

Appendix C

Biological Evaluations for Special Status Plant, Fish, and Wildlife Species

**Biological Evaluation for
Special Status Plants on BLM Lands in the Southwest Highlands Watershed
(Southwest Highlands Watershed Environmental Assessment)
DOI-BLM-MT-B050-2014-0007-EA**

Prepared by
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June 2014

None of the plants currently listed as endangered or threatened under the Endangered Species Act inhabit BLM lands in the Dillon Field Office. However, Ute ladies' tresses, which is listed as threatened in Montana, is known to occur on private and state lands in Beaverhead, Madison, Gallatin, and Jefferson counties. Fifty-four sensitive plant species inhabit BLM-administered lands within the Dillon Field Office. Four of those species are known to occur within the Cumulative Impact Area of the Southwest Highlands Watershed (SWHW) Environmental Assessment. The potential effects that the various alternatives may have on these species are summarized in the following table. A detailed discussion of predicted effects and potential impacts to special status plant species and their habitat is provided in the attached "Supplemental Information on Special Status Plants on BLM Lands in the Southwest Highlands Watershed."

C-1

Definitions of Abbreviations used in the Table.

NI - No Impact

BI - Beneficial impact to populations or habitat

MIH - May impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species.

* **WIFV** - Will impact individuals or habitat with a consequence that the action may contribute to a trend toward federal listing or cause a loss of viability to the population or species.

* Consultation with the U.S. Fish and Wildlife Service will be initiated if an alternative is selected that may contribute to a loss of viability to a population of species reviewed in this evaluation.

Biological Evaluation Summary for Special Status Plants for the Southwest Highlands Watershed Environmental Assessment (DOI-BLM-MT-B050-2014-0007-EA)

Common Name <i>Genus species</i>	Does the species occur on Public Lands within the Southwest Highlands Watershed?	Is the species or its habitat found in the Cumulative Impact Area?	Are irreversible or irretrievable resources involved?	What effect could this proposal have? *		
				Alt. A	Alt. B	Alt. C
Ute ladies' tresses <i>Spiranthes diluvialis</i>	NO	NO	--	--	--	--
Cusick's horse-mint <i>Agastache cusickii</i>	NO	NO	--	--	--	--
Western joepywe-weed <i>Ageratina occidentalis</i>	NO	NO	--	--	--	--
Tapertip onion <i>Allium acuminatum</i>	NO	NO	--	--	--	--
Sitka columbine <i>Aquilegia formosa</i>	NO	NO	--	--	--	--
Sapphire rockcress <i>Arabis fecunda</i>	NO	NO	--	--	--	--
Painted milkvetch <i>Astragalus ceramicus var. apus</i>	NO	NO	--	--	--	--
Lesser rushy milkvetch <i>Astragalus convallarius var. convallarius</i> = <i>A. junciformis</i>	NO	NO	--	--	--	--
Bitterroot milkvetch <i>Astragalus scaphoides</i>	NO	NO	--	--	--	--
Railhead milkvetch <i>Astragalus terminalis</i>	NO	NO	--	--	--	--
Large-leafed balsamroot <i>Balsamorhiza macrophylla</i>	NO	NO	--	--	--	--
Red sage <i>Bassia americana</i>	NO	NO	--	--	--	--
Mojave brickellbush <i>Brickellia oblongifolia</i>	YES	YES	NO	NI		
Idaho sedge <i>Carex idaho</i>	NO	NO	--	--	--	--
Lesser Indian paintbrush <i>Castilleja minor ssp. minor</i>	NO	YES	NO	NI		
Fendler cat's-eye <i>Cryptantha fendleri</i>	NO	NO	--	--	--	--

Common Name <i>Genus species</i>	Does the species occur on Public Lands within the Southwest Highlands Watershed?	Is the species or its habitat found in the Cumulative Impact Area?	Are irreversible or irretrievable resources involved?	What effect could this proposal have? *		
				Alt. A	Alt. B	Alt. C
Beavertip draba <i>Draba globosa</i>	NO	NO	--	--	--	--
Wind River draba <i>Draba ventosa</i>	NO	NO	--	--	--	--
Beaked spikerush <i>Eleocharis rostellata</i>	NO	NO	--	--	--	--
Long-sheath waterweed <i>Elodea bifoliata</i>	NO	NO	--	--	--	--
Idaho fleabane <i>Erigeron asperugineus</i>	YES	YES	NO	NI		
Linearleaf fleabane <i>Erigeron linearis</i>	NO	NO	--	--	--	--
Buff fleabane <i>Erigeron parryi</i>	NO	NO	--	--	--	--
Mat buckwheat <i>Eriogonum caespitosum</i>	NO	NO	--	--	--	--
Railroad Canyon wild buckwheat <i>Eriogonum soliceps</i>	NO	NO	--	--	--	--
Hiker's gentian <i>Gentianopsis simplex</i>	NO	NO	--	--	--	--
Many-flowered viguiera <i>Heliomeris multiflora var. multiflora</i>	NO	NO	--	--	--	--
Prostrate hutchensia <i>Hornungia procumbens</i>	NO	NO	--	--	--	--
Ballhead ipomopsis <i>Ipomopsis congesta ssp. crebrifolia</i>	NO	NO	--	--	--	--
Simple bog sedge <i>Kobresia simpliciuscula</i>	NO	NO	--	--	--	--
Beautiful bladderpod <i>Lesquerella pulchella</i>	NO	NO	--	--	--	--
Sand wildrye <i>Leymus flavescens</i>	NO	NO	--	--	--	--
Taper-tip desert-parsley <i>Lomatium attenuatum</i>	NO	NO	--	--	--	--

Common Name <i>Genus species</i>	Does the species occur on Public Lands within the Southwest Highlands Watershed?	Is the species or its habitat found in the Cumulative Impact Area?	Are irreversible or irretrievable resources involved?	What effect could this proposal have? *		
				Alt. A	Alt. B	Alt. C
Marsh felwort <i>Lomatogonium rotatum</i>	NO	NO	--	--	--	--
Dwarf purple monkeyflower <i>Mimulus nanus</i>	NO	NO	--	--	--	--
Primrose monkeyflower <i>Mimulus primuloides</i>	NO	NO	--	--	--	--
Low northern – rockcress <i>Neotorularia humilis</i>	NO	NO	--	--	--	--
Small-flowered pennycress <i>Noccaea parviflora</i>	NO	NO	--	--	--	--
Meadow lousewort <i>Pedicularis crenulata</i>	NO	NO	--	--	--	--
Lemhi beardtongue <i>Penstemon lemhiensis</i>	NO	NO	--	--	--	--
Whipple's beardtongue <i>Penstemon whippleanus</i>	NO	NO	--	--	--	--
Hoary phacelia <i>Phacelia incana</i>	NO	NO	--	--	--	--
Slender-branched popcorn flower <i>Plagiobothrys leptocladus</i>	NO	NO	--	--	--	--
Spiny skeletonweed <i>Pleiacanthus spinosus</i>	NO	NO	--	--	--	--
Alkali primrose <i>Primula alcalina</i>	NO	NO	--	--	--	--
Mealy primrose <i>Primula incana</i>	NO	NO	--	--	--	--
James stitchwort <i>Pseudostellaria jamesiana</i>	NO	NO	--	--	--	--
Lemmon's alkaligrass <i>Puccinellia lemmonii</i>	NO	NO	--	--	--	--
White-stemmed globe-mallow <i>Sphaeralcea munroana</i>	NO	NO	--	--	--	--
Silver chicken sage <i>Sphaeromeria argentea</i>	NO	NO	--	--	--	--

Common Name <i>Genus species</i>	Does the species occur on Public Lands within the Southwest Highlands Watershed?	Is the species or its habitat found in the Cumulative Impact Area?	Are irreversible or irretrievable resources involved?	What effect could this proposal have? *		
				Alt. A	Alt. B	Alt. C
Rocky Mountain dandelion <i>Taraxacum eriophorum</i>	NO	NO	--	--	--	--
Alpine meadowrue <i>Thalictrum alpinum</i>	NO	NO	--	--	--	--
Slender thelypody <i>Thelypodium sagittatum</i>	NO	NO	--	--	--	--
Showy townsendia <i>Townsendia florifera</i>	NO	NO	--	--	--	--
Whitebark pine <i>Pinus albicaulis</i>	NO	YES	NO	NI		

* The livestock management and project proposals are not consistent across alternatives. For example, the season of use for one allotment under Alternative B may not be the same as the season of use for another allotment under the same alternative. For the purposes of this biological evaluation if a proposed grazing treatment (numbers, duration, time of year, frequency of rest), project or vegetative treatment within a given alternative is likely to adversely affect a sensitive plant or its habitat, then that effect is reflected in the table.

Supplemental Information on Special Status Plants on BLM Lands in the Southwest Highlands Watershed

The Dillon Resource Management Plan provides guidance that requires project sites in high probability habitats to be surveyed for sensitive plants prior to any ground disturbing activities. This reduces the possibility that sensitive plant species would be accidentally or inadvertently impacted by BLM activities.

No impacts from any of the three alternatives considered in the EA are anticipated on the three plant species that are known only from the cumulative impact area. They either occupy habitats not normally frequented by cattle or are located far enough away from the project area that the livestock management, range improvement projects or vegetation treatments proposed on allotments in the Southwest Highlands Watershed will be of little or no consequence.

Idaho fleabane and Mojave brickellbush aren't likely to be impacted by any of the alternatives. Neither of these plants is considered palatable and their habitats typically receive light grazing use. Generally these plants occupy dissimilar habitats than those proposed for fuels and healthy forest treatments. The risk of any management proposals impacting these two species is relatively low.

During the summer of 2010, the U.S. Fish and Wildlife Service announced a 90-day finding on a petition to list whitebark pine (*Pinus albicaulis*) as endangered or threatened and to designate critical habitat. In July of 2011, the finding was released; whitebark was given a warranted but precluded listing with a priority of 2 and is currently on the candidate species list. The IDT did not find whitebark pine on BLM-administered land within the SWHW. Whitebark pine is known to occur outside the SWHW at higher elevations in the adjacent Highland Mountains.

Cumulative Considerations:

High probability habitats will be surveyed for sensitive plants prior to any ground disturbing activities on federal land but botanical surveys aren't required on private and state lands even on cooperative projects (e.g. a pipeline that crosses multiple ownerships). It's possible that sensitive plant species could be accidentally or inadvertently impacted by construction or placement of range improvement projects on non-federal lands.

The invasion of introduced species and noxious weeds near and into special plant species habitat across all ownerships poses a direct threat to these plants through competition, habitat degradation and the potential impact of herbicides. The use of insecticides on private lands within the SWHW to control grasshoppers or other insects may affect pollinators that visit sensitive plant species on BLM lands.

C-6

 \s\ Kelly Savage
Signature

 6/11/14
Date

Printed Name and Title: Kelly Savage , Rangeland Management Specialist/TES Plants

References:

Heidel, B.L. 1998. Conservation status of *Spiranthes diluvialis* Sheviak in Montana. Unpublished report to U.S. Fish and Wildlife Service. Montana Natural Heritage Program, Helena. 55 pp. + app.

Heidel, B.L., and J. Vanderhorst. 1996. Sensitive plant surveys in Beaverhead and Madison counties, MT. Unpublished report to the Bureau of Land Management. Montana Natural Heritage Program, Helena, MT.

Lesica, P. 2003. Conserving Globally Rare Plants on Lands Administered by the Dillon Office of the Bureau of Land Management. Report to the Bureau of Land Management, Dillon Office. Montana Natural Heritage Program, Helena, MT.

Montana Natural Heritage Program (MNHP). 2014. Montana Rare Plant Field Guide. (Available online @ <http://mtnhp.org/SpeciesOfConcern/Default.aspx>)

United States Department of the Interior, Bureau of Land Management, Dillon Field Office. 2009. Montana BLM Sensitive Plant Species Found on or Near BLM Lands Administered by the Dillon Field Office. List prepared for the Dillon Field Office based on Instruction Memorandum No. MT-2009-039

BLM DILLON FIELD OFFICE
Biological Evaluation for Special Status Fish and Wildlife Species
Form Revised May 2009 - Updated May 2013

Project: Southwest Highlands Watershed EA # DOI-BLM-MT-B050-2014-0007-EA

Step 1a.	Step 1b.	Step 1c.	Step 2	Step 3.	Step 4.	Step 5.	Step 5.	Step 5.	Step 5.
List of all Special Status Species that are known or suspected to occur on the DFO.	Current Management Status of the Species.	Does the species occur on this portion of the Field Office?	Is the species or its habitat found in the surrounding area?	Could this proposal have any effect?	Are Irreversible or Irretrievable Resources involved?	Alt A level of effect	Alt B level of effect	Alt C level of effect	Alt D level of effect
Canada Lynx (<i>Lynx canadensis</i>)	Threatened	N/A	N/A	--	--	--	--	--	--
Grizzly Bear (<i>Ursus arctos horribilus</i>)	Threatened	N/A	N/A	--	--	--	--	--	--
Greater Sage Grouse (<i>Centrocercus urophasianus</i>)	Candidate	Y	Y	Y	N	MIIH	BI	BI	BI
North American Wolverine (<i>Gulo gulo luscus</i>)	Proposed Threatened	N	Y	N	--	--	--	--	--
Mammals									
Fisher (<i>Martes pennanti</i>)	Sensitive	N/A	N/A	--	--	--	--	--	--
Fringed myotis (<i>Myotis thysanodes</i>)	Sensitive	Y	Y	N	--	--	--	--	--
Gray Wolf (<i>Canis lupus</i>)	Sensitive	Y	Y	N	--	--	--	--	--
Great Basin pocket mouse (<i>Perognathus parvus</i>)	Sensitive	Y	Y	Y	N	MIIH	BI	BI	BI
Long-eared Myotis (<i>Myotis evotis</i>)	Sensitive	Y	Y	N	--	--	--	--	--
Long-legged Myotis (<i>Myotis volans</i>)	Sensitive	Y	Y	N	--	--	--	--	--
Pygmy Rabbit (<i>Brachylagus idahoensis</i>)	Sensitive	N/A	N/A	--	--	--	--	--	--
Townsend's Big-eared Bat (<i>Plecotus townsendii</i>)	Sensitive	Y	Y	N	--	--	--	--	--

(cont.) List of all Special Status Species that are known or suspected to occur on the DFO.	Current Management Status of the Species.	Does the species occur on this portion of the Field Office?	Is the species or its habitat found in the surrounding area?	Could this proposal have any effect?	Are Irreversible or Irretrievable Resources involved?	Alt A level of effect	Alt B level of effect	Alt C level of effect	Alt D level of effect
Birds									
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	Sensitive	Y	Y	N	--	--	-	--	--
Black Tern (<i>Chlidonias niger</i>)	Sensitive	N	Y	N	--	--		--	--
Black-backed Woodpecker (<i>Picoides arcticus</i>)	Sensitive	Y	Y	N	--	--		--	--
Black-crowned Night Heron (<i>Nycticorax nycticorax</i>)	Sensitive	N/A	N/A	--	--	--		--	--
Bobolink (<i>Dolichonyx orysivorus</i>)	Sensitive	N	Y	N	--	--		--	--
Brewer's sparrow (<i>Spizella breweri</i>)	Sensitive	Y	Y	Y	N	NI	BI	BI	BI
Burrowing Owl (<i>Athene cucularia</i>)	Sensitive	N	Y	N	--	--		--	--
Common Loon (<i>Gavia immer</i>)	Sensitive	N/A	N/A	--	--	--		--	--
Ferruginous Hawk (<i>Buteo regalis</i>)	Sensitive	Y	Y	N	--	--		--	--
Flammulated Owl (<i>Otus flammeolus</i>)	Sensitive	N	Y	N	--	--		--	--
Franklin's Gull (<i>Larus pipixcan</i>)	Sensitive	N/A	N/A	--	--	--		--	--
Golden Eagle (<i>Aquila chrysaetos</i>)	Sensitive	Y	Y	N	--	--		--	--
Great Gray Owl (<i>Strix nebulosa</i>)	Sensitive	Y	Y	N	--	--		--	--
Harlequin Duck (<i>Histrionicus histrionicus</i>)	Sensitive	N/A	N/A	--	--	--		--	--
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	Sensitive	Y	Y	Y	N	NI	BI	BI	BI
Long-billed Curlew (<i>Numenius americanus</i>)	Sensitive	Y	Y	N	--	--	--	--	--

(cont.) List of all Special Status Species that are known or suspected to occur on the DFO.	Current Management Status of the Species.	Does the species occur on this portion of the Field Office?	Is the species or its habitat found in the surrounding area?	Could this proposal have any effect?	Are Irreversible or Irretrievable Resources involved?	Alt A level of effect	Alt B level of effect	Alt C level of effect	Alt D level of effect
Marbled Godwit (<i>Limosa fedoa</i>)	Sensitive	N/A	N/A	--	--	--	--	--	--
McCown's longspur (<i>Calcarius mccownii</i>)	Sensitive	Y	Y	Y	N	NI	MIH	MIH	MIH
Northern Goshawk (<i>Accipiter gentilis</i>)	Sensitive	Y	Y	N	--	--	--	--	--
Peregrine Falcon (<i>Falco peregrinus anatum</i>)	Sensitive	Y	Y	N	--	--	--	--	--
Sage Sparrow (<i>Amphispiza belli</i>)	Sensitive	N	Y	N	--	--	--	--	--
Sage thrasher (<i>Oreoscoptes montanus</i>)	Sensitive	Y	Y	Y	N	MIH	BI	BI	BI
Sedge Wren (<i>Cistothorus platensis</i>)	Sensitive	N/A	N/A	--	--	--	--	--	--
Swainson's Hawk (<i>Buteo swainsoni</i>)	Sensitive	Y	Y	N	--	--	--	--	--
Three-toed Woodpecker (<i>Picoides tridactylus</i>)	Sensitive	Y	Y	N	--	--	--	--	--
Trumpeter Swan (<i>Cygnus buccinator</i>)	Sensitive	N/A	N/A	--	--	--	--	--	--
White-faced Ibis (<i>Plegadis chihi</i>)	Sensitive	N/A	N/A	--	--	--	--	--	--
Amphibian/reptiles									
Boreal/Western toad (<i>Bufo boreas</i>)	Sensitive	N	Y	N	--	--	--	--	--
Plains Spadefoot (<i>Spea bombifrons</i>)	Sensitive	N/A	N/A	--	--	--	--	--	--
Northern leopard frog (<i>Rana pipiens</i>)	Sensitive	N/A	N/A	--	--	--	--	--	--
Fish									
Fluvial Arctic Grayling (<i>Thymallus arcticus</i>)	Candidate	N	Y	N	--	--	--	--	--
Westslope cutthroat trout (<i>Onchorhynchus clarkii lewisi</i>)	Sensitive	N	Y	N	--	--	--	--	--

Step 6. Are there any specific recommendations to avoid significant effects (if any)? These are mitigation measures needed to avoid determinations of: LAA, LJ, WIFV. If so, the narrative describing these recommendations would be discussed in the NEPA document.

Step 7. Documentation: This short form is intended to follow a seven-step process to provide basic biological evaluations. Judgments must not be arbitrary but should be reasoned. This form provides a “road map” of that reasoning and assumes the judgments are drawn from numerous sources. Any species-specific impacts should be discussed in the NEPA document or below under the Narrative of Potential Impacts.

The signature below certifies that:

1. The wildlife and fisheries biologists have reviewed the proposed action and its alternatives, but may or may not have provided input to alternative design, depending on the issues.
2. The wildlife and fisheries biologists have an understanding of the specific conditions found in the affected area. Column 1a lists all possible Special Status Species in the Dillon Field Office. Column 1b identifies the species’ current management status. Column 1c indicates whether there are no records (N/A), or whether the species is considered a Transient (T) or Resident (R) {for our purposes, resident includes migratory species that fulfill a portion of their life history here}. Step 2 is satisfied by field visits or knowledge of local conditions from previous visits resulting in enough information to determine if the area is potential habitat for species listed in Step 1. Extensive surveys are not necessary if the conservative approach is taken that “suitable habitat” means the potential for occupancy.
3. The wildlife and fisheries biologists have an understanding of the species habitat needs and other attributes important to the determination. This can be a combination of literature review, professional experience, and consultation with others.
4. The wildlife and fisheries biologist have assimilated the above information in making the “determinations” (i.e. final judgments about the scientific significance of the effects).

Signed: \s\ Kelly Bockting **Date:** 6-4-14 **Signed:** \s\ Paul Hutchinson **Date:** 6-4-14

Printed Name and Title: Kelly Bockting, Wildlife Biologist Paul Hutchinson, Fisheries Biologist

Definitions of Abbreviations for the Short Form

N/A – “Not Applicable.” Indicates this species does not occur in the project area or that the project would have no bearing on its potential habitat. These species were removed from detailed analysis after field review of existing and potential habitats and consideration of distribution records.

FEDERALLY LISTED SPECIES

NE - No Effect

***LAA** - May Effect - Likely to Adversely Affect (formal consultation required)

NLAA - May Effect, Not Likely to Adversely Affect (informal consultation - concurrence with determination - required)

BE - Beneficial Effect (informal consultation - concurrence with determination - required)

SPECIES PROPOSED FOR LISTING

NE - No Effect

NLJ - Not likely to jeopardize the continued existence of the species or result in the destruction or adverse modification of proposed critical habitat

***LJ** - Likely to jeopardize the continued existence of the species or result in the destruction or adverse modification of proposed critical habitat

SENSITIVE SPECIES

NI - No Impact

MIH - May Impact Individuals or Habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species.

***WIFV** - Will Impact Individuals or habitat with a consequence that the action may contribute to the need for federal listing or cause a loss of viability to the population or species.

BI - Beneficial Impact

* triggers formal consultation process

NARRATIVE of POTENTIAL IMPACTS

LISTED and PROPOSED SPECIES:

Canada Lynx and Grizzly Bear: These two species are not known to occur in the SWHW and the adjacent mountain ranges are outside the recovery area. Therefore the proposed action will not have any effect on either species.

North American Wolverine: The distinct population segment (DPS) of wolverines in the contiguous United States was proposed for listing as Threatened in the Federal register on February 4, 2013. Male and female wolverine home ranges can be over 300 and 125 sq. miles respectively, including a wide variety of alpine, boreal, and arctic habitats. Although wolverine habitat surrounds the SWHW, they have not been documented on BLM lands within the SWHW, but due to the large home range, transients are possible as the SWHW could be used as a dispersal corridor between the Pioneer and Tobacco Root Mountains. “The conservation status of wolverines in the contiguous United States is less secure than wolverines in adjacent Canada due to fragmented habitat, small population size, reduced genetic diversity, and their vulnerability to threats analyzed in this finding.” (Fed. Reg. 2013.) The primary listing factor was “Reduction in Habitat Due to Climate change.” Due to the large home range, small scale treatments that may fragment habitat do not have a significant effect on wolverine. Activities identified in Alternatives B and C of the UHPW E.A. fall into the category outlined in the Federal Register on page 26 as follows: *“Land management activities (principally timber harvest, wildland firefighting, prescribed fire, and silviculture) can modify wolverine habitat, but this generalist species appears to be little affected by changes to the vegetative characteristics of its habitat. In addition, most wolverine habitat occurs at high elevations in rugged terrain that is not conducive to intensive forms of silviculture and timber harvest. Therefore, we anticipate that habitat modifications resulting from these types of land management activities would not significantly affect the conservation of the DPS, as we described above.”* Therefore activities proposed under the action alternatives would not have an effect on habitat conditions for wolverines.

No impacts are anticipated to any listed or proposed Threatened or Endangered species associated with implementation of this decision under any alternative.

CANDIDATE SPECIES:

Greater Sage Grouse: Alternative A the “no action” would maintain the current conditions. No core sage grouse habitat is identified in the SWHW. Allotments not meeting habitat requirements for nesting and brood rearing would not see any improvements. Alternatives B, C and D were developed to improve nesting and brood rearing habitat. Changes in grazing management would lead to an increase in residual herbaceous cover resulting in higher nest success and greater chick survival due to reduced predation.

Fences constructed to improve livestock management would impact sage grouse by creating collision hazards as well as raptor perches that can lead to increased predation by avian predators. All new fences located near known high concentrations of sage grouse would be marked to mitigate collision hazards. Location of fences would be chosen after determining which high risk areas should be avoided for fence building. Using BLM fence construction standards for wildlife would also help to mitigate collision hazards. This is discussed in further detail under the perspective allotment and alternative in the SWHW EA.

The general sage grouse habitat map was mapped at the regional scale using satellite imagery and it is known to contain habitat that is unsuitable or does not have the potential to meet sage grouse habitat requirements but may be important linkage habitat. Many of these areas do not have the site potential, due to the soil type or precipitation zone, to meet sagebrush canopy or herbaceous stubble requirements for nesting or winter habitat. Sage grouse are known to use seasonal habitats therefore these areas may provide foraging opportunities. Much of the SWHW is general habitat but may not have the site potential to provide for nesting or winter habitat needs.

Non-commercial mechanical/prescribed fire treatments would restore/maintain sagebrush communities in the long-term for sagebrush obligate species including sage grouse. Sage grouse are known to forage in the burn units post burn due to increased forbs and ease of finding insects. Cover for sagebrush obligate species would be reduced in the short-term, but is expected to return to pre-burn levels in 20-25 years. All fuels treatments are in summer habitat over four miles from any known active lek. There is a historic lek within ½ mile of the Old Glory Rx but there are no historic records on lek counts and no lekking activity has been documented over the past 20 years. The late seral sagebrush habitat currently does not have any openings that would allow for lekking. If it is determined that sage grouse are nesting in the area, no known nesting habitat would be burned. Within the Rx, areas with a low density of conifers and a high canopy cover of sagebrush, only mechanical removal of conifers would be allowed and the remainder of the unit would be burned. As sagebrush re-populates the burned areas, the potential for conifers to expand into the burned area is reduced and therefore habitat for sagebrush dependent species would be restored in the long-term. The treatments are designed to create more edge and a mosaic burn pattern, ensuring residual sagebrush canopy cover would remain within the burn units. No alternatives proposed would impact sage grouse to the extent that would lead to federally listing of the greater sage grouse.

BLM SENSITIVE SPECIES:

Great Basin Pocket Mouse: These species are scattered throughout the watershed although some allotments have higher concentrations than others where friable soils are present for burrowing. Under alternative A, increased predation is expected as compared to alternatives B, C and D due to the reduced herbaceous cover. However, alternative A would not likely lead to a decline in the overall species population. These species would benefit under alternatives B, C and D because of the increase in herbaceous understory in sagebrush steppe habitats. Providing increased hiding cover would reduce the potential for predation. None of the alternatives are expected to lead to listing of this species.

Brewers Sparrow, Loggerhead Shrike and Sage Thrasher: These three species are considered sagebrush obligate species and require similar habitat. The Brewers sparrow is known to nest in sagebrush and forage primarily on insects in shrubs or low vegetation. Loggerhead shrikes prefer early seral sagebrush and short grass and are negatively influenced by increased tree canopy cover. The sage thrasher is a ground forager; therefore, increased herbaceous cover would lead to better concealment and reduce predation. Fragmentation or loss of habitat is the largest threat to these species. The big sagebrush habitat in the SWHW has remained relatively unchanged for the last 25 years. Under alternative A, increased predation is expected as compared to alternatives B, C and D due to the reduced herbaceous cover. However, alternative A would not likely lead to a decline in the overall species population. Improving habitat conditions under the action alternatives is expected to improve habitat for these species. The prescribed fire treatments under alternatives B, C and D would create more grassland in the short term within the SWHW and would increase early seral sagebrush and grassland habitat for the Loggerhead Shrike. Burning in late seral sagebrush to remove colonizing Douglas-fir will create a mosaic in the sagebrush and an increase the edge and patchiness would improve foraging habitat. None of the alternatives are expected to lead to listing of these species.

McCown's Longspur: This species prefers habitat with sparse vegetation or bare ground, contrary to the three species discussed above. They are ground nesters and do not require shrubs for nesting. McCown's longspur also prefers dry, arid climates and has been known to abandon an area during wet periods. It is typically known as a Great Plains species found in short-grass prairies and agricultural areas. Although it has been documented in the SWHW, it is on the edge of its range and habitat is limited. Alternative A may be the preferred alternative for this species as it would remove more vegetation and leave more bare ground than the other action alternatives. Range wide this species is doing well and none of the alternatives for the SWHW are expected to impact this species that would lead to it being federally listed.

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