjustments to permitted use and annual adjustments to levels of livestock use consistent with regulation and the direction identified below where livestock grazing is identified as a causal factor to not meeting standards or habitat objectives.

**MA-GRA-2**

The BLM will prioritize (1) the review of grazing permits/leases, in particular to determine if modification is necessary prior to renewal, and (2) the processing of grazing permits/leases in SFA first followed by PHMA outside the SFA. In setting workload priorities, precedence will be given to existing permits/leases in these areas not meeting Land Health Standards, with focus on those containing riparian areas, including wet meadows. The BLM may use other criteria for prioritization to respond to urgent natural resource concerns (ex., fire) and legal obligations.

**MA-GRA-3**

In PHMA, consult, cooperate, and collaborate with other land owners and management agencies (e.g., private and SITLA) to develop plans which provide for landscape level approaches to habitat improvement. Manage unfenced private and SITLA lands within a grazing allotment that are under exchange of use agreements or percent public land use as a single unit that will have the same management as the public lands.

**MA-GRA-4**

Evaluate Utah's Rangeland Health Standards and process grazing permits. Focus monitoring and management activities on allotments found not to be achieving Utah's Rangeland Health Standards where livestock grazing is identified as a causal factor and that have the best opportunities for conserving, enhancing or restoring habitat for GRSG.

Use ESDs and/or other appropriate information to determine the desired plant community within proper functioning ecological processes for conducting land health assessments to evaluate the achievement or non-achievement of rangeland health standards.

**MA-GRA-5**

In PHMA and GHMA, conduct land health assessments that include indicators and measurements of structure, condition, composition, etc., of vegetation specific to achieving GRSG habitat objectives (Objective GRSG-3), including within wetlands and riparian areas. Prioritize land health assessments in SFA, followed by PHMA outside of the SFA. Conduct land health assessments at the watershed scale and use the GRSG habitat objectives when assessing the applicable standard in GRSG habitats.

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**MA-GRA-6**

In PHMA, implement management actions (e.g., allotment management plans, term permit renewals, or other agreements) necessary to meet land health standards and to conserve, enhance or restore GRSG habitat through specific objectives (Objective GRSG-3). If an effective grazing system that meets specific GRSG habitat objectives is not already in place, consider singly, or in combination, changes in the following:

- Rotation systems (e.g., rest rotation, deferred rotation)
- Season or timing of use
- Distribution of livestock use;
- Intensity of use (e.g., objectives for utilization or stubble height)
- Type of livestock (e.g., cattle, sheep, horses, and goats), unless such a change conflicts with other species management
- Class of livestock (e.g., yearlings vs. cow-calf pairs)
- Duration of grazing use and rest periods
- Stocking rates

The NEPA analysis for renewals and modifications of livestock grazing permits/leases that include lands within SFA and PHMA will include specific management thresholds based on Table Objective GRSG-3, 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. Adjustments to meet seasonal GRSG habitat requirements could include those items identified in the list above.

**MA-GRA-7**

In PHMA, during drought periods, prioritize evaluating effects of the drought relative to GRSG needs for food and cover.

Initiate emergency management measures (e.g. delaying turnout, adjusting the amount and/or duration of livestock grazing, implement other terms of the permit) during times of drought to protect GRSG habitat, in accordance with IM-2013-094 (Resource Management During Drought), or other agency policies.

Implement post-drought management to allow for vegetation recovery that meets GRSG needs.

**MA-GRA-8**

In PHMA, manage riparian areas and wet meadows for proper functioning condition.

**MA-GRA-9**

In PHMA, assess livestock grazing in riparian and meadow complexes and ensure recovery or maintenance of appropriate vegetation and water quality. Where recovery or maintenance is not occurring and the causal factor is livestock grazing, reduce pressure on riparian or wet meadow vegetation used by GRSG in the summer by adjusting grazing management practices (e.g., use fencing/herding techniques, or changes in seasonal use or livestock distribution).

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

**MA-GRA-10**

In PHMA, limit authorization of new water developments to projects that would have a neutral effect or be beneficial to GRSG habitat (such as by shifting livestock use away from critical areas). New

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developments that divert surface water must be designed to maintain riparian or wet meadow vegetation and hydrology to meet GRSG needs.

**MA-GRA-11**

In PHMA, evaluate existing water developments (springs, seeps, etc., and their associated pipelines) to determine if modifications are necessary to maintain or improve riparian areas and GRSG habitat. Make modifications where necessary, considering impacts on other water uses when such considerations are neutral or beneficial to GRSG.

**MA-GRA-12**

In PHMA, ensure that vegetation treatments conserve, enhance or restore GRSG habitat (this includes treatments that benefit livestock).

**MA-GRA-13**

In PHMA, evaluate the role of existing seedings that are currently composed of primarily introduced perennial grasses to determine if they should be restored to sagebrush or habitat of higher quality for GRSG. If existing seedings provide value in conserving or enhancing GRSG habitats, then no restoration would be necessary. Assess the compatibility of these seedings for GRSG habitat during the land health assessments.

**MA-GRA-14**

In PHMA, design new structural range improvements to have a neutral effect or conserve, enhance, or restore GRSG habitat through an improved grazing management system relative to 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.

**MA-GRA-15**

In PHMA, evaluate existing structural range improvements to make sure they have a neutral effect or conserve, enhance or restore GRSG habitat.

**MA-GRA-16**

To reduce outright GRSG strikes and mortality, remove, modify or mark fences in high risk areas (Stevens et al. 2012) based on proximity to lek (e.g., within 1.2 miles of a lek), lek size, and topography, or as latest science indicates. Prioritize actions in SFA first, then PHMA.

Employ NRCS fence collision risk tool (NRCS/CEAP Conservation Insight Publication “Applying the Sage Grouse Fence Collision Risk Tool to Reduce Bird Strikes”).

**MA-GRA-17**

In PHMA, monitor for and treat noxious weeds and treat invasive species where needed, associated with existing range improvements.

**MA-GRA-18**

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

**Guidelines**

**MA-WHB-1**

Manage herd management areas (HMAs) in GRSG habitat within established Appropriate Management Level (AML) ranges to achieve and maintain GRSG habitat objectives (Objective-GRSG-3).

**MA-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 PHMA;
2. HMAs containing only GHMA;
3. HMAs containing sagebrush habitat outside of PHMA and GHMA mapped habitat; and
4. HMAs without GRSG habitat.

**MA-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.

**MA-WHB-4**

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

**MA-WHB-5**

In PHMA, monitor the effects of WHB use in relation to GRSG seasonal habitat objectives on an annual basis to help determine future management actions.

**MA-WHB-6**

Develop or amend herd management plans to incorporate GRSG habitat objectives and management considerations for all HMAs within GRSG habitat, with an emphasis placed on PHMA.

**MA-WHB-7**

Consider removals or exclusion of wild horses/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.

**MA-WHB-8**

When conducting NEPA analysis for wild horse/burro management activities, water developments, or other rangeland improvements for wild horses, address the direct and indirect effect on GRSG populations and habitat. Implement any water developments or rangeland improvements using the criteria identified for domestic livestock.

**MA-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

### Management Actions

#### MA-LAR-1

In PHMA, manage lands ROWs, permits, and leases as follows (**Map 2.15**):

- Open: 18,900 acres (associated with designated above-ground ROW corridors)
- Avoided: 1,997,000 acres
- Excluded: 10,500 acres

#### MA-LAR-2

Linear and Site-Type ROWs, Permits, and Leases (excluding wind and solar)

PHMA would be avoidance areas for new linear and site type ROWs, permits, and leases except for within ROW corridors designated for aboveground use. Placement of new ROWs, permits, and leases in PHMA should be avoided if at all possible. Where avoidance is not possible in PHMA, placement of a new ROW/permit/lease could be allowed if it applies the management for discretionary activities in PHMA identified in MA-GRSG-3 (e.g., mitigation, disturbance cap, buffers, tall structure restrictions, seasonal restrictions, and applicable RDFs).

In PHMA, lands ROWs, permits and leases that cannot be avoided should be located in areas that minimize the effect on the GRSG population (e.g., non-habitat areas, least suitable habitat, collocated with existing disturbances).

In PHMA, new proposals for power lines, access roads, pump storage, and other hydroelectric facilities licensed by FERC would be subject to all GRSG ROW avoidance allocations and pertinent management for discretionary activities in MA- GRSG-3.

Outside PHMA, portions of opportunity areas within 4-miles of a lek that is located in PHMA would be avoidance areas for new ROWs, permits and leases, applying stipulations for noise and tall structures.

In addition to the above requirements, the subsequent conditions would apply to specific types of ROW authorizations:

#### Transmission Lines

PHMA are designated as avoidance areas for high voltage transmission line ROWs, except for the transmission projects specifically identified below. All authorizations in these areas, other than the excepted projects, must comply with the conservation measures outlined in this plan, including the RDFs and avoidance criteria presented in MA-GRSG-03. The BLM is currently processing an application for TransWest Express (including those portions of Energy Gateway South that are collocated) and the NEPA review for this project is well underway. The BLM is analyzing GRSG mitigation measures through the project's NEPA review process.

In PHMA, high voltage transmission lines (100 kV or greater) would be avoided if possible. If avoidance is not possible, they would be placed in designated corridors where technically feasible. Where not technically feasible, lines should be located adjacent to existing infrastructure, unless using a different alignment better minimizes impacts on GRSG. New ROWs constructed adjacent to existing infrastructure will be constructed as close as technically feasible to existing infrastructure to limit disturbance to the smallest footprint.

In PHMA outside of designated corridors, new transmission lines must be buried where technically feasible. Where burying transmission lines is not technically feasible:

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- new transmission lines must be located adjacent to existing infrastructure, unless using a different alignment better minimizes impacts on GRSG; and
- would be subject to GRSG ROW avoidance criteria described above.

In PHMA, if an existing transmission line is being upgraded to a higher voltage transmission line outside an existing corridor:

- the existing transmission line must be removed within a reasonable 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.

In PHMA, where existing guy wires are determined to have a negative impact on GRSG or its habitat, they should be removed or appropriately marked with bird flight diverters to make them more visible to GRSG in flight.

### Pipelines

In PHMA, major pipelines (greater than 24 inches) that cannot avoid PHMA would be placed in designated corridors where technically feasible. Where not technically feasible, pipelines should be located adjacent to existing infrastructure, unless using a different alignment better minimizes impacts on GRSG.

### Communication Sites

In PHMA, new communication towers that cannot avoid PHMA must be located, where technically feasible, within an existing communication site. New sites would be considered where necessary for public safety.

### **MA-LAR-3**

#### Road ROWs

In PHMA, new road ROWs would be authorized when necessary for public safety, administrative access, or subject to valid existing rights. If the new ROW is necessary for public safety, administrative access, or subject to valid existing rights and creates new surface disturbance, then avoid, minimize, and compensate for the impacts.

In PHMA, limit route construction to realignments of existing ROWs if the realignment maintains or enhances GRSG habitat, eliminates the need to authorize a new ROW to construct a new road, or is necessary for public safety or public need.

In PHMA, subject to valid existing rights, new road ROWs/easements would be authorized only when necessary for public safety or administrative access or, if it would create no new or de minimis new surface disturbance.

In PHMA, collocate new ROWs as close as technically possible to existing ROWs or where it best minimizes GRSG impacts. Use existing roads, or realignments, 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.

In PHMA, existing Federal Highway Act Appropriation ROWs will be managed as valid existing rights, and new Federal Highway Act ROWs would continue to be considered and subject to all GRSG ROW plan restrictions.

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**MA-LAR-4**

In PHMA, designate ROW corridors as identified on **Map 2.20**:

- Retain 17,600 acres of existing designated ROW corridor
- Retain 44,300 acres of existing designated ROW corridor, but stipulate new developments be limited to underground use only
- Undesignate 18,200 acres of existing designated ROW corridor

In PHMA, placement of new ROWs in corridors should be avoided if at all possible. Where avoidance is not possible:

- Allow new linear ROWs in designated corridors.
- New ROWs constructed in designated corridors will be constructed as close as technically feasible to existing linear ROW infrastructure to limit disturbance to the smallest footprint, unless using a different alignment better minimizes impacts on GRSG.
- Apply the pertinent management for discretionary activities in PHMA identified in MA-GRSG-3.

**MA-LAR-5**

In PHMA, when a ROW grant expires, is relinquished, or terminated, required rehabilitation as a term and condition of the FLPMA ROW grant, in compliance with 43 CFR 2805.12(i).

- the lease holder will be required to restore the site by removing overhead lines and other infrastructure, and;
- eliminate existing raven nesting opportunities created by anthropogenic development on public lands (e.g., remove power line and communication facilities no longer in service).

In PHMA, during renewal, amendment or reauthorization of existing permits, work with existing ROW holders to mitigate impacts of existing ROW infrastructure. Where technically feasible, require ROW holders to bury or relocate existing power lines to minimize long-term impacts on GRSG habitat. Where the potential long-term impacts of relocating or burying the line would be greater than the existing impacts, do not pursue the mitigation. If relocation or burying is not feasible or would result in severe short-term or greater long-term impacts on GRSG habitat, incorporate additional terms and conditions in the ROW authorization for protection of GRSG habitat.

Work with ROW holders to retrofit existing towers with perch deterrents or other anti-perching devices, where appropriate, to limit GRSG predation.

**MA-LAR-6**

In PHMA, where existing leases or ROWs have had some level of development (road, fence, well, etc.) and are no longer in use, remove the features and restore the habitat.

**MA-LAR-7**

In GHMA, manage ROWs, permits, and leases as follows (**Map 2.15**):

- Open: 484,900 acres
- Avoided: 0 acres
- Excluded: 17,600 acres

New ROWs (including permits and leases) authorizations would be allowed if they apply the pertinent management for discretionary activities in GHMA identified in MA-GRSG-5.

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**MA-LAR-8**

In GHMA, retain 74,700 acres of designated ROW corridors as identified on **Map 2.20**.

**MA-LAR-9**

Land Tenure

Lands classified as PHMA 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.

**MA-LAR-10**

In PHMA, where suitable conservation actions cannot be achieved, seek to acquire state and private lands with intact federal mineral estate by donation, purchase or exchange in order to best conserve, enhance or restore GRSG habitat.

**MA-LAR-11**

Withdrawal

SFA would be recommended for withdrawal from the Mining Law of 1872 (as amended), subject to valid existing rights. Other federal lands or non-federal lands with federal mineral interests within PHMA or GHMA that are not already withdrawn or recommended for withdrawal would be available for locatable mineral entry.

**MA-LAR-12**

Wind Energy Development

PHMA would be designated as exclusion areas for wind energy development (2,026,400 acres) (**Map 2.31**).

Do not site wind energy development in opportunity areas within 5 miles from occupied GRSG leks that are in PHMA.

Manage wind energy development in GHMA as follows:

- Open – 484,900 acres
- Avoided – 0 acres
- Excluded – 17,600 acres

New wind ROW authorizations would be allowed in GHMA if they apply the pertinent management for discretionary activities identified in MA-GRSG-5.

**MA-LAR-13**

Solar Energy Development

As noted in **Chapter 1**, the BLM's Approved Resource Management Plan Amendments/ROD for Solar Energy Development in Six Southwestern States (October 2012) excluded all GRSG occupied habitat to new utility-scale solar development. Because the existing land use plans already exclude solar development in GRSG habitat; this plan amendment process does not need to make additional decisions related to solar development (**Map 2.32**).

## Minerals

### Management Action

#### MA-MIN-1

Allow exploration for all minerals (e.g., geophysical, trenching, drilling, etc.) within mapped occupied GRSB habitat areas that are not closed to leasing, permitting, etc., to obtain exploratory information. In areas where leasing, permitting, etc. is still available, minerals exploration shall be subject to the pertinent management for discretionary activities in PHMA (MA-GRSG-3) and GHMA (MA-GRSG-5).

## *Nonenergy Leasable Minerals*

### Management Actions

#### MA-MIN-2

In PHMA, manage nonenergy leasable minerals on federal lands and non-federal lands with federal mineral interests as follows (**Map 2.38**):

- Open to Leasing Consideration – 0 acres
- Closed to Leasing – 2,587,100 acres

In PHMA, close federal lands and non-federal lands with federal mineral interests to nonenergy leasable mineral leasing. However, expansion of existing operations could be considered if the new lease is contiguous with an existing operation and the new lease (construction, operation, or maintenance) applies the pertinent management for discretionary activities in PHMA identified in MA-GRSG-3 (e.g., mitigation, disturbance cap, minerals/energy density, buffers, seasonal restrictions, and RDFs).

#### MA-MIN-3

In GHMA, manage nonenergy leasable minerals on federal lands and non-federal lands with federal mineral interests as follows (**Map 2.38**):

- Open to Leasing Consideration – 619,500 acres
- Closed to Leasing – 27,600 acres

New leasing and development in GHMA would be considered if consistent with the pertinent management for discretionary activities described in MA-GRSG-5.

#### MA-MIN-4

In PHMA, exploration and prospecting activities associated with nonenergy leasable minerals would be required to comply with the same stipulations identified for leasing and development, above. In addition:

- The exploration/prospecting activity does not occur during sensitive seasonal periods (i.e., breeding and nesting, brood rearing, winter) (MA-GRSG-3G);
- Facilities associated with exploration/prospecting activities will be removed before the next breeding season.
- Disturbances will be restored.

## *Coal*

### **Management Actions**

#### **MA-MIN-5**

##### Leases Associated with Surface Mining

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).

#### **MA-MIN-6**

##### Leases Associated with Underground Mining

Consider leasing PHMA for coal that would be extracted through underground mining. Require the following stipulations as part of any new lease or lease modification:

- In PHMA, appurtenant facilities would not be placed in GRSG habitat, where technically feasible.
- In PHMA, if placement of facilities outside of GRSG habitat is not technically feasible, disturbances associated with the lease (construction, operation, or maintenance) can be allowed if they are consistent with the pertinent management for discretionary activities identified in MA-GRSG-3 (e.g., mitigation, disturbance cap, minerals/energy density, buffers, noise restrictions, seasonal restrictions, etc.).

If the above criteria cannot be met, do not grant new leases or modifications.

#### **MA-MIN-7**

New leasing for underground mining of coal in GHMA would be considered if consistent with the pertinent management for discretionary activities described in MA-GRSG-5.

#### **MA-MIN-8**

In PHMA, exploration activities needed to meet data adequacy standards associated with potential coal leasing would be required to comply with the pertinent management for discretionary activities identified in MA-GRSG-3 (e.g., mitigation, disturbance cap, buffers, noise restrictions, seasonal restrictions, etc.).

#### **MA-MIN-9**

For coal mining operations on existing leases:

Underground mining: In PHMA, unless required for technical or safety reasons, do not authorize new appurtenant surface facilities for existing underground mining. If new appurtenant surface facilities associated the existing mine leases cannot be located outside of PHMA, collocate them with any existing disturbed areas, if possible. If collocation is not possible, then construct new facilities to minimize disturbed areas while meeting mine safety standards/requirements, as identified by MSHA mine-plan approval process, and locate the facilities in an area least harmful to GRSG habitat based on vegetation, topography, or other habitat features.

#### **MA-MIN-10**

For coal mining operations on existing leases:

In GHMA, new disturbances could be considered if consistent with the pertinent management for discretionary activities described in MA-GRSG-5.

## *Locatable Minerals*

### **Management Actions**

#### **MA-MIN-11**

SFA would be recommended for withdrawal from the Mining Law of 1872 (as amended), subject to valid existing rights.

Other federal lands or non-federal lands with federal mineral interests within PHMA or GHMA that are not already withdrawn would be available for locatable mineral entry. Areas that are recommended for withdrawal would continue to be managed as they are currently managed.

In PHMA, to the extent consistent with the rights of a mining claimant under existing laws and regulations, limit surface disturbance from locatable mineral development and apply management to minimize and mitigate impacts. To the extent allowable by law, work with claimants to voluntarily apply the pertinent management for discretionary activities in PHMA identified in MA-GRSG-3 (e.g., mitigation, disturbance cap, minerals/energy density, buffers, seasonal restrictions, and RDFs) and in GHMA identified in MA-GRSG-5 (i.e., mitigation and buffers).

Regardless of whether agreements with the claimant incorporates the 3 percent disturbance cap (MA-GRSG-3B), disturbance from locatable mineral development would be included as disturbance when calculating disturbance for other land uses.

## *Mineral Materials*

### **Management Actions**

#### **MA-MIN-12**

In PHMA, manage mineral materials as follows (**Map 2.47**):

- open to mineral materials development: 0 acres
- closed to mineral materials development: 2,587,100 acres

#### **MA-MIN-13**

Close PHMA 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 at all phases of the development (construction and long-term operation of facilities):

- the activity is within the BSU and project area disturbance cap (MA-GRSG-3B);
- the activity is subject to the provisions set forth in the mitigation framework (MA-GRSG-3A);
- all applicable RDFs are applied (MA-GRSG-3I); and
- the activity applies the other pertinent management for discretionary activities in PHMA in MA-GRSG-3.

In GHMA, new mineral material developments could be considered if consistent with the pertinent management for discretionary activities described in MA-GRSG- 5.

## *Fluid Minerals*

### **Objectives**

#### **Objective MIN-1**

Priority will be given to leasing and development of fluid mineral resources, including geothermal, outside of PHMA and GHMA. When analyzing leasing and authorizing development of fluid mineral

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resources, including geothermal, in PHMA 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).

**Objective MIN-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 compensate for adverse impacts on 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 application for permit to drill (APD) for the lease to avoid, minimize, and compensate for impacts on 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 Actions**

**MA-MIN-14**

Manage fluid mineral leasing in PHMA as follows (**Map 2.53**):

- open to leasing, subject to standard stipulations: 0 acres
- open to leasing, subject to CSU and/or TL stipulations: 0 acres
- open to leasing, subject to NSO stipulations: 2,516,200 acres
- closed to leasing: 70,900 acres

*Unleased Federal Fluid Mineral Estate*

**Management Actions**

**MA-MIN-15**

Unleased Areas within PHMA

PHMA would be designated as open to leasing fluid minerals, subject to NSO stipulations.

In SFA, there would be no waivers, exceptions, or modifications. In the remainder of PHMA, no waivers or modifications to a fluid mineral lease no-surface-occupancy stipulation will be granted. The Authorized Officer may grant an exception to a fluid mineral lease no-surface-occupancy stipulation only where the proposed action:

- Would not have direct, indirect, or cumulative effects on GRSG or its habitat; or,
- 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) PHMA of mixed ownership where federal minerals underlie less than fifty percent of the total surface, or (b) areas of the public lands where the proposed exception is an alternative to an action occurring on a nearby parcel subject to a valid federal fluid mineral lease existing as of the date of this LUPA. 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

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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.

In addition, any lease activities would apply the pertinent management for discretionary activities in PHMA identified in MA-GRSG-3 (e.g., mitigation, disturbance cap, minerals/energy density, buffers, seasonal restrictions, and RDFs).

Outside PHMA, portions of opportunity areas within 4 miles of a lek that is located in PHMA would be open for leasing with CSU stipulations (avoiding noise and tall structures that could affect adjacent GRSG use of PHMA).

### **MA-MIN-16**

#### Unleased Areas within GHMA

Manage fluid mineral leasing in GHMA as follows (**Map 2.53**):

- open to leasing, subject to standard stipulations: 228,100 acres
- open to leasing, subject to CSU and/or TL stipulations: 279,100 acres
- open to leasing, subject to NSO stipulations: 22,500 acres
- closed to leasing: 27,800 acres
- planning decision not mapped: 89,600 acres

In GHMA, new development of fluid mineral leases could be considered if they apply the pertinent management for discretionary activities in GHMA identified in MA-GRSG-5.

#### *Leased Federal Fluid Mineral Estate*

### **Management Actions**

#### **MA-MIN-17**

Apply the following conservation measures through implementation decisions (e.g., approval of an APD, geothermal drilling permit, Sundry Notice, Master Development Plans, etc.) and upon completion of the environmental record of review (43 CFR 3162.5). In this process, evaluate whether the conservation measures are “reasonable” (43 CFR 3101.1-2) with the valid existing rights.

#### **MA-MIN-18**

In PHMA, avoid, minimize, and compensate for impacts on GRSG and their habitat (e.g., habitat loss, fragmentation, indirect impacts, etc.) from new oil and gas development on existing leases.

Where possible, place development outside of PHMA. If it is determined that this restriction would render the recovery of fluid minerals infeasible or uneconomic, considering the lease as a whole, or where development of existing leases requires that disturbance density exceeds 1 per 640, and/or 3 percent disturbance cap, apply other measures to site proposed lease activities to meet GRSG habitat objectives and require mitigation as described in **Appendix D**. If the lease is entirely within PHMA, if feasible, apply the lek buffers from MA-GRSG-3H. If this is not technically feasible, locate infrastructure in areas that will minimize habitat loss. Require any development to be placed at the most distal part of the lease from the lek or in areas least harmful to GRSG populations and habitat (e.g., areas where local terrain

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features such as ridges and ravines may reduce habitat importance or shield nearby habitat from disruptive factors).

For geophysical exploration activities, include seasonal TLs and RDFs as permit COAs to eliminate or minimize surface-disturbing and disruptive activities within nesting and brood-rearing habitat and winter concentration areas.

**MA-MIN-19**

To the extent consistent with existing lease-rights, apply the pertinent management for discretionary activities in PHMA identified in MA-GRSG-3 (e.g., mitigation, disturbance cap, minerals/energy density, buffers, seasonal restrictions, and RDFs) and in GHMA identified in MA-GRSG-5 (i.e., mitigation, buffers, and RDFs).

**MA-MIN-20**

In PHMA, operators must submit a master development plan with site-specific plans of development for roads, wells, pipelines and other infrastructure prior to any development being authorized. The BLM will evaluate the plan through the NEPA process.

**MA-MIN-21**

In PHMA, encourage 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.

**MA-MIN-22**

In PHMA, identify areas where acquisitions (including federal mineral rights) or conservation easements, would benefit GRSG habitat.

**MA-MIN-23**

In PHMA, require a full reclamation bond specific to the site in accordance with 43 CFR 3104.2, 3104.3, 3104.5, and 36 CFR 228.109. Insure bonds are sufficient for costs relative to reclamation 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 will perform the work.

*Mineral Split Estate*

**Management Actions**

**MA-MIN-24**

Where the federal government manages the mineral estate in PHMA and GHMA, 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.

Where the federal government manages the surface and the mineral estate is in non-federal ownership in PHMA 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.

## Comprehensive Travel and Transportation Management

### Management Actions

#### MA-TTM-1

Manage OHV use in GRSG habitat as follows (**Map 2.59**):

- Open to cross-country use: 525 acres (one area each in Parker Mountain and Uintah Population Areas)
- Limited to existing routes: 1,274,700 acres
- Limited to designated routes: 1,220,500 acres
- Closed: 33,200 acres

#### MA-TTM-2

PHMA and GHMA that do not have designated routes in a Travel Management Plan would be managed as limited to existing routes until a Travel Management Plan designates routes (unless they are already designated as limited to designated routes or closed to OHV use).

OHV Areas designated as “closed” would be managed as areas closed to motorized vehicles. OHV Areas designated as “limited existing” within PHMA would be managed as “limited to existing roads, primitive roads, and trails” until the completion of an implementation level travel plan. Individual route designations would occur during subsequent implementation level travel management planning efforts. Upon the completion of implementation level travel management plans OHV areas designated as “Limited” would automatically transition to “limited to designated roads, primitive roads and trails.”

#### MA-TTM-3

Implementation level travel planning efforts would be guided by the goals, objectives and guidelines outlined in the GRSG section, relevant national and Utah specific guidance as well as the following:

- A timeline to complete travel planning efforts in would be identified, prioritized and updated annually in all relevant planning areas to accelerate the accomplishment of: data collection, route evaluation and selection, and on the ground implementation efforts including signing, monitoring and rehabilitation.
- During subsequent travel management planning, consultation “with interested user groups, federal, state, county, and local agencies, local landowners, and other parties in a manner that provides an opportunity for the public to express itself and have its views given consideration.” Consequently, a public outreach plan to fully engage all interested stakeholders will be incorporated into future travel management plans.
- Among other designation criteria from 43 CFR 8342.1(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.”
- During subsequent travel management planning, all routes would undergo a route evaluation to determine its purpose and need and the potential resource and/or user conflicts from motorized travel. Where resource and/or user conflicts outweigh the purpose and need for the route, the route would be considered for closure or considered for relocation outside of sensitive GRSG habitat.
- During subsequent travel planning, threats to GRSG and their habitat would be considered when evaluating route designations and/or closures.
- During subsequent travel management planning, routes that do not have a purpose or need would be considered for closure.
- During subsequent travel management planning, routes that are duplicative, parallel, or redundant

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would be considered for closure.

- During subsequent travel management planning, seasonal restrictions on OHV use would be considered in important seasonal habitats where OHV use is a threat. During subsequent travel management planning, consider limiting over snow vehicles designed for use over snow and that runs on a track or tracks and/or a ski or skis, while in use over snow to designated routes or consider seasonal closures in GRSG wintering areas from November 1 through March 31.
- During subsequent travel management planning, routes not required for public access or recreation with a current administrative/agency purpose or need would be evaluated for administrative access only.
- During subsequent travel management planning, consider prioritizing restoration of routes not designated in a Travel Management Plan.
- During subsequent travel management plan implementation, consider using seed mixes or transplant techniques that will maintain or enhance GRSG habitat when rehabilitating linear disturbances.
- During subsequent travel management plan implementation, consider scheduling road maintenance to avoid disturbance during sensitive periods and times to the extent practicable. Consider using time of day limits (e.g., no use between 6:00 pm and 9:00 am) to reduce impacts on GRSG during breeding periods.

**MA-TTM-4**

In PHMA, complete transportation plans in accordance with National BLM Travel Management guidance, requiring the BLM to maintain a current action plan and planning schedule to most effectively target available resources. The following GRSG population areas are Utah's top priority areas to designate comprehensive travel plans:

- Sheeprocks
- Bald Hills
- Box Elder
- Rich
- Ibapah
- Hamlin Valley

**MA-TTM-5**

In PHMA, travel systems would be managed with an emphasis on improving the sustainability of the travel network in a comprehensive manner to minimize impacts on GRSG, maintain motorist safety, and prevent unauthorized cross country travel while meeting access needs. To do so, it may be necessary to improve portions of existing routes, close existing routes or create new routes that meet user group needs, thereby reducing the potential for pioneering unauthorized routes. The emphasis of the comprehensive travel and transportation planning would be placed on having a neutral or positive effect on GRSG habitat.

**MA-TTM-6**

In PHMA, when considering upgrade of existing routes that would change route category (BLM route categories: road, primitive road, or trail) or capacity, consider the larger transportation network while providing for protection of GRSG habitat.

**MA-TTM-7**

In 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. Apply additional effective mitigation necessary to offset the resulting loss of GRSG habitat.

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Plan for new routes in consideration of the larger transportation network objectives and needs while providing for protection of GRSG habitat.

**MA-TTM-8**

In PHMA, when reseeding roads, primitive roads and trails, use appropriate seed mixes and consider the use of transplanted sagebrush.

**MA-TTM-9**

Develop an educational process to advise OHV users of the potential for conflict with GRSG.

**MA-TTM-10**

In PHMA 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 OHVs 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.

[Recreation](#)

**Management Actions**

**MA-REC-1**

In PHMA, only allow BLM special recreation permits (SRPs) that have neutral or beneficial effect on GRSG and their habitat. Evaluate existing SRPs for adverse effect on GRSG and their habitat. Modify or cancel the permit, as appropriate and where possible to avoid or mitigate effects of habitat alterations or other physical disturbances to GRSG (e.g., breeding, brood-rearing, migration patterns, or winter survival).

Identify permit stipulations that require the permittee to implement any necessary habitat restoration activities after SRP events. Restoration activities must be consistent with GRSG habitat objectives.

**MA-REC-2**

In PHMA, 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.

[Areas of Critical Environmental Concern \(ACEC\)](#)

No additional ACECs are designated.

## Attachment C: FOREST SERVICE PLAN COMPONENTS

See accompanying document with the Forest Service proposed Land Use Plan Amendment components, which is an excerpt from Chapter 2 of the FEIS. This excerpt is provided to facilitate USFWS review of this document.

# Utah Forest Service Proposed Plan Amendment

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## Forest Service Plan Components

On April 9, 2012, the USDA adopted final planning regulations for the National Forest System at 36 CFR part 219. The regulations, known collectively as the 2012 Planning Rule, provide broad programmatic direction in developing and carrying out land management planning and set out requirements for plan components (36 CFR 219.7(e)) and other content in land management plans. Forest Service Handbook (FSH) 1909.12 provides procedural guidance for implementing land management planning direction for the 2012 Planning Rule. Every Forest Service plan must include the following components<sup>18</sup>:

- *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.
- *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.
- *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.

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

The Forest Service has developed two Proposed Plans to be applied in the Utah Sub-region. This Proposed Plan applies to the National Forest System lands within the boundaries of the State of Utah: Uinta-Wasatch-Cache National Forest, Ashley National Forest, Manti-La Sal National Forest, Fishlake National Forest, and Dixie National Forest.

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<sup>18</sup> 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](http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5260265.pdf).

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**General Greater Sage-Grouse**

Desired Conditions

**GRSG-GEN-DC-001**

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**

Anthropogenic disturbance is focused in non-habitat areas outside of PHMA, SFA, and GHMA<sup>19</sup>. Disturbance in general management areas is limited, and there is little to no disturbance in PHMA and SFA except for valid existing rights and existing authorized uses.

**GRSG-GEN-DC-003**

In 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 GRSG-GEN-DC-003, Seasonal Habitat Desired Conditions for Greater Sage-Grouse.

**Table GRSG-GEN-DC-003  
Seasonal Habitat Desired Conditions for Greater Sage-grouse**

ATTRIBUTE	INDICATORS	DESIRED CONDITON
<b>BREEDING AND NESTING<sup>1,2,3</sup> (Seasonal Use Period March 1-June 15) Apply 4 miles from active leks. <sup>4</sup></b>		
Lek Security	Proximity of trees <sup>5</sup>	Trees or other tall structures are none to uncommon within 1.86 miles of leks <sup>6, 7</sup>
	Proximity of sagebrush to leks <sup>6</sup>	Adjacent protective sagebrush cover within 328 feet of lek <sup>6</sup>
Cover	Seasonal habitat extent <sup>7</sup>	>80% of the breeding and nesting habitat
	Sagebrush canopy cover <sup>6, 7, 8</sup>	15 to 25%
	Sagebrush height <sup>7</sup> Arid sites <sup>6,7,9</sup> Mesic sites <sup>6,7,10</sup>	12 to 32 inches 16 to 32 inches
	Predominant sagebrush shape <sup>6</sup>	>50% in spreading <sup>11</sup>
	Perennial grass canopy cover <sup>6,7</sup> Arid sites <sup>7,9</sup> Mesic sites <sup>7,10</sup>	≥10% ≥15%
	Perennial grass height <sup>6,7,8</sup>	Provide overhead and lateral concealment from predators <sup>7, 15</sup>
	Perennial forb canopy cover <sup>6,7,8</sup> Arid sites <sup>9</sup> Mesic sites <sup>10</sup>	≥5% <sup>6,7</sup> ≥10% <sup>6,7</sup>
<b>BROOD-REARING/SUMMER<sup>1</sup> (Seasonal Use Period June 16-October 31)</b>		
Cover	Seasonal habitat extent <sup>7</sup>	>40% of the brood-rearing/summer habitat
	Sagebrush canopy cover <sup>6,7,8</sup>	10 to 25%
	Sagebrush height <sup>7,8</sup>	16 to 32 inches

<sup>19</sup> 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 SFA including nonhabitat.

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**Table GRSG-GEN-DC-003**  
**Seasonal Habitat Desired Conditions for Greater Sage-grouse**

ATTRIBUTE	INDICATORS	DESIRED CONDITON
	Perennial grass canopy cover and forbs <sup>7,8</sup>	>15%
	Riparian areas/mesic meadows	Proper Functioning Condition <sup>12</sup>
	Upland and riparian perennial forb availability <sup>6,7</sup>	Preferred forbs are common with several preferred species present <sup>13</sup>
<b>WINTER<sup>1</sup> (Seasonal Use Period November 1-February 28)</b>		
Cover and Food	Seasonal habitat extent <sup>6,7,8</sup>	>80% of the winter habitat
	Sagebrush canopy cover above snow <sup>6,7,8</sup>	>10%
	Sagebrush height above snow <sup>6,7,8</sup>	>10 inches <sup>14</sup>
<p><sup>1</sup> 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.</p> <p><sup>2</sup> Doherty, K. 2008. <i>Sage-grouse and Energy Development: Integrating Science with Conservation Planning to Reduce Impacts</i>. University of Montana. Missoula, MT.</p> <p><sup>3</sup> Holloran and Anderson. 2005. <i>Spatial Distribution of Greater Sage-grouse nests in relatively contiguous sagebrush habitats</i>. Condor 107:742-752.</p> <p><sup>4</sup> Buffer distance may be changed only if 3 out of 5 years of telemetry studies indicate the 4 miles is not appropriate.</p> <p><sup>5</sup> 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. <i>Saving sage-grouse from trees: A proactive solution to reducing a key threat to a candidate species</i>. Biological Conservation 167: 233-241.</p> <p><sup>6</sup> Stiver et al. 2015 <i>In Press</i>.</p> <p><sup>7</sup> 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.</p> <p><sup>8</sup> Connelly, J. K. Reese, and M. Schroder. 2003. <i>Monitoring of Greater sage-grouse habitats and populations</i>. Station Bulletin 80, Contribution 979. University of Idaho, College of Natural Resources Experiment Station. Moscow, ID.</p> <p><sup>9</sup> 10–12 inch precipitation zone; <i>Artemisia tridentata wyomingensis</i> is a common big sagebrush subspecies for this type site (Stiver et al. 2015).</p> <p><sup>10</sup> ≥12 inch precipitation zone; <i>Artemisia tridentata vaseyana</i> is a common big sagebrush subspecies for this type site (Stiver et al. 2015).</p> <p><sup>11</sup> Sagebrush plants with a spreading shape provide more protective cover than sagebrush plants that are more tree- or columnar shaped (Stiver et al. 2015 <i>In Press</i>).</p> <p><sup>12</sup> 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 GRSG habitat requirements.</p> <p><sup>13</sup> Preferred forbs are listed in Table III-2 of the Sage-Grouse Habitat Assessment Framework (Stiver et al. 2015 <i>In Press</i>). 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 of the Sage-Grouse Habitat Assessment Framework (Stiver et al. 2015 <i>In Press</i>).</p> <p><sup>14</sup> 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.</p> <p><sup>15</sup> Projects will be designed to provide overhead and lateral concealment of nests on a site specific basis.</p>		

Standards

**GRSG-GEN-ST-004**

In PHMA, SFA, and Anthro Mountain, 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 E**).

**GRSG-GEN-ST-005**

In PHMA, SFA, GHMA, and Anthro Mountain, 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 compensatory mitigation as addressed in the Regional Mitigation Strategy (**Appendix D**).

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**GRSG-GEN-ST-006**

During lekking (March 1 to April 30) restrict surface disturbing and disruptive activities, including noise at 10 decibels above ambient (not to exceed 20-24 decibels) measured at the perimeter of an occupied lek, to lekking birds from 6:00 pm to 9:00 am within a buffer distance<sup>20</sup> of 3.1 miles.

Guidelines

**GRSG-GEN-GL-007**

During breeding and nesting (March 1 to June 15), surface disturbing and disruptive activities to nesting birds should be avoided.

**GRSG-GEN-GL-008**

When breeding and nesting habitat overlaps with other seasonal habitats, habitat should be managed for breeding and nesting desired conditions in Table GRSG- GEN-DC-003.

**GRSG-GEN-GL-009**

Development of tall structures within 2 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**

Standards

**GRSG-AM-ST-010**

If a hard trigger is met, immediate action is necessary to stop a severe deviation from GRSG conservation objectives. The larger deviation from natural variation associated with a hard trigger would correspond with a greater change in management. Upon reaching a hard trigger, an appropriate component of a more restrictive alternative analyzed in the EIS will be implemented without further action by the Forest Service. The Forest Service will review available and pertinent data, in coordination with GRSG biologists from multiple agencies (**Appendix B**).

**GRSG-AM-ST-011**

If a soft trigger is met, the Forest Service will determine the specific cause or causes that are contributing to the decline. In completing this evaluation, the Forest Service will coordinate with GRSG biologists from multiple agencies. If it is determined that the decline is related to a natural variation in the population, no specific management actions would be required. However, if Forest Service management actions are determined to be the cause or contribute to the decline, the Forest Service would apply measures within their implementation-level discretion to mitigate the decline of populations and/or habitat. These measures would apply more conservative or restrictive implementation-level conservation conditions, terms, or decisions within the agency's discretion to mitigate the decline (**Appendix B**).

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<sup>20</sup> Plan buffer distances reflect lower-interpreted range from Manier, D. J., Z. H. Bowen, M. L. Brooks, M. L. Casazza, P. S. Coates, P. A. Deibert, S. E. Hanser, and D. H. Johnson. 2014. Conservation buffer distance estimates for Greater Sage-Grouse—A review: USGS Open-File Report 2014-1239, 14 p., <http://dx.doi.org/10.3133/ofr20141239>.

## **Lands and Realty**

### ***Special Use Authorizations (non-recreation)***

#### Objectives

##### **GRSG-LR-SUA-O-012**

In brood rearing and nesting habitats, retrofit existing tall structures (e.g., power poles, and cellular towers) with perch deterrents or other anti-perching devices within 2 years of signing the ROD.

#### Standards

##### **GRSG-LR-SUA-ST-013**

In PHMA, SFA, and Anthro Mountain, restrict issuance of new lands special use authorizations (SUAs) that authorize 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**

In GHMA, new lands SUAs 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**

In PHMA, SFA, GHMA, and Anthro Mountain, 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**

In PHMA, SFA, GHMA, and Anthro Mountain, 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**

In PHMA, SFA, GHMA, and Anthro Mountain, 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**

In PHMA, SFA, GHMA, and Anthro Mountain, when a lands SUA is revoked or terminated and no future use is contemplated, require the authorization holder to remove overhead lines and other surface infrastructure in compliance with 36 CFR 251.60(i).

##### **GRSG-LR-SUA-ST-019**

In PHMA, SFA, GHMA, and Anthro Mountain, 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 SUA, 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 SUA for protection of GRSG or their habitats.

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**GRSG-LR-SUA-ST-020**

In PHMA, SFA, GHMA, and Anthro Mountain, collocate 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 GRSG or their habitats. If collocation of new infrastructure cannot be accomplished, locate it adjacent to existing infrastructure, roads, or already disturbed areas. New communication tower sites may be authorized for public safety.

Guideline

**GRSG-LR-SUA-GL-021**

In PHMA, SFA, and Anthro Mountain, 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 are being avoided. When new transmission lines and pipelines are not buried, locate them adjacent to existing transmission lines and pipelines.

*Land Ownership Adjustments*

Standard

**GRSG-LR-LOA-ST-022**

In PHMA, SFA, GHMA, and Anthro Mountain, 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.

Guideline

**GRSG-LR-LOA-GL-023**

In PHMA, SFA, and GHMA with minority federal ownership, and Anthro Mountain, consider landownership adjustments to achieve a landownership pattern (e.g., consolidation, reducing fragmentation) that supports improved GRSG population trends and habitats.

*Land Withdrawal*

Guideline

**GRSG-LR-LW-GL-024**

In PHMA, SFA, and Anthro Mountain, use land withdrawals as a tool, where appropriate, to prevent activities that will be detrimental to GRSG or their habitats.

*Wind and Solar*

Standards

**GRSG-WS-ST-025**

In PHMA, SFA, GHMA, and Anthro Mountain, do not authorize new solar utility- scale and/or commercial energy development except for on-site power generation associated with existing industrial infrastructure (e.g., mine site).

**GRSG-WS-ST-026**

In PHMA, SFA, GHMA, and Anthro Mountain, do not authorize new wind utility- scale and/or commercial energy development except for on-site power generation associated with existing industrial infrastructure (e.g., mine site).

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**Greater Sage-Grouse Habitat**

Objective

**GRSG-GRSGH-O-027**

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 GRSG-GRSGH-O-027, Treatment Acres per Decade.

<b>Table GRSG-GRSGH-O-027 Treatment Acres per Decade<sup>1</sup></b>			
<b>Forest</b>	<b>MECHANICAL<sup>2</sup></b>	<b>PRESCRIBED FIRE<sup>3</sup></b>	<b>GRASS RESTORATION<sup>4</sup></b>
Ashley	10,000	0	2,000
Dixie	13,000	1,000	7,000
Fishlake	7,000	0	1,000
Manti-La Sal	3,000	0	4,000
Uinta-Wasatch-Cache	9,000	0	0

<sup>1</sup> These are estimates of treatments required to achieve and/or maintain desired habitat conditions over a period of 10 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 10-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.

<sup>2</sup> 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

<sup>3</sup> Acres are those that are greater than 30 percent sagebrush canopy cover and/or invaded by 10 percent or greater conifer.

<sup>4</sup> Acres presently dominated by annual grasses that could be improved by herbicide application and seeding of perennial vegetation

Standard

**GRSG-GRSGH-ST-028**

Design habitat restoration projects to move towards desired conditions (Table GRSG-GEN-DC-003) and incorporate the concepts outlined in **Appendix K**.

Guidelines

**GRSG-GRSGH-GL-029**

Sagebrush removal in GRSG breeding and nesting and wintering habitats should be avoided unless necessary to support attainment of desired habitat conditions (Table GRSG-GEN-DC-003).

**GRSG-GRSGH-GL-030**

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**

In PHMA, SFA, GHMA, and Anthro Mountain, actions and authorizations should include design features to limit the spread and effect of undesirable nonnative plant species.

**GRSG-GRSGH-GL-032**

To facilitate safe and effective fire management actions, in PHMA, SFA, GHMA, and Anthro Mountain, 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 GRSG-GEN-DC-003) should be designed to reduce the spread and/or intensity of wildfire or the susceptibility of GRSG values to move away from desired conditions (GRSG-GEN-DC-003).

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**GRSG-GRSGH-GL-033**

In PHMA, SFA, GHMA, and Anthro Mountain, native plant species should be used, when possible, to restore, enhance, or maintain desired habitat conditions (Table GRSG-GEN-DC-003).

**GRSG-GRSGH-GL-034**

In PHMA, SFA, and Anthro Mountain, vegetation treatment projects should only be conducted if they restore, enhance, or maintain desired conditions. (Table GRSG- GEN-DC-003).

**Livestock Grazing**

Desired Condition

**GRSG-LG-DC-035**

In PHMA, SFA, GHMA, and Anthro Mountain, livestock grazing is managed to ensure adequate nesting cover and does not conflict with attainment of other vegetation attributes (Table GRSG-GEN-DC-003).

Standard

**GRSG-LG-ST-036**

In PHMA, SFA, and Anthro Mountain, do not approve construction of water developments unless beneficial to GRSG habitat.

Guidelines

**GRSG-LG-GL-037**

Grazing guidelines should be applied in each of the seasonal habitats in Table GRSG- LG-GL-037, Grazing Guidelines for Greater Sage-Grouse Seasonal Habitat. If values in Table GRSG-LG-GL-037 guidelines cannot be achieved based upon a site-specific analysis using ESDs, long-term ecological site capability analysis, or other similar analysis, adjust grazing management to move towards desired habitat conditions in Table GRSG-GEN-DC-003 consistent with the ecological site capability. Do not use drought and degraded habitat condition to adjust values. Grazing guidelines in Table GRSG-LG-GL-037 would not apply to isolated parcels of National Forest System lands that have less than 200 acres of GRSG habitat.

<b>Table GRSG-LG-GL-037 Grazing Guidelines for Greater Sage-Grouse Seasonal Habitat</b>	
<b>Seasonal Habitat</b>	<b>Grazing Guidelines</b>
Breeding and nesting <sup>1</sup> within 4 miles of occupied leks	Perennial grass height: <sup>2</sup> When grazing occurs during breeding and nesting season (March 1 to June 15) manage for upland perennial grass height of 7 inches <sup>3,4,5</sup> When grazing occurs post breeding and nesting season (June 16 to October 30) manage for 4 inches <sup>4,5,6</sup> of perennial grass height.
Brood rearing and summer <sup>1</sup>	Retain an average stubble height of 4 inches for herbaceous riparian/mesic meadow vegetation <sup>7, 8</sup>
Winter <sup>1</sup>	≤35% use of sagebrush
<sup>1</sup> For descriptions of Seasonal Habitat and Seasonal Periods of <b>GRSG</b> see Table GRSG-GEN-DC-003. <sup>2</sup> Grass heights only apply in breeding and nesting habitat with ≥10 percent sagebrush cover to support nesting. <sup>3</sup> Holloran et al. 2005. <i>Greater sage-grouse nesting habitat selection and success in Wyoming</i> . <sup>4</sup> 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, 2000). <sup>5</sup> Hagen C., J.W. Connelly, and M.A. Schroeder. 2007. <i>A meta-analysis of greater sage-grouse <i>Centrocercus urophasianus</i> nesting and brood-rearing habitats</i> . <i>Wildlife Biology</i> 13(1): 42-50. <sup>6</sup> Stubble height to be measured at the end of the growing season. <sup>7</sup> Crawford et al. 2004. Ecology and Management of sage-grouse and sage-grouse habitat. "In riparian brood-rearing habitat, sage-grouse prefer the lower vegetation (5-15 cm (2-6 in) vs. 30-50 cm (12-20 in); 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." <sup>8</sup> Stubble height to be measured in the meadow areas used by <b>GRSG</b> for brood-rearing (not on the hydric greenline).	

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**GRSG-LG-GL-038**

In PHMA, SFA, and Anthro Mountain, 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 GRSG-GEN- DC-003).

**GRSG-LG-GL-039**

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**

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**

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**

New permanent livestock facilities (e.g., windmills, water tanks, and corrals) should not be constructed within 1.2 miles from the perimeter of occupied leks.

**Fire Management**

Desired Condition

**GRSG-FM-DC-043**

In PHMA, SFA, GHMA, and Anthro Mountain, the extent and spread of wildfire resulting in loss of sagebrush is minimized, considering firefighter and public safety and other high priority values.

Standards

**GRSG-FM-ST-044**

In PHMA, SFA, GHMA, and Anthro Mountain, 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 GRSG-GEN-DC-003.

**GRSG-FM-ST-045**

In PHMA, SFA, GHMA, and Anthro Mountain, if it is necessary to use prescribed fire to facilitate site preparation for restoration of GRSG habitat consistent with desired conditions in Table GRSG-GEN-DC-003, 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.

Guidelines

**GRSG-FM-GL-046**

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.

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**GRSG-FM-GL-047**

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

**GRSG-FM-GL-048**

In PHMA, SFA, GHMA, and Anthro Mountain, fuel treatments should be designed to restore, enhance, or maintain GRSG habitat.

**GRSG-FM-GL-049**

Locating temporary wildfire suppression facilities (e.g., incident command posts, spike camps, helibases, and mobile retardant plants) in PHMA, SFA, GHMA, and Anthro Mountain should be avoided.

**GRSG-FM-GL-050**

In PHMA, SFA, GHMA, and Anthro Mountain, 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**

In PHMA, SFA, GHMA, and Anthro Mountain, 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**

In PHMA, SFA, GHMA, and Anthro Mountain, 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**

In PHMA, SFA, GHMA, and Anthro Mountain, 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**

In PHMA, SFA, GHMA, and Anthro Mountain, 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**

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**

Localized maps of PHMA, SFA, GHMA and Anthro Mountain 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**

In or near PHMA, SFA, GHMA, and Anthro Mountain, a GRSG resource advisor should be assigned to all extended attack fires.

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**GRSG-FM-GL-058**

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**

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

**GRSG-FM-GL-060**

In PHMA, SFA, GHMA, and Anthro Mountain, consider using fire retardant and mechanized equipment only if it is likely to result in minimizing burned acreage.

**GRSG-FM-GL-061**

In PHMA, SFA, GHMA, and Anthro Mountain, 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.

**Recreation**

Desired Condition

**GRSG-R-DC-062**

In PHMA, SFA, and Anthro Mountain, recreation activities are balanced with the ability of the land to support them, while meeting GRSG seasonal habitat desired conditions (GRSG-GEN-DC-003) and creating minimal user conflicts.

Standard

**GRSG-R-ST-063**

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

Guidelines

**GRSG-R-GL-064**

In PHMA, SFA, GHMA, and Anthro Mountain, terms and conditions that protect and/or restore GRSG habitat within the permit area should be included in new recreation SUAs. 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-065**

In PHMA, SFA, and Anthro Mountain, new recreational facilities or expansion of existing recreational facilities (e.g., roads, trails, and campgrounds), including SUAs 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 and Transportation**

Desired Condition

**GRSG-RT-DC-066**

In PHMA, SFA, GHMA, and Anthro Mountain, within the travel management system, GRSG experience minimal disturbance during breeding and nesting (March 1 to June and wintering (November 1 to February 28) periods.

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Standards

**GRSG-RT-ST-067**

In PHMA, SFA, GHMA, and Anthro Mountain, do not construct 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 compensate for the impacts.

**GRSG-RT-ST-068**

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 6:00 pm – 9:00 am.

**GRSG-RT-ST-069**

In PHMA, SFA, and Anthro Mountain, prohibit public access on temporary energy development roads, unless consistent with all other terms and conditions included in the forest plan.

Guidelines

**GRSG-RT-GL-070**

In PHMA, SFA, and Anthro Mountain, new roads and road realignments should be designed and administered to reduce collisions with GRSG.

**GRSG-RT-GL-071**

In PHMA, SFA, and Anthro Mountain, 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-072**

In PHMA, SFA, GHMA, and Anthro Mountain, when decommissioning roads and unauthorized routes, restoration activity should be designed to move habitat towards desired conditions (Table GRSG-GEN-DC-003).

**GRSG-RT-GL-073**

In PHMA, SFA, GHMA, and Anthro Mountain, dust abatement terms and conditions should be included in road use permits when dust has the potential to impact GRSG.

**GRSG-RT-GL-074**

In PHMA, SFA, GHMA, and Anthro Mountain, 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* Standards

#### **GRSG-M-FMUL-ST-075**

In PHMA and Anthro Mountain, 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 UDWR 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-076**

In SFA, there will be no surface occupancy and no waivers, exceptions, or modifications for fluid mineral leasing.

### *Fluid Minerals – Leased* Standards

#### **GRSG-M-FML-ST-077**

In PHMA, SFA, and Anthro Mountain, when approving the Surface Use Plan of Operation portion of the APD 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-078**

In PHMA, SFA, and Anthro Mountain, 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 GRSG-GEN-DC-003.

#### **GRSG-M-FML-ST-079**

In general management areas, 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-080**

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 Standard GRSG-GEN-ST-006.

#### **GRSG-M-FML-ST-081**

In PHMA, SFA, GHMA, and Anthro Mountain, 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.

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**GRSG-M-FML-ST-082**

Apply the following COAs on existing fluid mineral leases in Anthro Mountain:

- Use a phased approach for development in GRSG habitat.
- No well pads or permanent structures will be permitted within a 0.6 mile buffer of an occupied lek.
- Project-related activities and vehicle access will not be allowed in or through the 0.6 mile lek buffer.
- No project-related vehicles or activities (including routine maintenance, production vehicles, or work-over rigs) will be allowed from 1 hour before sunset to 2 hours after sunrise within mapped GRSG habitat from March 1 to May 31.
- No surface disturbing activities (including construction, drilling, and well- flaring) will be allowed for wells located within mapped GRSG habitat from March 1 through June 30.
- No well pad construction, road construction, drilling, or work-over rigs will be allowed on ridge tops from November 1 to March 1 within 4 miles of a lek.
- Within mapped GRSG habitat, disturbance will be limited to an average of one disturbance per square mile (640 acres). Disturbance should be clustered in areas of habitat most distal from leks or areas of habitat least important to GRSG.
- Disturbance within the mapped GRSG habitat on Anthro Mountain will be no more than 3 percent.
- Within 4 miles of a lek, well pads and roads should avoid openings in the pinyon/juniper tracts. If avoidance of an opening is not possible, then well pads and roads should be located as close to the edge of the opening as possible.
- Noise levels at leks must be limited to no more than 10 decibels above ambient (not to exceed 20-24 decibels), measured at the perimeter of a lek, during the breeding season (March 1 to May 31).
- Low profile tanks will be required for all well pads within mapped GRSG habitat.
- Raptor perch avoidance devices will be installed on any required tank batteries in GRSG habitat.
- Closed-loop drilling will be used for wells within GRSG habitat.
- If a new lek is discovered outside of mapped GRSG habitat, contiguous GRSG habitat within 4 miles of the lek will be mapped. Apply the same protections to the new mapped habitat and the new lek.

Guidelines

**GRSG-M-FML-GL-083**

In PHMA, SFA, GHMA, and Anthro Mountain, 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 APD, 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-084**

On existing federal leases in PHMA, SFA, and Anthro Mountain 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-085**

In PHMA, SFA, GHMA, and Anthro Mountain, 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, COAs, conservation measures, and RDFs to the appropriate surface management instruments to the maximum extent permissible under existing authorities.

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***Fluid Minerals – Operations***

Standards

**GRSG-M-FMO-ST-086**

In PHMA, SFA, and Anthro Mountain, do not authorize employee camps.

**GRSG-M-FMO-ST-087**

In PHMA, SFA, and Anthro Mountain, when feasible, do not locate tanks or other structures that may be used as raptor perches. If this is not feasible, use perch deterrents.

Guidelines

**GRSG-M-FMO-GL-088**

In PHMA, SFA, and Anthro Mountain, closed- loop systems should be used for drilling operations with no reserve pits, where feasible.

**GRSG-M-FMO-GL-089**

In PHMA, SFA, GHMA, and Anthro Mountain, 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-090**

In PHMA, SFA, GHMA, and Anthro Mountain, 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-091**

In PHMA, SFA, GHMA, and Anthro Mountain, 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***

Standard

**GRSG-M-CMUL-ST-092**

In PHMA, SFA, and Anthro Mountain, do not authorize surface disturbances (e.g., appurtenant facilities) for new underground coal mines.

***Coal Mines - Leased***

Standard

**GRSG-M-CML-ST-093**

In PHMA, SFA, and Anthro Mountain, do not authorize new appurtenant surface facilities for existing underground mines unless no technically feasible alternative exists. If new appurtenant surface facilities associated with existing mine leases cannot be located outside of PHMA and SFA, collocate them with any existing disturbed areas, if possible. If collocation 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.

Guideline

**GRSG-M-CML-GL-094**

In PHMA, SFA, GHMA, and Anthro Mountain, 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***

Standard

**GRSG-M-LM-ST-095**

In PHMA, SFA, and Anthro Mountain, 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 Mining Law of 1872, as amended.

Guidelines

**GRSG-M-LM-GL-096**

In PHMA, SFA, GHMA, and Anthro Mountain, to keep habitat disturbance at a minimum, a phased development approach should be applied to operations consistent with the rights granted under the Mining Law of 1872, as amended. Disturbed areas should be reclaimed as soon as they are no longer needed for mineral operations.

**GRSG-M-LM-GL-097**

In PHMA, SFA, GHMA, and Anthro Mountain, abandoned mine sites should be closed or mitigated, subject to valid or existing rights, to reduce predation of GRSG by eliminating tall structures that could provide nesting opportunities and perching sites for predators.

***Nonenergy Leasable Minerals***

Guideline

**GRSG-M-NEL-GL-098**

In PHMA, SFA, GHMA, and Anthro Mountain, 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-099**

In PHMA, SFA, GHMA, and Anthro Mountain, the Forest Service should recommend to the BLM that expansion or readjustment of existing leases avoid, minimize, or mitigate the effect on GRSG and their habitat.

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***Mineral Materials***  
**Standards**

**GRSG-M-MM-ST-100**

In PHMA, SFA, and Anthro Mountain, do not authorize new mineral material disposal or development.

**GRSG-M-MM-ST-101**

In PHMA, SFA, and Anthro Mountain, 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 6:00 pm and 9:00 am within 2 miles from the perimeter of occupied leks, within the BSU and proposed project area, if doing does not exceed the disturbance cap.

**GRSG-M-MM-ST-102**

In PHMA, SFA, GHMA, and Anthro Mountain, 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 GRSG-GEN-DC-003).

## Attachment D: EXISTING CONSERVATION MEASURES

The following measures apply to the species that were analyzed in the *Analysis of Effects* section for plants.

Below is a partial list of existing national conservation measures for TEP plants on BLM administered lands.

- *Special Status Species Management, BLM Manual 6840* directs field office managers to implement Special Status Species programs within their area of jurisdiction by:
  - conducting and maintaining current inventories for Special Status Species on public lands;
  - providing for the conservation of Special Status Species in preparing and implementing recovery plans with which BLM has concurred, interagency plans, and conservation agreements;
  - ensuring that all actions comply with the ESA, its implementing regulations, and other directives associated with conserving Special Status Species;
  - coordinating field office activities with federal, state, and local groups to ensure the most effective program for Special Status Species conservation;
  - ensuring actions are evaluated to determine whether Special Status Species objectives are being met;
  - ensuring all actions authorized, funded, or carried out by BLM follow the interagency consultation procedures as outlined in 50 CFR, Part 402; and
  - ensuring results of formal Section 7 consultations, including Threatened and Endangered (T&E) incidental take statements, are implemented.
- All BLM units are subject to national direction regarding treatment of invasive nonnative plants. National direction includes, but is not limited to, BLM Manual and Handbook direction (9011, 9014, 9015, H-9011-1) and the Vegetation Treatments Using Herbicides in 17 Western States Programmatic EIS (BLM 2007a), the Record of Decision for the project (BLM 2007b) and the supporting final Biological Assessment (BA) (BLM 2007c).
- Mitigation measures in the Record of Decision for the *Vegetation Treatments Using Herbicides in 17 Western States Programmatic EIS* require following all conservation measures listed in the final Biological Assessment for the project (BLM 2007c). Conservation measures listed in the BA include:
  - Surveys of all proposed decision areas with potential habitat for TEP species before treatments
  - Establishment of site-specific no activity buffers; buffer distances vary from 100 to 1,200 feet
  - Pre and post-treatment monitoring
  - Avoidance of OHV use in suitable or occupied lands
  - No use of biocontrol agents that target plants in the same genus as TEP plants
  - Evaluation of biocontrol agents that target plants in the same family as TEP plants
  - Measures related to herbicide drift, runoff, spills
  - Measures related to aerial application
  - Measures related to each of 20 herbicides
- The following BLM Standards for Public Land Health and Guidelines for Livestock Grazing Management (1997) apply for listed plant species:
  - Standard 4: Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.

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- Guideline 7. Natural occurrences such as fire, drought, flooding, and prescribed land treatments should be combined with livestock management practices to move toward the sustainability of biological diversity across the landscape, including the maintenance, restoration, or enhancement of habitat to promote and assist the recovery and conservation of threatened, endangered, or other special status species, by helping to provide natural vegetation patterns, a mosaic of successional stages, and vegetation corridors, and thus minimizing habitat fragmentation.

## Dixie National Forest

### Species: Last Chance townsendia

#### *Land and Resource Management Plan (USDA Forest Service 1986)*

Goal No. 1. . Manage classified species (bald eagle (E), peregrine falcon ( E ) , Utah prairie dog (TI, Astragalus perianus (E), Bonneville cutthroat trout (S), Colorado River cutthroat trout (SI, (E = Endangered, T = Threatened, S = Sensitive) habitat to maintain or enhance their status through direct habitat improvement and agency cooperation.

#### Wildlife and Fish Resource Management

##### *General Direction*

7. Manage and provide habitat for recovery of endangered and threatened species.

#### Rights-of-Way and Land Adjustments

3. Classify lands or interest in lands for acquisition where lands are valuable for NFS purposes according to the following priorities:

C. Lands which provide habitat for threatened and endangered species of animals or plants.

4. Classify lands for disposal according to the following priorities:

When critical or unique resource (wetlands, floodplains, essential big game winter range, threatened or endangered species habitat, historical or cultural resources, critical ecosystems. etc.) exist. Effects are mitigated by reserving interests to protect the resource, or by exchange where other critical resources to be acquired are considered to be of equal or greater value.

#### Special Stipulations – Oil and Gas

15. Activity Coordination Stipulation. This lease includes lands within \* \_\_\_\_\_. In order to minimize impacts on these resources, special conditions, such as unitization before approval of operations, and/or other limitations to spread surface disturbance activities over time and space may be required before approval and commencement of any operations on the lease.

\*Visually sensitive areas, Areas of Threatened and Endangered Species.

16. Protection of Endangered or Threatened Species. The Federal surface management agency is responsible for assuring that the area to be disturbed is examined, before undertaking any surface-disturbing activities on lands covered by this lease, to determine effects on any plant or animal species listed or proposed for listing as endangered or threatened, or their habitats. If the findings of this examination determine that the operation may detrimentally affect an endangered or threatened species, some restrictions to the operator's plans or even disallowances of use may result. The lessee/operator may, at his discretion and cost, conduct the examination on the lands to be disturbed. This examination must be done by or under the supervision of a qualified resource specialist approved by the surface management agency. An acceptable report must be provided to the surface management agency identifying the anticipated effects or the proposed action on endangered or threatened species or their habitat.

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Special Stipulations – Coal

*Forest Service Stipulation No. 2*

- If there is reason to believe that threatened or endangered (T6E) species of plants or animals, or migratory species of high Federal interest occur in the area, the Lessee shall be required to conduct an intensive field inventory of the area to be disturbed and/or impacted. The inventory shall be conducted by a qualified specialist and a report of findings will be prepared making recommendations for the protection of these species or action necessary to mitigate the disturbance. The cost of conducting the inventory, preparing reports, and carrying out mitigating measures shall be borne by the Lessee.

## **Fishlake National Forest**

### **Species: Last Chance townsendia, Ute ladies'-tresses**

#### *Land and Resource Management Plan (USDA Forest Service 1986)*

##### Analysis of Management Situation

##### *Resource Elements*

##### *Threatened, Endangered, and Sensitive Plants*

Habitat for threatened and sensitive species may occur within grazing allotments. When this happens, allotment management plans will recognize and provide for the protection of these species. Sites for the threatened species have been located and mapped. They occur on small areas on the Tushar and Monroe Mountains.

##### Goals:

##### *Wildlife and Fish Management Direction*

Identify and improve habitat for sensitive, threatened and endangered species including participation in recovery efforts for both plants and animals.

##### General direction

5. Manage and provide habitat for recovery of endangered and threatened species.
6. Do not allow activities or practices that would negatively impact endangered, threatened, or sensitive plant or animal species.

##### *Lands and Realty*

3. Classify lands or interest in lands for acquisition where lands are valuable for national forest system purposes according to the following priorities:

C. Lands which provide habitat for threatened and endangered species of animals and plants.

4. Classify lands for disposal according to the following priorities:

D. When critical or unique resource (wetlands, floodplains, essential big game winter range, threatened or endangered species habitat, historical or cultural resources, critical ecosystems, etc. Effects are mitigated by reserving interests to protect the resource, or by exchange where other critical resources to be acquired are considered to be of equal or greater value.

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*Stipulations for Mineral Activities*

12. Activity Coordination Stipulation . This lease includes lands within \*\_\_\_\_\_ . In order to minimize impacts on these resources, special conditions, such as unitization before approval of operations, and/or other limitations to spread surface disturbance activities over time and space may be required before approval and commencement of any operations on the lease.

\*Wilderness Areas, Further Planning Areas, Areas of Threatened and Endangered Species.

13. Protection of Endangered of Threatened Species. The Federal surface management agency is responsible for assuring t h a t the area to be disturbed is examined, before undertaking any surface-disturbing activities on lands covered by this lease, to determine effects on any plant or animal species listed or proposed for listing as endangered or threatened species, some restrictions to the operator's plans or even disallowances of use may result.

The lessee/operator may, at his discretion and cost, conduct the examination on the lands to be distrubed. This examination must be done by or under the supervision of a qualified resource specialist approved by the surface managemnet agency. An acceptable report must be provided to the surface management agency identifying the anticipated effects of the proposed action on endangered or threatened species or their habitat.

## Grand Staircase-Escalante National Monument

### Species: Ute ladies'-tresses

#### *Monument Management Plan (BLM 2000) Special Status Species*

**SSP-1:** The BLM will continue to consult with the USFWS to ensure that actions authorized by the BLM do not jeopardize the continued existence of any federally listed plant species or result in the destruction or adverse modification of critical habitats. Coordination with the U.S. Forest Service, the Utah Division of Wildlife Resources' Natural Heritage Program, and the National Park Service will also occur in areas where plant species cross jurisdictional lines. The BLM will work with these agencies to develop recovery plans, when needed, and to implement existing recovery plans for all listed species.**SSP-2:** No exceptions for cross-country vehicular travel will be made in known habitat or locations of sensitive plant species.

**SSP-3:** Surface disturbing research activities will generally not be allowed in threatened or endangered plant species habitat. All scientific research projects in close proximity to listed species populations or habitat will be evaluated by Monument biologists, the USFWS, and appropriate experts before initiation to determine impacts on these populations or habitat. Any research project which may have an effect on populations of listed species will be coordinated with the USFWS and appropriate permits and Section 7 consultation will be completed as determined necessary. Projects which provide new information and understanding of listed species, their populations and/or their habitat, may be allowed after approval by the BLM and the review and issuance of permits by the USFWS. All projects will be evaluated on a case-by-case basis.

**SSP-4:** The allotment evaluation process will address the protection of endangered species, including the incorporation of the latest research and information in the protection of these species, consistent with the BLM-wide grazing permit review process. Section 7 consultation will be conducted for all allotments that may affect listed species.

**SSP-5:** Future fuelwood cutting areas will not be designated in listed plant populations (see the Forestry Products section for related decisions).

**SSP-6:** Areas with threatened or endangered plants will be targeted for noxious weed control activities as a first priority. BLM employees or contractors with appropriate certification will be responsible for use of chemicals in noxious weed removal efforts, and will take precautions to prevent possible effects on non-target species.

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**SSP-7:** Public education about protection of these species will be an integral part of projects and will be provided in interpretive displays and handouts at project sites and visitor centers around the Monument. Information will also be included on the Monument website.

**SSP-8:** BLM law enforcement personnel and increased field presence of BLM personnel will concentrate efforts in areas with special status species habitat in order to curb non-compliance activities. The BLM is pursuing cooperative agreements with each of the Sheriff departments in Kane and Garfield Counties to facilitate shared law enforcement and support for enforcing established closures.

**SSP-9:** Communication sites, utility rights-of-way, and road rightsof-way will not be permitted in known special status species populations. As permits are granted for these sites and rights-of-way, surveys will be completed to determine the presence of special status species in the area. If they are found, these activities will be moved to another location.

**SSP-10:** Reseeding or surface disturbing restoration after fires will not be allowed in areas with special status plant species. Natural diversity and vegetation structure will provide adequate regeneration. Management ignited fires will also not be allowed in these areas unless consultation with the USFWS indicates that fire is necessary for the protection and/or recovery of listed species.

### *Ute Ladies'-tresses (Spiranthes diluvialis)*

**SSP-18:** The information in the **Water** section describes a strategy for assuring water availability. Under that strategy, priority will be to maintain natural flows and flood events. In addition, the maintenance of instream flows will provide adequate water for natural structure and function of riparian vegetation. Ute ladies'-tresses relies on these natural flood events to colonize new areas and maintain healthy and viable populations.

**SSP-19:** Surveys for this species were initiated the 1999 growing season and results of this survey will be used to determine any further actions.

**SSP-20:** Appropriate actions will be taken to prevent trampling of the plants by visitors in high-use areas. These actions may include replanting native vegetation or construction of barriers.

**SSP-21:** Areas may be closed if necessary to protect these plants. Barriers will be constructed and restoration work initiated to stabilize the soil and banks and provide the best possible habitat for this plant.

**SSP-22:** No expansion of current or new facilities will be permitted where this plant grows.

**SSP-23:** Existing trails in areas where this plant grows will be relocated away from the plants and potential habitat when possible. These protection measures apply to current as well as future potential habitat areas for this species.

**SSP-24:** Interpretive materials will be developed to educate the public about Ute ladies'-tresses and the actions being implemented to protect it.

**SSP-25:** Restoration of the current social trails in known populations will be initiated, including obliteration of the trail by planting native species, and moving soil to return the area to its natural grade. Group size restrictions, allocations, or other measures will be initiated if continued monitoring indicates that visitor use in the area is causing impacts.

## Kanab Field Office

### Species: Autumn buttercup (Suspected)

Autumn buttercup is not known from BLM or USFS administered lands. The closest field unit to known occurrences is the Kanab Field Office.

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***Resource Management Plan (BLM 2008b)***

The Kanab FO RMP (BLM 2008b) includes a statement related to fluid mineral exploration and development as it relates to TEP species and proposed critical habitat.

*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 U.S.C. 1531 et seq., including completion of any required procedure for conference or consultation.*

The Kanab FO RMP (BLM 2008b) Appendix 9 includes lease notices for oil and gas activities in areas with special status plant species habitat. IM 2002-174 also directs State Offices to “provide a separate notification to prospective lessees identifying the particular special status species that are present on the lease parcel offered. This information is to be provided through a lease notice and not by lease stipulation (unless otherwise provided in current LUPs). This stipulation would now be attached to most oil and gas leases issued by the Bureau, including areas identified in LUPs as open to standard lease terms.

**Lease Notice—Listed Plant Species – from ROD app 9**

The lessee/operator is given notice that the lands in this parcel contain suitable habitat for federally listed plant species under the ESA. The following avoidance and minimization measures have been developed to facilitate review and analysis of any submitted permits under the authority of this lease:

1. Site inventories:

- a. Must be conducted to determine habitat suitability.
- b. Are required in known or potential habitat for all areas proposed for surface disturbance before initiation of project activities, at a time when the plant can be detected, and during appropriate flowering periods.
- c. Documentation should include but not be limited to individual plant locations and suitable habitat distributions.
- d. All surveys must be conducted by qualified individuals.

2. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.

3. Project activities must be designed to avoid direct disturbance to populations and to individual plants:

- a. Designs will avoid concentrating water flows or sediments into plant occupied habitat.
- b. Construction will occur down-slope of plants and populations where feasible; if well pads and roads must be sited up-slope, buffers of 100 feet minimum between surface disturbances and plants and populations will be incorporated.
- c. Where populations occur within 200 feet of well pads, establish a buffer or fence the individuals or groups of individuals during and post-construction.
- d. Areas for avoidance will be visually identifiable in the field (e.g., flagging, temporary fencing, or rebar).
- e. For surface pipelines, use a 10-foot buffer from any plant locations:
  - i. If on a slope, use stabilizing construction techniques to ensure the pipelines do not move toward the population.

4. For riparian/wetland-associated species (e.g., Ute ladies-tresses), avoid loss or disturbance of riparian habitats:

- a. Ensure that water extraction or disposal practices do not result in change of hydrologic regime.

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5. Limit disturbances to and within suitable habitat by staying on designated routes.
6. Limit new access routes created by the project.
7. Place signing to limit all-terrain vehicle (ATV) travel in sensitive areas.
8. Implement dust abatement practices near occupied plant habitat.
9. All disturbed areas will be revegetated with native species composed of species indigenous to the area.
10. Post-construction monitoring for invasive species will be required.
11. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in plant habitat. Ensure that such directional drilling does not intercept or degrade alluvial aquifers.
12. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated. Additional measures to avoid or minimize effects on the species may be developed and implemented in consultation with the USFWS between the lease sale stage and lease development stage to ensure continued compliance with the ESA.

## Manti-La Sal National Forest

### Species: Clay phacelia (Suspected)

#### *Land and Resource Management Plan (Forest Service 1986)*

##### Forestwide goals

- Protect, maintain, and/or improve habitat for threatened or endangered and sensitive plants and animals.
- Habitats of threatened and endangered species would be maintained. Habitat would be surveyed and appropriate action taken. Habitats for sensitive species would be managed to reduce the potential of these species becoming threatened or endangered.
- Desired conditions
- Habitats of threatened and endangered species would be maintained. Habitat would be surveyed and appropriate action taken. Habitats for sensitive species would be managed to reduce the potential of these species becoming threatened or endangered.
- Endangered, threatened, and sensitive plant species populations and their habitats would be maintained and improved. Land disturbing activities would be reviewed for endangered, threatened, and sensitive plant species and clearance would be made before the projects are approved, thus, providing the safeguards needed for their protection and continued existence.

##### Wildlife and Fish General Management

###### *General direction*

- 02 Manage habitat for recover of endangered and threatened species.
- 04 Manage habitat of sensitive species to keep them from becoming threatened or endangered.

###### *Rights-of-Way and Land adjustments*

03 Classify lands or interest in lands for acquisition where lands are valuable for NFS purposes according to the following priorities:

- B. Lands which provide habitat for threatened and endangered species of animals and plants.

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E. When important or unique resources (wetlands, floodplains, essential big-game winter range, threatened or endangered species habitat, historical or cultural resources, critical eco- systems),

## Appendix B Mineral stipulations and mitigation statements

### *Forest Service Stipulation #2*

- If there is reason to believe that threatened or endangered (T&E) species of plants or animals, or migratory species of high Federal interest occur in the area, the Lessee shall be required to conduct an intensive field inventory of the area to be disturbed and/or impacted. The inventory shall be conducted by a qualified specialist and a report of findings will be prepared. A plan will be prepared making recommendations for the protection of these species or action necessary to mitigate the disturbance.
- The cost of conducting the inventory, preparing reports, and carrying out mitigating measures shall be borne by the Lessee.

### *Surface disturbance stipulations*

#### 6. Protection of Threatened or Endangered Species

- The Forest Service is responsible for assuring adequate protection for threatened and endangered species occurring in the area to be disturbed. Before undertaking any surface disturbing activities on lands covered by this lease, the lessee shall contact the appropriate Forest Service officer to be advised of the occurrence of, and requirements for protection of, any plant or animal species listed or proposed for listing as endangered or threatened or their habitat. Lessee may be required to complete inventories under guidelines provided by the Forest Service if areas of proposed surface disturbance may result in adverse impacts on threatened or endangered species. Presence of such species may result in some restrictions to the operator's plans or even disallowing any use or occupancy that would detrimentally affect any of the identified species.
- Discovery of any threatened or endangered species during operations will require cessation of such operations until the appropriate Forest Service officer and the authorized officer of the Bureau of Land Management have been advised and approved protective measures implemented.

### *Special Stipulations*

#### 15. Activity Coordination Stipulation

This lease includes lands within\* \_\_\_\_\_, which has resource values sensitive to high levels of activity. In order to minimize impacts on these resources, special conditions, such as unitization before approval of operations, and/or other limitations to spread surface disturbance activities over time and space may be required before approval and commencement of any operations on the lease.

\*Wilderness Area, Further Planning Areas, Areas of Threatened and Endangered Species

#### 16. Protection of Endangered or Threatened Species

The Federal Surface Management Agency is responsible for assuring that the area to be disturbed is examined before undertaking any surface-disturbing activities on lands covered by this lease, to determine effects on any plant or animal species listed or proposed for listing as endangered or threatened, or their habitats. If the findings of this examination determine that the operation may detrimentally affect an endangered or threatened species, or its habitat, some restrictions to the operator's plans or even disallowance of use may result.

## Appendix C: Unsuitability and Multiple Use Management Evaluation

CRITERION NUMBER 9 - Federally designated critical habitat or threatened or endangered plant and animal species and habitat for Federal threatened or endangered species which is determined by the Fish and Wildlife Service and the surface management agency to be of essential value and where the presence of threatened or endangered species has been scientifically documented, shall be considered unsuitable.

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Exceptions - A lease may be issued and mining operations approved if, after consultation with the Fish and Wildlife Service, the Service determines that the proposed activity is not likely to jeopardize the continued existence of the listed species and/or its critical habitat.

Exemptions - This criterion does not apply to lands: To which the operator made substantial legal and financial commitments before January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

CRITERION NUMBER 10 - Federal lands containing habitat determined to be critical or essential for plant or animal species listed by a state pursuant to state law as endangered or threatened shall be considered unsuitable.

Exceptions - A lease may be issued and mine operations approved if, after consultation with the state, the surface management agency determines that the species will not be adversely affected by all or certain stipulated methods of coal mining.

Exemptions - This criterion does not apply to lands: To which the operator made substantial legal and financial commitments before January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

### Appendix D: Energy Transportation and Utility Corridor Evaluation

#### *Exclusion Areas*

The following areas have been identified as exclusion areas:

1. Research Natural Areas
  - Elk Knolls
  - Nelson Mountain (Proposed)
  - Mount Peale (Proposed)
  - Cliff Dwellers Pasture (Proposed)
2. Great Basin Experimental Range
3. Scenic, Wilderness, and Recreation Areas
  - Dark Canyon Wilderness Area
  - Straight Canyon & Joe's Valley Recreation Area
  - Ferron Reservoir Recreation Area
  - Huntington Canyon Recreation Area
  - Hammond Canyon Archeological and Scenic Area

## Price Field Office

### Species: Last Chance townsendia

#### *Resource Management Plan (BLM 2008c)*

- The BLM submitted a Biological Assessment (BA) and requested initiation of formal consultation on July 21, 2008. The USFWS responded with a Biological Opinion (BO) on October 27, 2008, completing the formal Section 7 consultation process. The BO concurred (see Appendix R-4) with the determinations made in the BA regarding potential effects on listed threatened and endangered species located within the
- planning area. The entire BO is attached to this Record of Decision (ROD) as a CD. The BO be a part of the implementation of the Approved RMP. These are committed measures that will be included as part of the proposed action of any subsequent site specific activities authorized by the RMP. Should any changes be made in any of the conservation measures identified in the BO, Section 7 consultation with USFWS will be re-initiated.
- The BLM, in coordination with the USFWS developed the majority of these committed conservation measures as part of a programmatic Section 7 consultation that was completed in 2007. Some modifications and additional measures were developed during the consultation process specific to the Price RMP. All site specific actions potentially impacting listed species or their critical habitat will implement these measures. Incorporating

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these measures will ensure that the BLM is in compliance with the Endangered Species Act and will help UDWR and BLM meet necessary management and recovery goals.

- BLM notes that the Biological Opinion (Appendix R-4 and attached CD), provides a number of recommended conservation measures that are beyond the scope of this Approved RMP, but may be considered in tiered consultation with this programmatic opinion when project-specific analysis is conducted in the future. These recommended conservation measures are optional measures, additional to the committed mitigation contained in the Approved RMP, that BLM will consider at the appropriate time and as deemed necessary to manage and recover listed and candidate plant and animal species occurring within the planning area.

### Management Decisions

**VEG-5:** In areas where multiple resources are potentially affected by surface disturbance (e.g., crucial wildlife habitat, livestock pastures, threatened and endangered [T&E] and special status species habitat, and occupied wild horse and burro range), coordinate implementation of any offsite mitigation with other affected agencies and the overlapping resource values. This strategy will enable identification of a suitable mitigation method and location to best accomplish the objective of offsetting the impacts and to ensure that benefits of the mitigation are distributed among all users and resources affected. The BLM will approach compensatory mitigation on an “as appropriate” basis where it can be performed onsite, and on a voluntary basis where it is performed offsite, or, in accordance with current guidance.

### Special Status Species (SSS)

#### Goals:

- Maintain, protect, and enhance habitats (including but not limited to designated critical habitat) and actively promote recovery, maintenance, protection, and enhancement of populations and habitats of BLM, non-listed, special status plant and animal species to ensure that actions authorized, funded, or carried out do not contribute to the need for these species to be listed as T&E under the Endangered Species Act (ESA).
- Assist in managing, conserving, and recovering listed threatened and endangered plant and animal species found within the Price planning area, where appropriate.

The Biological Opinion for the Resource Management Plan includes recommended resource protection measures (USFWS 2008) that were integrated into the Approved Resource Management Plan (BLM 2008c). All recommended resource measures are listed in the Biological Opinion. They provide protection for riparian areas, wetlands, springs, habitat and other elements important for federally listed species. Several measures relate specifically to listed species:

#### All species

- Avoid land trades/disposals of listed species habitats.
- Avoid the broad-scale use of pesticides and insecticides in habitats of listed species during sensitive time periods such as breeding and nesting seasons.
- Disturbance of all suitable habitats for listed and sensitive species will be improved to provide adequate habitat (pre-disturbance condition or better).
- Decommission unnecessary roads and reclaim unauthorized illegal trails in habitats important to listed and sensitive species.
- Where appropriate at designated recreation sites, design recreation activities that are predictable for wildlife; i.e. provide well-marked trails or boardwalks to encourage controlled and predictable human use away from listed and sensitive species habitats, and discourage off-trail hiking and creation of alternate routes.
- Where recreation conflicts with use by listed and sensitive species, and area closures are not proactical, provide on-site monitoring to educate users and control use.
- Sponsor programs and post signs that educate users about the value of riparian habitat to listed and sensitive species.

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## Plants

- Avoid use of aerosol insecticides within 3 miles of listed plant populations to protect pollinators.
- Direct recreational activities away from occupied habitats of listed and sensitive plant species.

## Richfield Field Office

### Species: Last Chance townsendia

#### *Resource Management Plan*

Decision REC-18 has been modified to include language from Chapter 3 in the Proposed Plan/Final EIS. The Decision has been appended to explain that opening the RMZs in the Factory Butte SRMA to cross-country use will not occur until a number of criteria have been met. These criteria include ensuring appropriate infrastructure is in place to protect the threatened and endangered cacti, a monitoring plan is completed and enacted, and the authorized officer formally rescinds the Factory Butte OHV Restriction Order of 2006 when the above is completed. On signature of the ROD/Approved Plan, these cross-country RMZs remain under the Restriction Order until it is formally rescinded.

Best management practices are found in the Approved Resource Management Plan (2008d); they would be used for site-specific projects if feasible.

- Areas considered for prescribed burns shall be surveyed for populations of threatened and endangered species and viable habitat.
- Environmental assessments should continue to be required before excavation permits are issued.
- The environmental assessments should include the presence or absence of threatened, endangered, or SSS and their suitable habitats.
- Seeding and revegetation actions will be adjusted to the special habitat and plant community characteristics of endangered and threatened plant populations.
- The BLM, in coordination with the USFWS developed committed conservation measures as part of a programmatic Section 7 consultation that was completed in 2007. Some modifications and additional measures were developed during the consultation process specific to the Richfield RMP. All site specific level actions potentially impacting listed species or their critical habitat will implement these measures.
- BLM notes that the Biological Opinion (Appendix 4 of the Richfield Resource Management Plan), provides a number of recommended conservation measures that are beyond the scope of this Approved RMP, but may be considered in tiered consultation with this programmatic opinion when project-specific analysis is conducted in the future. These recommended conservation measures are optional measures, additional to the committed mitigation measures contained in the Approved RMP, that BLM will consider at the appropriate time and as deemed necessary to manage and recover listed and candidate plant and animal species occurring within the planning area.
- The SRMA will be designed to protect threatened and endangered (T & E) species and provide a recreational experience that involves a high degree of self-reliance, challenge and risk in a natural setting. It is important to note the Approved RMP does not rescind the Factory Butte OHV Restriction Order (September 2006). The OHV use restrictions set forth in the September 2006 order will remain in effect until the determinations required by the regulation have been met (i.e. infrastructure in place, a monitoring program enacted to protect threatened and endangered cacti, and the Factory Butte OHV Restriction Order has been formally rescinded by the authorized officer).

#### Desired Outcomes (Goals and Objectives)

- Conserve and recover all SSS (including listed species) and the ecosystems on which they depend.
- Manage, minimize, and mitigate impacts on plant, fish, and animal species and habitats so that the need to list any of these species as threatened or endangered does not become necessary.
- Promote recovery and conservation of special status plant, fish, and animal species, including those listed under the Endangered Species Act (ESA).

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- Prevent long-term habitat fragmentation through avoidance and/or site-specific reclamation to return areas to productive levels.
- Continue to work with United States Fish and Wildlife Service (USFWS) and others to ensure that plans and agreements are updated and implemented as necessary to reflect the latest scientific data.
- Where possible, implement the conservation actions identified in the Utah Comprehensive Wildlife Conservation Strategy (Utah Division of Wildlife Resources [UDWR] 2005c), which identifies priority wildlife species and habitats, identifies and assesses threats to their survival, and identifies long-term conservation actions needed,

### Overall Special Status Species Management Guidance

**SSS-1:** For listed species that do not have designated critical habitat, cooperate with the USFWS and other agencies, such as the UDWR, in managing the species and their habitat.

**SSS-2:** Allow, initiate, or participate in scientific research of listed and sensitive species and their habitats.

**SSS-3:** Collaborate with the appropriate local, state, and federal agencies to promote public education on species at risk, their importance to the human and biological community, and reasons for protective measures that would be applied to the lands involved.

**SSS-4:** Implement species-specific conservation measures to avoid or mitigate adverse effects on known populations of listed and non-listed special status plant and animal species on public lands.

**SSS-5:** Prohibit actions that destroy, adversely modify, or fragment listed threatened or endangered species' habitat.

**SSS-6:** Maintain the integrity of SSS habitat to provide the quantity, continuity, and quality of habitat necessary to maintain SSS populations.

**SSS-7:** Conduct habitat improvement treatments for SSS. Future consultation would be needed for biological controls in SSS habitat.

**SSS-8:** Retain habitat for federally listed and candidate species in federal ownership. Exceptions may be considered in exchanges with the State of Utah and others after

**SSS-9:** Consider SSS habitat in all wildfire suppression efforts.

**SSS-10:** Conduct Section 7 consultation with the USFWS if biological treatments as a result of vegetation management actions are proposed in federally listed species habitats.

**SSS-11:** Recovery Plans and Conservation Agreements.

**SSS-12:** Implement the goals and objectives of recovery plans, conservation agreements and strategies, and activity level plans using best available information to recover and conserve species to the point where requirements of the ESA are no longer necessary.

**SSS-13:** Work with USFWS and others to ensure that plans and agreements are updated and implemented as necessary to reflect the latest scientific data.

**SSS-14:** Implement the specific goals and objectives of recovery plans, conservation agreements and strategies, and approved activity-level plans.

**SSS-15:** Recovery Actions for Listed Species

**SSS-16:** Do not adversely modify or destroy designated critical habitats for federally listed species.

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**SSS-17:** Provide habitat improvements and other management actions to promote conservation and recovery of listed species.

**SSS-18:** Reintroduction/Translocation of SSS

**SSS-19:** Allow translocations of listed and non-listed SSS to aid in conservation and recovery efforts. Implement necessary habitat manipulations and monitoring in translocation plans and allow identification and manipulation of Utah prairie dog translocation sites to achieve suitable conditions for successful translocations.

**SSS-20:** Use strategies to avoid or reduce habitat fragmentation when possible, including:

- Co-locating communication and other facilities
- Employing directional drilling for oil and gas
- Closing and reclaiming roads
- Landscape scale evaluations
- Using topographic and vegetative screening to reduce the influence of intrusions.

**SSS-21:** Mitigate the effects of proposed projects that have the potential to cause long-term or permanent habitat impacts or losses by enhancing, restoring, or creating other habitat within the project's region of influence. Consider protecting the habitat when the habitat type is rare and under severe development pressures. Protection should only be a portion of the mitigation and must contain elements of restoration or enhancement.

**SSS-22:** Use species-specific buffers and seasonal, temporal, and spatial restrictions to conserve habitat for SSS (Richfield RMP Appendix 11 and Appendix 14).

### Land and Realty Decisions

**LAR-3:** Consider proposals for wind and solar energy development throughout the RFO except within the following areas:

- WSAs (ROW exclusion areas in accordance with IMP)
- Fremont (Fremont Gorge) suitable wild river corridor
- ACECs
- Areas open to oil and gas leasing with NSO and areas closed to leasing.
- VRM Class I and II areas
- Migratory bird habitats and raptor nesting complexes
- Threatened & Endangered Species habitats

The Biological Opinion for the Resource Management Plan includes recommended resource protection measures (USFWS Undated) that were integrated into the Approved Resource Management Plan (BLM 2008d). All recommended resource measures are listed in the Biological Opinion. They provide protection for riparian areas, wetlands, springs, habitat and other elements important for federally listed species. Several measures relate specifically to listed species:

#### All species

- Avoid land trades/disposals of listed species habitats.
- Avoid the broad-scale use of pesticides and insecticides in habitats of listed species during sensitive time periods such as breeding and nesting seasons.
- Disturbance of all suitable habitats for listed and sensitive species will be improved to provide adequate habitat (pre-disturbance condition or better).
- Monitor condition of habitat in occupied, suitable, or potentially suitable habitat for listed and sensitive species to ensure maintenance of good to excellent ecological conditions; and consistent with available species-specific habitat requirements.

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- Decommission unnecessary roads and reclaim unauthorized illegal trails in habitats important to listed and sensitive species.
- Avoid construction or expansion of recreation facilities within occupied, suitable, and potentially suitable habitat for listed and sensitive species.
- Where appropriate at designated recreation sites, design recreation activities that are predictable for wildlife; i.e. provide well-marked trails or boardwalks to encourage controlled and predictable human use away from listed and sensitive species habitats, and discourage off-trail hiking and creation of alternate routes.
- Where recreation conflicts with use by listed and sensitive species, and area closures are not practical, provide on-site monitoring to educate users and control use.
- Sponsor programs and post signs that educate users about the value of riparian habitat to listed and sensitive species.

## Plants

- Avoid use of aerosol insecticides within 3 miles of listed plant populations to protect pollinators.
- Direct recreational activities away from occupied habitats of listed and sensitive plant species.

## Salt Lake Field Office

### Lands Program

#### *Land Tenure Adjustments*

##### DECISION I - BERMP, 1986

Allow additional disposals/exchanges if following criteria are met:

5) Land tenure adjustment (LTA) results in net gain of significant resource values such as important wildlife habitat. Including Threatened & Endangered species, cultural sites, riparian zones, live water, or would include a net gain of recreational opportunities;

### Pony Express Management Plan ROD 1990

#### *Lands Program Decision 3*

In order to be considered, exchanges of public land in the Pony Express Resource Area must accomplish one or more of the following criteria:

- (1) Increase public ownership within those areas of public land which are not available for disposal or any other transfer from Federal ownership and BLM management (see Table 4 and Figure 2).
- (2) Result in a net gain of significant resource values on public land such as important wildlife habitat, cultural sites, riparian zones, live water, and threatened and endangered species.

#### *Wildlife and Fisheries Program Decision 2*

All threatened and endangered species are provided for under the Endangered Species Act; however, due to the unusual resource that exists within the Resource Area, additional measures will be made to improve and encourage the propagation of these important species.

## Uinta National Forest (Forest Service 2003)

### Species: Clay phacelia, Maguire primrose, Ute ladies'-tresses

#### Land and Resource Management Plan (Forest Service 2003)

#### FORESTWIDE GOALS

FW-Goal-2 Biologically diverse, sustainable ecosystems maintain or enhance habitats for native flora and fauna, forest and rangeland health, and watershed health.

- **Sub-goal-2-6 (G-2-6):** Ecosystems on the Forest provide and maintain viable and well-distributed populations of flora and fauna. New listings of threatened, endangered, and sensitive species as a result of Forest Service management activities are avoided. Population objectives developed cooperatively with the Utah Division of Wildlife Resources and U.S. Fish and Wildlife Service are achieved. To contribute to species stabilization and full recovery, habitats across all levels or scales for endangered, threatened, and proposed flora and fauna species listed in accordance with the Endangered Species Act are protected and recovered, and sensitive species appearing on the Forest Service Intermountain Region's Sensitive Species list are protected. Newly-developed management direction from recovery plans and conservation strategies to which the Forest Service is a signatory is incorporated as applicable to facilitate protection and/or recovery of threatened, endangered, or sensitive species. Sub-goal-2-13: Participate in the development and implementation of a habitat management strategy for clay phacelia (*Phacelia argillacea*).
- **Sub-goal-2-13 (G-2-13):** Participate in the development and implementation of a habitat management strategy for clay phacelia (*Phacelia argillacea*).
- **Sub-goal-2-14:** Potential habitat for clay phacelia (*Phacelia argillacea*) in the Spanish Fork Canyon area is managed to ensure quality habitat will be available in the future if it becomes necessary to introduce this species onto National Forest System lands to provide for its recovery.
- **Sub-goal-2-15 (G-2-15):** Ute ladies'-tresses (*Spiranthes diluvialis*) colonies are managed so as to contribute to the protection and recovery of the species within the Diamond Fork watershed. If necessary, these colonies will serve as propagation stock for new habitats within this watershed. Bee (pollinator) habitat is identified and protected in association with these plant colonies.

FW-Goal-3 Suitable commodity uses are provided in an environmentally sustainable and acceptable manner to contribute to the social and economic sustainability and diversity of local communities.

**Sub-goal-3-1(G-3-1):** If consistent with ecosystem health and integrity, and threatened, endangered, and sensitive species management, forage for livestock grazing on lands identified as suited for this use is provided to support social and economic community stability.

FW-Goal-7 When there is an apparent and overriding benefit, opportunities for consolidation of landownership and subsurface and surface property rights, acquisition of appropriate access, and establishment of identifiable boundaries are pursued.

- **Sub-goal-7-3 (G-7-3):** Within the economic and social constraints of local communities, critical habitat for federally-listed threatened and endangered species and big game winter range under other ownership within and adjacent to the Forest boundary is acquired.

#### Vegetation Management

**Veg-1 Standard:** Permits for the collection of federally-listed threatened or endangered plant species may only be issued for scientific and education purposes, and then only if a Recovery Permit has been issued by the U.S. Fish and Wildlife Service.

**Veg-3 Guideline:** Permits for the collection of seeds or plant cuttings of species that are not federally-listed threatened, endangered, or candidate plants, or Forest Service sensitive plants, may be issued if collection is not likely to adversely impact population viability or have negative ecological effects.

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**Veg-5 Standard:** Except for Forest Service approved scientific projects, restoration projects, or cultural uses, no seeds or plants may be collected in Research Natural Areas, locations where threatened or endangered plant species are known to occur, designated wilderness areas, areas recommended for wilderness designation, or developed recreation sites.

**Veg-6 Guideline:** Permits may be issued to collect plants for bioprospecting purposes.

### Lands and Property Boundary Management

**Lands-1 Guideline:** Use the following criteria to assist in the identification of lands that could be made available for disposal/conveyance (criteria are not listed in any priority):

6. Additionally, disposal/conveyance of lands should not result in any net loss in critical winter ranges or threatened, endangered, or sensitive species habitats; wetlands; or identified critical access to the Forest.

### Wildlife and Fish

**WL&F-16 Guideline:** Where feasible, provide pollinator habitat adjacent to Ute ladies'-tresses colonies by avoiding the removal of down woody material in the course of any management activities in the lower 7.5 miles of the Diamond Fork River corridor. Where removal cannot be avoided, salvage a portion of down woody material greater than 3 inches in diameter and relocate it to sunny openings adjacent to Ute ladies'-tresses colonies.

### Desired Future Conditions

#### *VEGETATION*

Known populations of all federally-listed threatened, endangered, proposed, or candidate plant species, and all Forest Service sensitive plant species occurring on the Forest are maintained or increased. Suitable habitat for rare plant species and rare plant communities has been surveyed. Noxious weeds and undesirable invasive plants are effectively combated using integrated pest management. Priority is given to eliminating weeds from critical habitats and preventing new infestations, then to reducing density or eliminating longer-established populations. The Forest uses public education to motivate the public to employ weed prevention practices. Deteriorated vegetated communities are assessed for estimated potential for recovery, and active restoration work completed as appropriate. Suitable habitat conditions are provided for plant-pollinating insects.

Riparian habitat along Diamond Fork Creek is managed to achieve and maintain healthy, dynamic, sustainable communities in which the Ute ladies'-tresses orchid is an integral, if not dominant, component (Forest Service 2003). Potential habitat for clay phacelia (*Phacelia argillacea*) is protected.

Habitat for the endangered clay phacelia, as identified by Harper and Armstrong (1992), is managed to maintain its integrity. A habitat management strategy for clay phacelia is in place.

## Vernal Field Office

**Species: Clay reed-mustard, shrubby reed-mustard, Uinta Basin hookless cactus, Ute ladies'-tresses**

*Resource Management Plan (BLM 2008e)*

### MANAGEMENT COMMON TO ALL DECISIONS

#### Goals and Objectives

Desired species, including native, threatened, endangered, and special-status species, are maintained at a level appropriate for the site and species involved.

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### Goals and Objectives for special status species

- Conserve and protect special status species and enhance their habitats.
- Conserve and recover all state special status species, including federally listed species and the ecosystems on which they depend.
- Implement the management recovery measures necessary to increase populations of special status species, including federally listed animal species, and restore them to their historic ranges by enhancing, protecting, and restoring known and potential habitat and the ecosystems on which they depend.
- Mitigate or reduce long-term habitat fragmentation through avoidance and site-specific reclamation to return areas to productive levels.
- Manage all listed T&E plant and animal species and the habitats on which they depend in such a manner as to conserve and recover these species to the point where protection under the ESA is no longer necessary.
- Manage non-listed sensitive species and the habitats on which they depend in such a manner as to preclude the need to list them as either threatened or endangered under the Endangered Species Act. The guidance for this management is put forth in the BLM 6840 Manual.
- Implement the specific goals and objectives of recovery plans, conservation agreements and strategies, and approved activity level plans. The BLM will continue to work with USFWS and others to ensure that plans and agreements are updated as necessary to reflect the latest scientific data.
- Implement the direction contained in the Northwest National Fire Plan Project Design and Consultation Process and the Counterpart Regulations, including Alternative Consultation Agreements.
  - Implement the management necessary to increase populations of special status species, including federally listed animal species, and restore them to their historic ranges by enhancing, protecting, and restoring known and potential habitat.

### Management Decisions for Special Status Species (SSS)

**SSS-1:** The BLM will continue to implement the specific goals and objectives of all recovery plans, conservation plans and strategies, and activity level plans. Recovery Plan revisions or new Recovery Plans will also be implemented.

**SSS-2:** The BLM will continue to work with USFWS and others to ensure that plans and agreements are updated as necessary to reflect the latest scientific data. Recovery plans have been finalized for Uinta Basin hookless cactus, shrubby reed–mustard, and clay reed-mustard. A draft plan is being developed by the USFWS for Ute ladies’ tresses. A Conservation Plan has been prepared for Horseshoe milkvetch (*Astragalus equisolensis*), Goodrich beardtongue (*Penstemon goodrichii*), Graham beardtongue (*Penstemon grahamii*), and White River beardtongue (*Penstemon scarious* var. *albifluvis*).

**SSS-3:** Where special status plant species, including listed T&E plant species, occur on public lands in the VPA, the BLM will collaborate with affected and or appropriate local, state, and federal agencies and researchers in the implementation of approved recovery plans and conservation strategies to protect, stabilize, and recover such species and their habitats. In addition to on-the-ground actions, strategies will be developed to provide public education on species at-risk, significance and importance of the species to the human and biological communities, and reasons for protective measures that will be applied to the lands involved. Continue or develop monitoring studies in order to determine population dynam dynamics and trends.

**SSS-4:** Continue and complete inventories and map current occupied and potential habitats for all listed and non-listed special status plant and animal species.

**SSS-5:** Develop relevant species-specific plans utilizing USFWS guidelines where applicable. This may include habitat management plans, conservation agreements, or other suitable plans.

**SSS-6:** In collaboration with the USFWS, UDWR, and other partners, develop and implement habitat management plans or conservation strategies for sensitive species.

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**SSS-7:** As additional data are collected over the life of the RMP, land managers will continually reevaluate population and habitat status. Management emphasis will be to accumulate ecological information and distributional data to enhance the BLM's ability to protect, conserve, recover, and manage these species in the future.

**SSS-9:** Collaborate with the appropriate local, state, and federal agencies to promote public education on species, their importance to the human and biological community, and reasons for protective measures that will be applied to the lands involved.

**SSS-10:** Conservation measures developed during the consultation on existing LUPs (June 2007) will be implemented as part of committed mitigation on new oil and gas leases. Vernal RMP Appendix L contains lease notices developed from the conservation measures.

### Goals and objectives for vegetation

- Protect special status plant species and their habitats.

### Management direction for recreational resources

**REC-15:** The following recreation management guidelines were developed to help achieve and maintain healthy public lands as defined by the *BLM Utah Standards for Rangeland Health and Guidelines for Grazing Management*. They are listed below with the standard that they apply to:

#### Rangeland Health Standard 1

- Upland soils exhibit permeability and infiltration rates that sustain or improve
- site productivity, considering the soil type, climate, and landform.
- Designate areas for intensive recreational use or cross-country motorized
- travel where disturbance of soil and vegetation is acceptable, either because impacts are insignificant and/or temporary or because the value of intensive use of the land outweighs whatever ecological changes may occur. Decisions on such designation shall take into account conflicts with other users as well as adverse effects on archaeological or historical sites, T&E species habitat, wildlife habitat, or social values such as beauty, solitude, and quiet.
- In all other areas, travel routes and other disturbances shall be kept to the minimum necessary to provide access and visitor facilities appropriate to the area. Through blocking, signing, and public education, unneeded travel routes shall be eliminated and rehabilitated and unplanned development of new ones discouraged.
- It may be necessary to manage some areas to be entirely free of planned travel routes.

#### Rangeland Health Standard 3

- Desired species, including native, T&E and special status species, are maintained at a level appropriate for the site and species involved.
- Protect against the establishment and/or spread of noxious or other weeds from intensive recreation, including the use of riding and pack animals, hiking, motorized, or other mechanized vehicles.
- Conduct an educational campaign to inform recreational users about the damage caused by noxious weeds and how their spread can be minimized.
- Where appropriate, apply restrictions, (i.e., do not permit surface-disturbing activities).
- Protect wildlife and plant and/or habitat by:
  - Preserving connectivity and avoiding fragmentation.
  - Controlling recreational activities that will interfere with critical wildlife stages such as nesting, reproduction, or seasonal concentration areas.
  - Avoiding creation of artificial attractions such as the feeding of wild animals or improper disposal of garbage.
  - Where necessary, control recreational use by changing location or kind of activity, season, intensity, distribution, and/or duration in order to protect plant and animal communities, especially those containing special status species, including listed T&E or candidate species.

## Wasatch-Cache National Forest (USDA Forest Service 2003)

### Species: Clay phacelia, Ute ladies'-tresses

#### *Revised Land and Resource Management Plan (USDA Forest Service 2003)*

#### Botanical Resources Desired Condition

- Management activities provide for ecological conditions that contribute to the recovery of federally listed, proposed, or sensitive species. Native species are present in amounts and distribution similar to historical patterns, including species that were once listed, or proposed for listing, as threatened or endangered under the ESA, or listed as sensitive by the Regional Forester. Populations of non-native plant species are reduced or eradicated in rare plant actual and potential habitat. Habitats are maintained to promote pollinator success and survival. Management activities (recreation, development and other activities) are at a level that maintains desired conditions and habitat dynamics during key life stages. Pro-active efforts are made to educate and inform users of fundamental importance of plant species to society, plant conservation, and biodiversity.

#### Forestwide Subgoals

##### *Biodiversity and Viability*

- **Sub-goal-3a:** Maintain or restore viability of populations of species at risk,

##### *Watch List Plants and Rare Communities*

- **Sub-goal-3b.** Maintain pollinators and minimize impacts on pollinators or their habitats.
- **Sub-goal-3c.** Increase understanding of and support research on the distribution, ecology, and threats to plant species at risk, nonvascular plants and rare plant communities.
  - **Sub-goal-3d.** Restore or maintain **fire-adapted ecosystems** (consistent with land uses, historic fire regimes, and other Forest Plan direction) through wildland fire use, prescribed fire, timber harvest or mechanical treatments. See Forestwide Guideline (G for desired landscape structure and patterns).
- **Sub-goal-3e.** Maintain or restore as mature and old age classes 40% of total conifer and 30% of total aspen cover types, well distributed across the landscape.
- **Sub-goal-3f.** Maintain or restore, such that the species that occupy any given site are predominantly native species in the kind and amount that were historically distributed across the landscapes.
- **Sub-goal-3g.** Maintain and/or restore **tall forb communities** to mid seral or potential natural community (PNC) status.
- **Sub-goal-3h.** Evaluate areas with potential for Research Natural Area designation including Ben Lomond Peak (tall forb values), western portion of the Deseret Peak Wilderness (Great Basin community types and cryptogamic crusts).
- **Sub-goal-3i.** Maintain viability of species-at-risk (including endangered, threatened and sensitive species and unique communities).
- **Sub-goal-3j.** Manage Forest Service sensitive species to prevent them from being classified as threatened or endangered and where possible provide for delisting as sensitive.

#### Guidelines

(G23) Avoid actions on the Forest that reduce the viability of any population of plant species classified as Threatened, Endangered, Sensitive or recommended sensitive. Use management actions to protect habitats of plant species at risk from adverse modification or destruction. For species that naturally occur in sites with some disturbance, maintain the appropriate level of disturbance.

(G24) Management activities that negatively affect pollinators (e.g. insecticide, herbicide application and prescribed burns) should not be conducted during the flowering period of any known Threatened, Endangered, and Sensitive plant populations in the application area. An exception to this guideline is the application of *Bacillus thuringiensis*.

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(G25) Integrated weed management should be used to maintain or restore habitats for threatened, endangered, proposed and sensitive plants and other native species of concern where they are threatened by noxious weeds or non-native plants. When treating noxious weeds comply with policy in Intermountain Region's Forest Service Manual 2080, Supplement #R4 2000-2001-1 (Appendix III).

(G26) Protect key big game calving, fawning and lambing (G39) Manage fire to protect, restore or enhance threatened, endangered, candidate, proposed, and Forest Service sensitive species and their habitats.

### Management emphasis

3.2 Terrestrial Habitats (3.2U Undeveloped/3.2D Developed) Emphasis: Manage upland habitats to provide for sustaining and/or recovering desired plant and animal species and/or communities. Maintain or restore lands to meet desired conditions of habitat for threatened, endangered, and sensitive species. Considerations for these areas include winter ranges and corridors for seasonal migrations as well as movement of genetic materials, individuals, and populations; vegetation composition, structure, and pattern needed for life cycle stages; needs for control or eradication of undesirable non-native species; and protection of special or unique habitats.

### Desired Future Conditions: Botanical Threatened, Endangered, and Sensitive Species Protection/Recovery

- Rare plant habitats will be managed to maintain or restore and provide for recovery of populations of Threatened and current and proposed Sensitive plant species.
- Riparian plant habitats and rare riparian species will be protected from trampling and overuse by livestock grazing and recreational uses. Populations of non-native plant species will be reduced or eradicated in actual and potential rare plant habitat. Habitats will be maintained to promote pollinator success and survival and to provide for nesting needs. Proper stocking levels and utilization intensities of wildlife will maintain and protect rare plants and their associated habitat. Proactive efforts will be emphasized to educate and inform forest users of the fundamental importance of plant species to society, plant conservation, and biodiversity.
- Cliff, crevice, and ledge habitats will be protected and provide for the viability of a variety of cliff species along with a balance of recreational climbing opportunities.
- Recreational activities (rock climbing, hiking, biking, skiing) in Maguires Primrose and Frank Smith's Violet habitats, will be at a level that maintain individuals and habitat dynamics during key life stages including flowering and fruit production. Continued interactions with the local climbing community will provide for conservation of Logan Canyon endemics and recreational enjoyment. Reconstruction activities associated with Highway 89 will meet the requirements of the Bear River Endemics Conservation Agreement and provide for the viability of the Logan Canyon endemic species.
- Riparian plant habitats and rare riparian species will be protected from trampling and overuse by livestock grazing and recreational uses. Populations of non-native plant species will be reduced or eradicated in actual and potential rare plant habitat.
- Habitats will be maintained to promote pollinator success and survival and to provide for nesting needs. Proper stocking levels and utilization intensities will maintain and protect rare plants and their associated habitat.
- Proactive efforts will educate and inform forest users of the fundamental importance of plant species to society, plant conservation, and biodiversity.
- Protective measures will be provided for Maguires Primrose and Frank Smith's Violet populations in the lower portions of Logan Canyon.
- The US Forest Service requirements of the Maguires Primrose Recovery Plan and the Bear River Endemics Conservation Agreement with US Fish and Wildlife Service will be met.

### Wilderness and Recommended Wilderness Areas Desired Future Conditions:

- The Tri-canyon wilderness areas will be recognized and managed as wild areas that have emphasis on maintaining diverse and viable populations and habitat for flora and fauna including threatened, endangered and sensitive species, and valuable watershed while still existing adjacent to large urban areas and high use developed recreation canyons.