

**Appendix K – Biological Assessment and U.S. Fish and Wildlife Service  
Concurrence Letter**

# **Biological Assessment**

to analyze the effects of

Amending BLM and USFS Land Use Plans

To address:

## **Wyoming Greater Sage-Grouse Proposed Land Use Plan Amendment and Final Environmental Impact Statement**

16 March 2015

Revised May 20, 2015

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# Biological Assessment

## 1.0 Introduction

This Biological Assessment (BA) analyzes the potential effects of changes to existing management identified in the selected alternative of the joint BLM/Forest Service - Wyoming Greater Sage-Grouse Proposed Land Use Plan Amendment and Final Environmental Impact Statement (Amendment), on threatened or endangered species listed or proposed for listing under the Federal Endangered Species Act (ESA) or on their designated critical habitat. Existing management conditions that would not be changed as a result of the Amendment will not be analyzed in this document.

In accordance with the ESA and regulatory guidance, we consider:

- Only those organisms that appear on the official species list as seen in Table 3, and
- Only those species under the regulatory jurisdiction of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS).

We consider all listed and proposed species that may be present in the action area. We will also consider the effects of the proposed project on the primary constituent elements (PCEs) and/or physical and biological features (PBFs) of designated or proposed critical habitat that is likely to be affected by the proposed actions.

This document is prepared in accordance with the requirements of the ESA and its implementing regulations. It is also prepared in accordance with current Bureau of Land Management (BLM) policy following (IM No. 2012-044 and BLM Manual 6840) and US Forest Service (USFS) policy following standards established in Forest Service Manual direction (FSM 2670) and the guidance provided in the USFWS Consultation Handbook (U.S. Fish and Wildlife Service and National Marine Fisheries Service 1998). Additionally, this BA is prepared in collaboration with the USFWS as agreed upon under the Consultation Streamlining Guidance.

This analysis is based on the best scientific and commercial data available at the time this document was written. This includes information such as data collected from BLM and Forest databases, vegetation analyses, direct surveys in the field, the most recent and appropriate scientific research or species information, as well as direct observations by Biologists in the field.

This Biological Assessment (BA) analyzes the potential impacts on threatened and endangered plant, fish, and animal species that would result from the implementation of those management actions authorized under the Wyoming Greater Sage-Grouse Resource Management Plan/Land and Resource Management Plan (RMP/ LRMP) Amendments that would change, or are new and not part of existing management identified in current RMPs. Five potential alternatives are analyzed in the Environmental Impact Statement (EIS). This BA analyzes the Proposed Amended RMP/LRMP (Amendment).

Section 7(a) of the Endangered Species Act (ESA) requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and its designated critical habitat (if applicable). Regulations implementing this interagency cooperation provision of the ESA are codified at 50 CFR 402. Section 7 (a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the

continued existence of a listed species or adversely modify or destroy its designated critical habitat.

If a Federal action may “**adversely affect**” a listed species or its designated critical habitat, the responsible Federal agency must enter into formal consultation with the U.S. Fish & Wildlife Service (USFWS). In addition, under the 1994 Memorandum of Understanding (MOU) and the 2000 Memorandum of Agreement (MOA) among the BLM, U.S. Forest Service (USFS), USFWS, and National Marine Fisheries Service (NMFS), all four agencies agreed to promote the conservation of candidate species and streamline the Section 7 consultation and coordination process.

This BA conforms to the legal requirements set forth under Section 7 of the ESA, and was guided by the Regulations on Interagency Cooperation in 50 CFR 402.12 (f).

## **2.0 Project History**

Greater Sage-Grouse (sage-grouse) have emerged as a significant conservation concern over the last 10 years. The species is currently a candidate for listing under the Endangered Species Act as “threatened”, because of two primary factors: 1) the large-scale loss and fragmentation of habitats across the species range, and 2) a lack of regulatory mechanisms in place to ensure the conservation of the species. The primary threats to sage-grouse habitat are summarized in the listing decision. The two dominant threats are related to infrastructure associated with energy development in the eastern portion of the species range, and the conversion of sagebrush communities to annual grasslands associated with large uncharacteristic wildfires in the western portion of the species range.

The BLM and the USFS are working together to protect sage-grouse and their habitat by revising or amending 68 BLM Land Use Plans and 20 National Forest and Grassland Land and Resource Management Plans across nine western states, including Northeast California, Oregon, Nevada, Idaho, Montana, Utah, Wyoming, Northwest Colorado, South Dakota, and North Dakota. The BLM manages approximately half of the sage-grouse habitat, whereas the USFS manages approximately 8 percent of species habitat.

In 2011 and 2012, the United States Fish and Wildlife Service (FWS) submitted letters to the BLM and FS recommending that the agencies amend Land Use Plans to provide adequate regulatory mechanisms to conserve the species. The BLM and USFS are participating in six Environmental Impact Statements (EISs) to develop Records of Decision that will be used as a basis for amending Land Use Plans, including Forest Plans.

On December 9, 2011, a Notice of Intent was published in the Federal Register to initiate the BLM/USFS GRSG Planning Strategy across nine western states, including California, Oregon, Nevada, Idaho, Utah, and Southwest Montana in the Great Basin Region and Northwest Colorado, Wyoming, Montana, South Dakota, and North Dakota in the Rocky Mountain Region. The Wyoming RMP amendment/revision and draft EIS is one of fifteen separate EISs that are currently being conducted to analyze and incorporate specific conservation measures across the range of the GRSG, consistent with National BLM and USFS policy.

On December 27, 2011, the BLM Washington Office released Instruction Memorandum (IM) No. 2012-044, which directed all of the planning efforts across the GRSG range to consider all applicable conservation measures when revising or amending its RMPs in GRSG habitat, including the measures developed by the National Technical Team (NTT) that were presented in

their December 2011 document – A Report on National Greater Sage-Grouse Conservation Measures. IM-2012-044 directs all planning efforts associated with the national strategy to consider and analyze (as appropriate) the conservation measures presented in the report.

Along with the applicable measures that were outlined in the NTT Report, planning efforts associated with this National GRSG Planning Strategy will also analyze applicable conservation measures that were submitted to the BLM and USFS from various state governments and from citizens during the public scoping process.

The BLM and USFS are directed by the Federal Land Policy and Management Act of 1976 (FLPMA) to plan for and manage “public lands.” As defined by the Act, public lands are those federally owned lands, and any interest in lands (e.g., federally owned mineral estate), that are administered by BLM/USFS.

The process for developing, approving, maintaining, and amending or revising RMPs/LRMPs was initiated under the authority of FLPMA Section 202(f). BLM’s regulations under 43 CFR §1610 require BLM to use NEPA processes in preparing the plan so that the plan selected is based on informed decision making and public involvement. The 1976 National Forest Management Act (NFMA), Forest Service Manual (FSM) 1950, 1920 and Forest Service Handbook (FSH) 1909.15 direct the USFS in implementing NEPA into their planning processes. The process is guided by BLM planning regulations in 43 CFR §1600 and the Council on Environmental Quality (CEQ) regulations in 40 CFR §1500.

The pre-planning phase of the BLM and USFS planning process consists of (1) compiling and reviewing the current laws, regulations, policies, executive orders (EO), and directives pertaining to the planning area and (2) developing any needed State Director’s/Regional Forester’s guidance specific to the process and planning effort for the planning area.

Consultation/Conferencing History: The Bureau of Land Management (BLM) Wyoming State Office and the U.S. Forest Service (USFS) have initiated a planning effort to prepare Resource Management Plan (RMP) and Land and Resource Management Plan (LRMP) amendments with an associated environmental impact statement (EIS) for the Casper, Green River, Kemmerer, Newcastle, Pinedale, and Rawlins RMPs; and the Bridger-Teton National Forest (BTNF), Medicine Bow National Forest (MBNF), and Thunder Basin National Grassland (TBNG) LRMPs.

BLM and USFS land use plans and amendments must be consistent with officially approved or adopted resource-related plans, and the policies and programs contained therein, of other federal agencies, state and local governments, and Native American tribes, so long as the guidance and RMPs are also consistent with the purposes, policies, and programs of federal laws and regulations applicable to public lands, including federal and state pollution control laws as implemented by applicable federal and state air, water, noise, and other pollution standards or implementation plans.

### **3.0 Purpose and Need**

The purpose of this Land Use Plan (LUP) Amendment for the sage-grouse is to identify and incorporate appropriate conservation measures to protect, enhance, and/or restore sage-grouse habitat by reducing, eliminating, or minimizing threats to their habitat. The need to create this amendment arose when the inadequacy of regulatory mechanisms was identified as a significant threat in the USFWS finding on the petition to list the sage-grouse. The USFWS identified

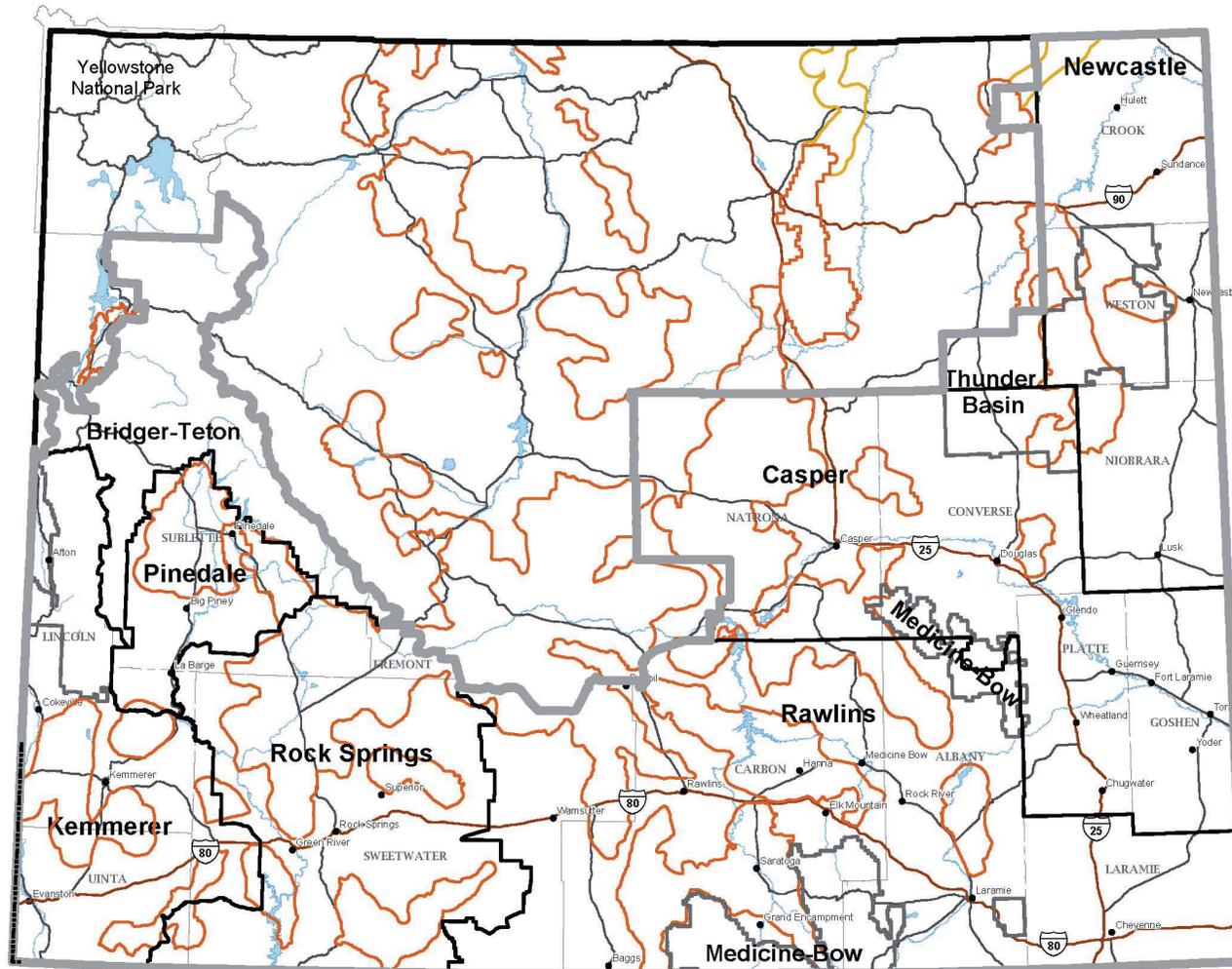
conservation measures within BLM and USFS LUPs as the principal regulatory mechanisms for habitat conservation. Therefore, this amendment will focus on areas affected by threats to sage-grouse habitat identified by the USFWS in the March 2010 listing decision (USFWS 2010a).

#### **4.0 Analysis Area**

The Bureau of Land Management (BLM) Wyoming State Office and the U.S. Forest Service (USFS) have initiated a planning effort to prepare Resource Management Plan (RMP) and Land and Resource Management Plan (LRMP) amendments with an associated environmental impact statement (EIS) for the Casper, Green River, Kemmerer, Newcastle, Pinedale, and Rawlins RMPs; and the Bridger-Teton National Forest (BTNF), Medicine Bow National Forest (MBNF), and Thunder Basin National Grassland (TBNG) LRMPs.

The planning area for the sage-grouse RMP and LRMP Amendments comprise the Wyoming BLM Casper, Kemmerer, Newcastle, Pinedale, Rawlins, and Rock Springs Field Offices, and the USFS BTNF, MBNF, and TBNG Planning Units and includes all public lands and federal mineral estate managed by the BLM and the USFS within these areas. The planning area encompasses approximately 16 million acres of public surface land administered by the BLM and USFS, and approximately 23 million acres of federal mineral estate in Albany, Campbell, Carbon, Converse, Crook, Fremont, Goshen, Laramie, Lincoln, Natrona, Niobrara, Platte, Sublette, Sweetwater, Teton, Uinta, and Weston counties in Wyoming. Of the 23 million acres of federal mineral estate, approximately 7 million acres are split estate. Table 1 provides a summary of land and mineral ownership and administrative jurisdictions within the planning area.

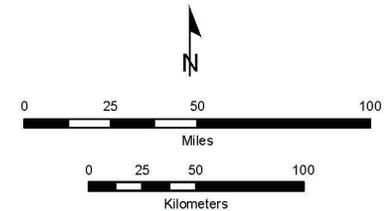
# Map 1- Planning Area



## Wyoming Sage-Grouse Land Use Plan Amendments

Map 1-1: Planning Area

- LUP Amendments Planning Area
- BLM Field Office Boundary
- Forest Service Planning Unit Boundary
- Sage-grouse Priority/Core Habitat Areas
- Sage-grouse Connectivity Habitat Areas
- Counties
- Water
- Interstate
- State / US Hwy
- Cities



NO WARRANTY IS MADE BY THE BLM FOR USE OF THE DATA FOR PURPOSES NOT INTENDED BY BLM.

**Table 1-Land and Mineral Ownership and Administrative Jurisdictions within the Planning Area**

<b>Jurisdiction</b>	<b>Acres</b>
Total land surface area in the planning area (all ownership)	38,854,719
<b>Areas the Wyoming Sage-Grouse RMP/LRMP Amendments decisions will cover:</b>	
Federal land/federal minerals	15,887,984
Federal land/nonfederal minerals	364,585
Nonfederal land/federal minerals	6,443,758
<b>Total BLM/USFS-administered federal land surface to be covered by RMP/LRMP decisions</b>	<b>16,249,869</b>
<b>Total BLM/USFS-administered federal mineral estate to be covered by RMP/LRMP decisions</b>	<b>22,964,444</b>
<b>Areas the Wyoming Sage-Grouse RMP/LRMP Amendments decisions will <i>not</i> cover:</b>	
Private or state land/private or state minerals	15,325,765

For purposes of this document, the following will be used to describe the types of habitat discussed:

- General Habitat Management Area (GHMA): Is occupied (seasonal or year-round) habitat outside of priority habitat. These areas have been identified by the BLM/Forest Service in coordination with respective state wildlife agencies.
- Priority Habitat Management Area (PHMA): Sage-grouse priority habitats are areas that have the highest conservation value to maintaining or increasing Sage-grouse populations. These areas would include breeding, late brood-rearing, winter concentration areas, and where known, migration or connectivity corridors. Sage-grouse Priority Habitat Management Area includes core plus connectivity habitat, unless specifically identified as containing only one (i.e., PHMA (core only)).
- Sagebrush Focal Area: Areas identified by the FWS that that represent recognized “strongholds” for GRSG that have been noted and referenced by the conservation community as having the highest densities of GRSG and other criteria important for the persistence of GRSG. Sagebrush Focal Areas are wholly contained within PHMA, and are assumed to have the same management actions applied, unless otherwise specified.

## **5.0 Description of Changes to Existing Management identified in the Proposed Land Use Plan Amendments**

As part of the Land Use Plan Amendment, BLM and the Forest Service identified management actions to manage sage-grouse habitat on federally managed lands. Table 2 (below) identifies new management actions or changes to existing management that are being consulted on in this BA. BLM and Forest Service have different policies and language/wording requirements, which creates the need for separate actions/standards/guidelines.

Table 2. Management Actions for the BLM and USFS Proposed LUP Amendments.

#		Alternative E (Proposed LUP Amendment)	
		BLM	Forest Service
General Management Direction for Action Alternatives			
5	The BLM/Forest Service will coordinate new recommendations, mitigation, and conservation measures applied for sage-grouse with the WGFD and other appropriate agencies, local government cooperators, and the Wyoming SGIT. These measures will be analyzed in site-specific NEPA documents, as necessary.		
6	Apply appropriate seasonal restrictions for implementing vegetation management treatments according to the type of seasonal habitats present in a priority area. Vegetation treatments must include monitoring to determine achievement of objectives and their long-term success.	See <b>GRSG-TDDD-ST-003-Standard, GRSG-TDDD-ST-004-Standard, GRSG-TDDD-ST-005-Standard, GRSG-TDDD-ST-006-Standard, and GRSG-TDDD-ST-007-Standard</b> at MA #131 through #134 for seasonal restrictions. See <b>GRSG-GRSGH-ST-001-Standard</b> at MA #99 for monitoring direction.	
7	Ensure site-specific, measurable, conservation and mitigation objectives are included in project planning within sage-grouse habitats.		
8	Each BLM field office will develop landscape-scale restoration, conservation, and maintenance strategies, including special management of seasonal habitats and identified connectivity zones outside of PHMA, working with voluntary partners and cooperating agencies. These strategies must be coordinated and reconciled, where possible, with adjoining management entities that share habitats or populations.	These LUP amendments are landscape-scale restoration, conservation, and maintenance strategies for greater sage-grouse habitat. Management of National Forest System lands will be coordinated and reconciled, where possible, with adjoining management entities that share habitats or populations.	
9	Design all range projects in a manner that minimizes potential for invasive species establishment. Monitor and treat invasive species associated with existing range improvements.	<b>GRSG-GRSGH-GL-004-Guideline</b> – In priority and general habitat management areas and sagebrush focal areas, actions and authorizations should be designed to limit the spread and effect of undesirable non-native plant species.	
10	Apply all appropriate required design features (Appendix B) as mandatory Stipulations/Conditions of Approval (COAs) within PHMAs for fluid minerals, travel management, lands and realty, range management, wild horses and burro, coal exploration, locatable minerals, West Nile Virus, mineral materials, non-energy solid leasable minerals, vegetation management, fire and fuels management, and noise.	<p>Required design features displayed in Appendix B that are not current standard operating procedure have been converted to standards or guidelines for the Forest Service draft proposed plan amendments. Those items that were not converted will be displayed in implementation guidance distributed after the project decision is finalized.</p> <p><b>GRSG-INFRA-GL-001-Guideline</b> - In priority habitat management areas and sagebrush focal areas, impacts to greater sage-grouse and their habitats should be reduced during maintenance, replacement, and upgrades of existing structures. Impacts should also be mitigated when constructing new infrastructure.</p> <ul style="list-style-type: none"> <li>• Existing guy wires should be removed or appropriately marked with bird flight diverters to make them more visible to greater sage-grouse in flight. Authorization of new infrastructure with guy wires should be restricted.</li> <li>• Power lines (distribution and transmission) should be designed to minimize wildlife related impacts and constructed to the latest APLIC standards.</li> <li>• When possible, perch deterrents should be installed on existing and new overhead facilities. Tanks and other above ground facilities should be equipped with structures or devices that discourage nesting and perching of raptors and corvids.</li> <li>• Permanent structures should be designed or sited to minimize impacts to greater sage-grouse, with emphasis on locating and operating facilities that create movement (e.g., pump jacks) or attract frequent human use and vehicular traffic (e.g., fluid</li> </ul>	

		<p>storage tanks) in a manner that will minimize disturbance of greater sage-grouse or interference with habitat use.</p> <ul style="list-style-type: none"> <li>• Liquid gathering facilities should be placed outside priority habitat management areas and sagebrush focal areas. To reduce truck traffic and perching and nesting of ravens and raptors, tanks should not be placed at well locations.</li> </ul> <p><b>GRSG-LG-GL-006-Guideline</b> – Collision risk should be mitigated through design features or markings (e.g., mark, laydown fences, location and design) when fences are constructed or reconstructed within priority-PHMAs and sagebrush focal areas and within 4 miles of occupied leks in priority-connectivity management areas.</p> <p><b>GRSG-M-FML-ST-003-Standard</b> –Locate compressor stations on portions of a lease that are non-habitat and are not used by greater sage-grouse, and if there would be no direct, indirect, or cumulative effects on greater sage-grouse or their habitat. If this is not possible, work with the operator to use mufflers, sound insulation, or other features to reduce noise. <b>GRSG-M-FMO-GL-001-Guideline</b> –Employee camps should not be authorized in priority habitat management areas and sagebrush focal areas.</p> <p><b>GRSG-M-FMO-GL-002-Guideline</b> – In priority habitat management areas and sagebrush focal areas, closed-loop systems should be used for drilling operations with no reserve pits, where feasible.</p> <p><b>GRSG-M-FMO-GL-003-Guideline</b> – In priority and general habitat management areas and sagebrush focal areas, during drilling operations, soil compaction should be reduced and soil structure should be maintained using the best available techniques to improve vegetation reestablishment.</p> <p><b>GRSG-M-FMO-GL-004-Guideline</b> – In priority and general habitat management areas and sagebrush focal areas, dams, impoundments and ponds for mineral development should be constructed to reduce potential for West Nile virus. Examples of methods to accomplish this include:</p> <ul style="list-style-type: none"> <li>• Increase the depth of ponds to accommodate a greater volume of water than is discharged.</li> <li>• 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.</li> <li>• Maintain the water level below that of rooted aquatic and upland vegetation. Avoid flooding terrestrial vegetation in flat terrain or low-lying areas.</li> <li>• 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.</li> <li>• 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.</li> <li>• Line the overflow spillway with crushed rock and construct the spillway with steep sides.</li> <li>• Fence pond sites to restrict access by livestock and other wild ungulates.</li> <li>• Remove or re-inject produced water.</li> <li>• Treat waters with larvicides to reduce mosquito production where water occurs on the surface.</li> </ul>
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	<p><b>GRSG-RT-ST-005-Standard</b> – In priority and general habitat management areas and sagebrush focal areas, do not allow public access on temporary energy development roads, unless consistent with all other terms and conditions included in this land use management plan amendment.</p> <p><b>GRSG-RT-GL-001-Guideline</b> – In priority and general habitat management areas and sagebrush focal areas, new roads and road realignments should be designed and administered to reduce collisions with greater sage-grouse.</p> <p><b>GRSG-RT-GL-002-Guideline</b> – In priority and general habitat management areas and sagebrush focal areas, 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 perpendicular to ephemeral drainages and stream crossings, unless topography prevents doing so.</p> <p><b>GRSG-RT-GL-004-Guideline</b> – In priority and general habitat management areas and sagebrush focal areas, dust abatement terms and conditions should be included in road use permits when dust has the potential to impact greater sage-grouse.</p> <p><b>GRSG-RT-GL-005-Guideline</b> - In priority and general habitat management areas and sagebrush focal areas, 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.</p> <p><b>GRSG-GRSGH-GL-005-Guideline</b> - To facilitate safe and effective fire management actions, in priority and general habitat management areas and sagebrush focal areas, fuels treatments should be designed to reduce the spread and intensity of wildfire in high-risk areas (i.e., areas of increased potential for ignition and in areas where there is a potential for wildfire that would be difficult for suppression resources to contain and control).</p> <p><b>GRSG-FM-GL-002-Guideline</b> – Locating temporary wildfire suppression facilities (e.g., incident command posts, spike camps, helibases, mobile retardant plants) in priority and general habitat management areas and sagebrush focal areas should be restricted. Methods to restrict impacts include location in existing disturbed areas, grasslands, near roads/trails or other areas where there is existing disturbance or minimal sagebrush cover.</p> <p><b>GRSG-FM-GL-003-Guideline</b> - In priority and general habitat management areas and sagebrush focal areas, cross-country vehicle travel during fire operations should be restricted whenever safe and practical to do so, as determined by fireline leadership, incident commanders, etc.</p> <p><b>GRSG-FM-GL-004-Guideline</b> – In priority and general habitat management areas and sagebrush focal areas, burnout operation areas should be restricted by constructing direct fire lines, whenever safe and practical to do so, to improve effectiveness and minimize loss of existing sagebrush habitat as determined by fireline leadership, incident commanders, etc..</p> <p><b>GRSG-FM-GL-005-Guideline</b> – In priority and general habitat management areas and sagebrush focal areas, fire management prescriptions should minimize undesirable effects on vegetation</p>
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		<p>and/or soils (e.g., minimize mortality of desirable perennial plant species and reduce risk of hydrophobicity).</p> <p><b>GRSG-FM-GL-006-Guideline</b> - In priority and general habitat management areas and sagebrush focal areas, roads and natural fuel breaks should be incorporated into fuel break design to improve effectiveness and minimize loss of existing sagebrush habitat.</p> <p><b>GRSG-FM-GL-007-Guideline</b> - In priority and general habitat management areas and sagebrush focal areas, all fire-associated vehicles and equipment should be power-washed before entering and exiting the area to minimize the introduction of undesirable invasive plant species.</p> <p><b>GRSG-FM-GL-008-Guideline</b> - Unit-specific greater sage-grouse fire management toolboxes containing maps, lists, contact information for qualified resource advisors, local guidance, and relevant information should be developed.</p> <p><b>GRSG-FM-GL-009-Guideline</b> – Localized maps of priority and general habitat management areas and sagebrush focal areas should be provided to dispatch officers and extended attack incident commanders to use when prioritizing wildfire suppression resources and designing suppression tactics.</p> <p><b>GRSG-FM-GL-010-Guideline</b> - In or near priority and general habitat management areas and sagebrush focal areas, a greater sage-grouse resource advisor should be assigned to all extended attack fires.</p> <p><b>GRSG-FM-GL-011-Guideline</b> – On critical fire weather days, additional fire suppression resources should be pre-positioned to optimize a quick and efficient response into priority and general habitat management areas and sagebrush focal areas.</p> <p><b>GRSG-FM-GL-012-Guideline</b> - During periods of multiple fires, line officers should be involved in setting priorities to help protect priority and general habitat management areas and sagebrush focal areas.</p> <p><b>GRSG-FM-GL-013-Guideline</b> – In priority and general habitat management areas and sagebrush focal areas, consider using fire retardant and mechanized equipment only if it is likely to result in minimizing burned acreage.</p> <p><b>GRSG-FM-GL-014-Guideline</b> – In priority and general habitat management areas and sagebrush focal areas, mop-up should be conducted where the burned areas adjoin unburned islands, doglegs, or other habitat features, as safety and available resources allows.</p>
11	<p>Integrated vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species per BLM Handbook H-1740-2. Manage weed treatments to maintain and improve greater sage-grouse habitat. Apply Required Design Features and BMPs as Conditions of Approval, such as those in Appendix B.</p>	<p>Integrated vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species per Forest Service Manual 2080. Manage weed treatments to maintain and improve Greater Sage-Grouse habitat.</p>
13	<p>As new occupied sage-grouse habitat is found or occurs either through additional inventories or expansion into previously unoccupied habitat, the BLM will incorporate, through appropriate processes and analyses, these areas into the GHMA sage-grouse habitat category and manage them as such, until the earliest review occurs by the SGIT. At that time they will be considered for PHMA status or continue to be managed as GHMA habitat, and will be added to the statewide map at that time.</p>	<p>As new occupied sage-grouse habitat is found or occurs either through additional inventories or expansion into previously unoccupied habitat, the Forest Service will incorporate these areas into priority and general habitat management areas and sagebrush focal areas through appropriate processes and analyses.</p>
14	<p>Contribute to actions that help to ground-truth the statewide sage-grouse seasonal habitat models for the State of Wyoming.</p>	

15	Use the Sage-grouse Habitat Assessment Framework or best available assessment tool (approved by the AO/Responsible Official) when assessing or evaluating sage-grouse habitats at multiple scales.	
17	Many sage-grouse seasonal habitats within and outside of PHMA are encumbered by valid existing rights, such as mineral leases or existing rights-of-way. Fluid mineral leases often will include less stringent lease stipulations than the timing, distance, and density requirements identified for consideration in this plan. The BLM will work with proponents holding valid existing leases that include less stringent lease stipulations than the timing, distance, and density restrictions described within this plan to ensure that measurable sage-grouse conservation objectives (such as, but not limited to, consolidation of infrastructure to reduce habitat fragmentation and loss, and effective conservation of seasonal habitats and habitat connectivity to support management objectives set by the WGFD) are included in all project proposals.	<b>GRSG-M-FML-GL-002-Guideline</b> – On existing federal leases in priority and general habitat management areas and sagebrush focal areas, 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 greater sage-grouse, based on vegetation, topography, or other habitat features.
18	Areas within PHMA would be limited to designated roads, primitive roads, and trails. Individual route designations will occur during subsequent implementation level travel management planning. Until implementation level travel management plans and route designations are complete, motorized travel will be limited to existing roads, and trails.	Motorized travel on National Forest System lands is limited to designated roads and trails.
19	Complete activity-level travel plans within five years of the ROD for this planning effort. During activity level planning, where appropriate, designate routes in PHMA with current administrative/agency purpose or need to administrative access only. Existing plans should be assessed for consistency with sage-grouse conservation objectives.	Motorized travel plans have been completed for National Forest System Lands. Existing plans will be assessed periodically for consistency with greater sage-grouse habitat needs.
20	Construct roads needed for production activities to minimum design standards within PHMAs, in compliance with the Density and Disturbance Calculation Tool (DDCT) process.	
21	Field Office and Ranger District staff will work with project proponents (including those within the BLM/Forest Service) and the WGFD to site their projects in locations that meet the purpose and need for their project, but have been determined to contain the least sensitive habitats.	
22	Evaluate opportunities to coordinate management plans and strategies on multiple allotments where coordination under a single management plan/strategy would result in enhancing Greater Sage-Grouse populations or its habitat, as determined in coordination with the state wildlife agency and with project proponents, partners, and stakeholders.	
25	All existing LUP decisions will be retained unless vacated or modified by decisions in these LUP amendments. Where more restrictive land use allocations or decisions are made in existing RMPs, those more restrictive land use allocations or decisions will remain in effect and will not be amended by these LUP amendments.	
26	Fire and fuels management would contribute to the protection and enhancement of sagebrush habitat that support Greater Sage-Grouse populations (including large contiguous blocks of sagebrush).	See GRSG-FM-GL-001-Guideline at MA #114.
27	<p>BLM planning units (Districts), in coordination with the USFWS and relevant state agencies, would complete and continue to update Greater Sage-Grouse Landscape Wildfire &amp; Invasive Species Habitat Assessments to prioritize at-risk habitats, and identify fuels management, preparedness, suppression and restoration priorities necessary to maintain sagebrush habitat to support interconnecting Greater Sage-Grouse populations. These assessments and subsequent assessment updates would also be a coordinated effort with an interdisciplinary team to take into account other Greater Sage-Grouse priorities identified in this plan. Appendix J describes a minimal framework example and suggested approach for this assessment.</p> <p>Implementation actions will be tiered to the Local (District) Greater Sage-Grouse Landscape Wildfire &amp; Invasive Species Assessment using the best available science related to the conservation of Greater Sage-Grouse.</p> <p>In coordination with USFWS and relevant state agencies, the BLM planning units (Districts) will identify annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments. Annual treatment needs will be coordinated across state/regional scales and across jurisdictional boundaries for long-term conservation of Greater Sage-Grouse.</p>	

	These landscape assessment implementation efforts will be reviewed annually with appropriate USFWS and state agency personnel.	
28	Implement a coordinated inter-agency approach to fire restrictions based upon National Fire Danger Rating System (NFDRS) thresholds (fuel conditions, drought conditions, and predicted weather patterns) for Greater Sage-Grouse habitat.	
29	Within acceptable risk levels, utilize a full range of fire management strategies and tactics, including the management of wildfires to achieve resource objectives across the range of sage-grouse habitat consistent with land use plan direction.	
29a	In order to avoid surface-disturbing activities in PHMA, priority will be given to development of oil and gas and other mineral resources outside of PHMA, subject to applicable stipulations. When authorizing development of oil and gas and other mineral resources in PHMA, subject to applicable stipulations for the conservation of Greater Sage-Grouse, priority will be given to development in non-habitat areas first and then in the least suitable habitat for Greater Sage-Grouse.	<b>GRSG-M-FMUL-GL-001-Guideline</b> – In priority and general habitat management areas, when analyzing leasing of fluid mineral resources, prioritize development in non-habitat areas first and then in the least suitable habitat for greater sage-grouse, subject to valid existing rights, law, and regulations.
139	Designate Sagebrush Focal Areas (SFA) as shown on Map 2-36 (1,915,989 acres). SFAs will be managed as PHMA, with the following additional management: 1) Recommended for withdrawal from the General Mining Act of 1872, subject to valid existing rights, the lands shown in Map 2-23 (252,161 acres). 2) Prioritized for management and conservation actions in these areas, including, but not limited to review of livestock grazing permits/leases (see livestock grazing section for additional actions).	
<b>Lands and Realty Management</b>		
<b>Rights-of-Way (e.g., Power lines, Transmission, Wind Energy Projects)</b>		
30	Sage-grouse PHMA would be managed as ROW avoidance areas for new ROW or SUA permits (Map 2-13).	<b>GRSG-LR-SUA-ST-001-Standard</b> – In priority habitat management areas and sagebrush focal areas, restrict issuance of new special use authorizations for infrastructure, such as high-voltage transmission lines, major pipelines hydropower, distribution lines, and cellular towers (Map 2-13). Exceptions must be limited and based on rationale (e.g., monitoring, modeling, or best available science) that explicitly demonstrates that adverse impacts to greater sage-grouse will be avoided with the exception.
30a	No similar action	<b>GRSG-LR-SUA-ST-002-Standard</b> – In priority and general habitat management areas and sagebrush focal areas, do not authorize temporary lands special use permits (i.e., facilities or activities) that result in loss of habitat or would have long-term (i.e., greater than five years) negative impact on greater sage-grouse or their habitats.
31	Within GHMA where new ROWs/SUAs are necessary, new ROWs/SUAs would be co-located within existing ROWs/SUAs where technically feasible. Appropriate sage-grouse seasonal timing constraints would be applied.	<b>GRSG-LR-SUA-ST-006-Standard</b> – In priority and general habitat management areas and sagebrush focal areas, locate upgrades to existing transmission lines within the existing designated corridors unless an alternate route would benefit greater sage-grouse or their habitats.
32	<b>Sage-grouse PHMA:</b> New transmission projects would be allowed only 1) within the 2-mile wide transmission line route through sage-grouse PHMA (core only) population areas in south-central and southwestern Wyoming (see Map 2-15 from EO 2011-5); 2) when co-located with an existing 115 kilovolt or greater powerline, as close as technically feasible, not to exceed 0.5 miles or within a designated corridor authorized for overhead powerlines. Projects in designated corridors and along these routes will not be counted against the 5% disturbance cap (Wyoming Density and Disturbance Calculation Tool Manual). New transmission projects proposed outside of these areas would be considered where it can be demonstrated that declines in sage-	<b>GRSG-LR-SUA-ST-004-Standard</b> – In priority habitat management areas and sagebrush focal areas, new power transmission projects must be located within the 2-mile wide transmission line route in south-central and southwestern Wyoming (see Map 2-15) or as close as technically feasible (within 0.5 mile) on either side of existing 115 kV or larger transmission lines or corridors (creating a route no wider than 1 mile). These projects will not be counted against the 5% disturbance cap (Wyoming Density and Disturbance Calculation Tool Manual). <b>GRSG-LR-SUA-ST-005-Standard</b> - In priority habitat management areas and sagebrush focal areas, new power distribution lines must not be located within 0.6 miles from the perimeter of occupied greater sage-grouse leks. Effective mitigation to protect greater sage-grouse is required.

	<p>grouse populations could be avoided through project design and/or mitigation.</p> <p>In conducting review of power line transmission proposals, the use of the Framework for Sage-grouse Impacts Analysis for Interstate Transmission Lines or other appropriate documents are necessary. These transmission and distributions lines should be sited to minimize any potential impact on sage-grouse or their habitats, and must consider siting along or adjacent to existing long-term linear disturbance features whenever possible (i.e., along existing occupied above ground utilities, roads).</p> <p>New projects within sage-grouse PHMA that may require future distribution and transmission lines would include the proposed distribution and transmission lines in their DDCT as part of the proposed disturbance. Lines permitted but not located in the above mentioned routes or a designated corridor will be counted towards the 5% disturbance calculation (line disturbance is equal to ROW width multiplied by length and includes all access roads, staging areas, and other surface disturbance associated with construction outside of the ROW).</p> <p>New Distribution Lines:</p> <p>New electric distribution lines would be buried where feasible. If not feasible, distribution lines may be authorized when effectively mitigated to protect greater sage-grouse and the Authorized Officer determines that overhead installation is the action alternative with the fewest adverse impacts. Agricultural and residential lines will be considered to be adequately mitigated for greater sage-grouse if constructed at least 0.6 mile from the lek perimeter with appropriate timing constraints and constructed to the latest APLIC standards. These ROW authorizations will be subject to approval by the State Director.</p> <p>PHMAs 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 proposed plan, including the RDFs and avoidance criteria presented in Appendix B of this document. The BLM is currently processing an application for Gateway South and the NEPA review for this project is well underway. The BLM is analyzing Greater Sage-Grouse mitigation measures through the project’s NEPA review process.</p>	<p>See all Standards and Guidelines in the Timing, Distance, Density, and Disturbance section and see <b>GRSG-INFRA-GL-001-Guideline</b>.</p> <p><b>GRSG-LR-SUA-GL-002-Guideline</b> – In priority habitat management areas and sagebrush focal areas, outside of existing designated corridors, 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 greater sage-grouse are being avoided. When new transmission lines and pipelines are not buried, locate them adjacent to existing transmission lines and pipelines.</p>
34	<p>Maintenance/replacement of existing structures would be allowed subject to valid and existing rights. Upgrades would be considered, subject to mandatory Required Design Features (RDF) (Appendix B).</p> <p>Existing guy wires should be removed or appropriately marked with bird flight diverters to make them more visible to sage-grouse in flight. Powerlines (distribution and transmission) will be designed to minimize wildlife related impacts and constructed to the latest APLIC standards.</p>	<p>See <b>GRSG-INFRA-GL-001-Guideline</b> at MA #10.</p>
35	<p>Where existing authorizations, ROWs, or SUAs have had some level of development (e.g., road, fence, and well) and are expired and are no longer in use, the site would be reclaimed by removing these features and restoring the habitat. Powerlines (distribution and transmission) will be designed to minimize wildlife related impacts and constructed to the latest APLIC standards.</p>	<p><b>GRSG-LR-SUA-ST-003-Standard</b> - In priority and general habitat management areas and sagebrush focal areas, when a lands special use authorization is revoked or terminated and no future use is contemplated, the authorization holder must remove overhead lines and other infrastructure in compliance with 36 CFR 251.60(i).</p>
	<p><b>Renewable Energy</b></p>	

36	<p>Wind energy development would be avoided in sage-grouse PHMA (Map 2-33), and not allowed unless it can be sufficiently demonstrated that the development activity would not result in declines of sage-grouse PHMA populations.</p> <p>Sufficient demonstration of “no declines” should be coordinated with the WGFD and USFWS. Areas that are currently unavailable due to the need to protect sensitive resources would remain unavailable to wind energy development<sup>1</sup>.</p>	<p><b>GRSG-WS-GL-001-Guideline</b> – In priority habitat management areas and sagebrush focal areas, restrict authorization of wind utility-scale and/or commercial energy development except for on-site power generation associated with existing industrial infrastructure (e.g., mine site).</p>
38	<p>The use of guy wires for MET tower supports would be avoided within sage-grouse PHMA. All existing and any new unavoidable guy wires should be marked with recommended bird deterrent devices.</p> <p>The siting of new temporary MET towers within sage-grouse PHMA would be avoided within 2 miles of occupied sage-grouse leks, unless they are out of the direct line of sight of the occupied lek.</p>	<p><b>GRSG-LR-SUA-GL-001-Guideline</b> - Authorization of new temporary MET towers should be avoided in priority habitat management areas and sagebrush focal areas within two miles of active greater sage-grouse leks, unless they are out of direct line of sight of the occupied lek.</p>
<b>Land Tenure Adjustments (Acquisitions, Land Exchanges, Transfers and Sales)</b>		
40	<p>Lands classified as PHMAs for Greater Sage-Grouse would be retained in federal management unless: (1) the agency can demonstrate that disposal of the lands will provide a net conservation gain to the Greater Sage-Grouse or (2) the agency can demonstrate that the disposal of the lands will have no direct or indirect adverse impact on conservation of the Greater Sage-Grouse.</p> <p>Exceptions would be considered where there is mixed ownership and land exchanges would allow for additional or more contiguous federal ownership patterns within PHMAs.</p> <p>For PHMAs with minority federal ownership, an additional, effective mitigation agreement would be included for any disposal of federal land. As a final preservation measure, consideration should be given to pursuing a permanent conservation easement.</p> <p>For lands in General Habitat Management Areas that are identified for disposal, the BLM will only dispose of such lands consistent with the goals and objectives of this plan, including, but not limited to, the land use plan goal to conserve, recover, and enhance sage-grouse habitat on a landscape scale.</p>	<p><b>GRSG-LR-LOA-ST-001-Standard</b> – In priority habitat management areas and sagebrush focal areas, do not approve land ownership adjustments that would result in a net loss or degradation of greater sage-grouse habitat. Exceptions include when there is mixed ownership and adjustments would allow for additional or more contiguous federal ownership patterns that support improved greater sage-grouse population trends and habitats.</p>
41	<p>Areas where acquisitions (including subsurface mineral rights) or conservation easements would benefit sage-grouse habitat would be identified.</p>	
42	<p>Sage-grouse habitat requirements would be utilized to prioritize parcels for exchange or acquisition within sage-grouse PHMA.</p>	<p>See GRSG-LR-LOA-ST-001-Standard at MA #40.</p>
43	<p>Within sage-grouse PHMA, non-mineral withdrawals would be evaluated to determine if the withdrawal action is consistent with sage-grouse conservation.</p>	<p><b>GRSG-LR-LW-GL-001-Guideline</b> – In priority habitat management areas and sagebrush focal areas, utilize land withdrawals as a tool, where appropriate and subject to valid existing rights, to prevent activities that will be detrimental to greater sage-grouse or their habitats.</p>
<b>Livestock Grazing Management</b>		
45	<p>The BLM/Forest Service would work cooperatively with permittees, lessees, and other landowners to develop voluntary grazing management strategies that integrate both public and private lands into single management units to improve sage-grouse habitat.</p>	
<b>Livestock Grazing Permit Monitoring</b>		
46	<p><b>GRSG-LG-GL-001-Guideline</b> - Grazing guidelines in table 3 should be applied in each of the seasonal habitats as displayed. If values in table 3 cannot be achieved based upon a site-specific analysis using Ecological Site Descriptions, long-term ecological</p>	

		<p>site capability analysis, or other similar analysis, adjust grazing management to move towards desired habitat conditions in table 3 consistent with the ecological site capability. Table 3 Do not use drought and degraded habitat condition to adjust values. Grazing guidelines in table 3 would not apply to isolated parcels of National Forest System lands that have less than 200 acres of greater sage-grouse habitat.</p> <p><b>GRSG-LG-GL-002-Guideline</b> – On the Thunder Basin National Grassland, if 90% or more of the allotment falls within nesting or brood rearing habitat, 25% of the allotment would be exempted from the breeding/nesting residual perennial grass height guidelines in Table 3.</p> <p><b>GRSG-LG-GL-008-Guideline</b> – On the Thunder Basin National Grassland, where general habitat management areas overlap with Management Area 8.4 (Mineral Production), Management Area 3.63 (Black-footed Ferret Reintroduction Habitat), or other designated areas for short-grass species, livestock grazing should be managed to meet the objectives for that Management Area.</p>
	<b>Permit Renewals</b>	
48	The NEPA analysis for renewals and modifications of livestock grazing permits/leases that include lands within SFAs and PHMAs will include specific management thresholds based on GRSG Habitat Objectives Table and Land Health Standards (43 CFR 4180.2) and defined responses that will allow the authorizing officer to make adjustments to livestock grazing without conducting additional NEPA.	See GRSG-LG-GL-001-Guideline in MA #46.
49	<p>BLM monitoring would be used to evaluate progress toward achieving land health standards within PHMAs and, where not achieved, to determine if existing grazing management practices or levels of grazing use on public lands are significant factors in failing to meet, maintain or make progress towards achieving the standards and conform with the guidelines, which through this process will identify appropriate actions to address non-achievement and non-conformance.</p> <p>Allotments within SFAs, followed by those within PHMAs, and focusing on those containing riparian areas, including wet meadows, will be prioritized for field checks to help ensure compliance with the terms and conditions of the grazing permits. Field checks could include monitoring for actual use, utilization, and use supervision.</p> <p>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 SFAs followed by PHMAs outside of the SFAs. In setting workload priorities, precedence will be given to existing permits/leases in these areas not meeting Land Health Standards, with focus on those containing riparian areas, including wet meadows. The BLM may use other criteria for prioritization to respond to urgent natural resource concerns (e.g., fire) and legal obligations.</p>	See GRSG-LG-GL-001-Guideline in MA #46.
50	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.	<b>GRSG-LG-GL-003-Guideline</b> – In priority habitat management areas and sagebrush focal areas, when livestock grazing permits and/or grazing preference are voluntarily relinquished, consider closure of grazing allotments, pastures, or portions of pastures, or managing the allotment as a forage reserve where removal of livestock grazing would enhance the ability to achieve desired habitat conditions displayed in Table 2.

52	<p>When periods of drought occur, where appropriate, the AO would evaluate strategies to address drought through coordination with grazing permittee/lessee and annual billings processes.</p> <p>In cooperation with livestock grazing permittees/lessees, drought contingency plans would be developed at the appropriate landscape unit that provide for a consistent/appropriate BLM/Forest Service response. Contingency plans should establish strategies for addressing ongoing drought and post-drought recovery.</p>	
<b>Range Development Projects</b>		
53	<p>In sage-grouse GHMA and PHMA, existing range improvements (e.g., fences, livestock/wildlife watering facilities) would continue to be evaluated and modified when necessary.</p> <p>The potential risk to Greater Sage-Grouse and its habitats from existing structural range improvements would be evaluated. The potential for modification of those structural range improvements identified as posing a risk would be addressed.</p> <p>Supplements and supplemental feeding would continue to be authorized where appropriate.</p>	
<b>Livestock Trailing</b>		
54	<p>Livestock trailing that is authorized would include a trailing plan to utilize non-habitat to the extent possible, include specific routes and timeframes for trailing, utilize existing trails, and avoid stopovers on occupied leks, as appropriate.</p>	<p><b>GRSG-LG-GL-005-Guideline</b> –Trailing livestock should be routed through non-habitat, to the extent feasible or in areas that will minimize impacts to greater sage-grouse and their habitats. Specific routes and timeframes should be identified, existing trails should be used, and stopovers on occupied leks should be restricted.</p> <p><b>GRSG-LG-GL-004-Guideline</b> - Domestic sheep bedding areas and herder camps should be located in areas of least conflict with greater sage-grouse seasonal uses. Bedding sheep and locating camps within 0.6 mi of a lek in priority habitat management areas and sagebrush focal areas should be avoided during lekking (March 1 to May 15).</p>
<b>Riparian Area Management</b>		
55	<p>Grazing between riparian habitats and upland habitats would be balanced to promote the production and availability of beneficial forbs to Greater Sage-Grouse for use during nesting and brood-rearing. Grazing in meadows, mesic habitats, and riparian pastures also would be balanced to promote the production and availability of beneficial grasses and forbs for use during late brood-rearing within sage-grouse PHMA, while maintaining upland conditions and functions.</p>	<p>See GRSG-LG-GL-001-Guideline at MA #46</p>
56	<p>Range improvement projects would be planned and authorized in a way that contributes to rangeland health and maintains and/or improves Greater Sage-Grouse and its habitat.</p>	<p><b>GRSG-LG-GL-006-Guideline</b> – In priority habitat management areas and sagebrush focal areas, new permanent livestock facilities (except fences) should not be constructed within 0.6 miles from the perimeter of occupied leks. In general habitat management areas, new permanent livestock facilities should not be constructed within 0.25 miles of occupied leks.</p>
57	<p>Existing water developments associated with springs and seeps would be evaluated and associated pipelines/structures to those developments having a negative effect on sage-grouse PHMA would be modified.</p>	
<b>Minerals Management</b>		
<b>Exceptions to lease stipulations, Conditions of Approval, and terms and conditions</b>		
58	<p>Exceptions waivers, and modifications to lease stipulations, COAs, and T&amp;Cs, etc. for sage-grouse would continue to be considered on a case-by-case basis consistent with approved LUPs and other BLM policy and regulations as they relate to exceptions within sage-grouse PHMA and GHMA.</p>	<p><b>GRSG-TDDD-ST-010-Standard</b> – On a case-by-case basis, and only when it can be demonstrated that activity will not cause declines in greater sage-grouse populations, allow exceptions, modifications, and waivers for Standards GRSG-TDDD-ST-003, 004, 005, 006, 007, 008, and 009 . The authorized officer may grant an exception if a review determines that the action, as proposed or conditioned, would not impair the function or utility of the site for the current or subsequent seasonal habitat, life-history, or behavioral needs of greater sage-grouse.</p>

<b>Fluid Minerals Unleased Estate</b>		
60	The BLM would allow oil and gas leasing consistent and subject to the leasing stipulations analyzed in the timing, distance, disturbance, and density restrictions sections (Map 2-8).	<b>GRSG-M-FMUL-ST-001-Standard</b> - In priority and general habitat management areas and sagebrush focal areas, new oil and gas leases may be offered consistent and subject to the leasing stipulations displayed in the timing, distance, disturbance, and density restrictions standards in section GRSG-TDDD.
61	A minimum lease size of 640 contiguous acres of federal mineral estate would be applied within sage-grouse PHMA.  Preliminary parcels reviewed for possible offering in a lease sale should comply with this minimum lease size. Expressions of interest that are less than this minimum lease size would be evaluated and modified by the BLM to meet the minimum lease size, where possible, prior to review for possible offering in a lease sale.	The Forest Service does not have jurisdiction over lease size requirements.
62	Geophysical exploration projects that are designed to minimize habitat fragmentation within sage-grouse PHMA would be allowed, except were prohibited or restricted by existing LUP decisions.	<b>GRSG-M-FMUL-ST-002-Standard</b> – In priority habitat management areas and sagebrush focal areas, require geophysical exploration projects to be designed to minimize habitat fragmentation.
63	In cases where federal oil and gas leases have been issued with stipulations varying from those in Appendix E for the protection of sage-grouse or their habitats being provided in the applicable LUP decision, as revised or amended, their inclusion as permit COAs would be considered when approving exploration and development activities through completion of the environmental record of review (43 CFR 3162.5 and 36 CFR 228.108), including appropriate documentation of compliance with NEPA.  Overall consideration shall be given to minimizing the impact to sage-grouse through a project design that avoids, minimizes, reduces, rectifies, and/or adequately compensates for direct and indirect impacts to sage-grouse PHMA or use and includes applicable and technical COAs. Selection and application of these measures shall be based on current science and research on the effects to important breeding, nesting, brood-rearing, and wintering areas. For proposed operations in PHMA, the Surface Use Plan of Operations (see 43CFR 3162.3-1(f)) shall address, at a minimum, the anticipated noise, density and amount of disturbance, mechanical movement (e.g., pump jacks), permanent and temporary facilities, traffic, phases of development over time, offsite mitigation, and expected periods of use associated with the proposed project. Seasonal habitats or project features related to potential sage-grouse impacts that are not addressed in the SUPO based on site-specific or project-specific considerations shall be noted in the project file, along with a rationale for not including them.  In this process the BLM would evaluate, among other things:  1. Whether the conservation measure is “reasonable” (43 CFR 3101.1-2) and consistent with valid existing rights  2. Whether the action is in conformance with the approved LUP; and the effectiveness of the proposed mitigation measures.  The BLM would work with project proponents in these situations to promote measurable sage-grouse conservation objectives such as, but not limited to, consolidation of project related infrastructure to reduce habitat fragmentation and loss and to promote effective conservation of seasonal habitats and connectivity areas that support population management objectives set by the State.	<b>GRSG-M-FML-ST-001-Standard</b> – In priority habitat management areas and sagebrush focal areas when approving the Surface Use Plan of Operation portion of the Application for Permit to Drill on existing leases that are not yet developed, require that leaseholders avoid and minimize surface disturbances and disruptive activities. If impacts from surface disturbance and disruptive activities remain after avoidance and minimization strategies, require leaseholders to provide timely, durable compensatory mitigation projects to offset residual impacts. Valid existing rights would be recognized.  <b>GRSG-M-FML-ST-004-Standard</b> – In priority and general habitat management areas and sagebrush focal areas, when authorizing development of fluid mineral resources, prioritize development in non-habitat areas first and then in the least suitable habitat for greater sage-grouse, subject to valid existing rights, law, and regulations.  <b>GRSG-M-FML-GL-001-Guideline</b> – In priority and general habitat management areas and sagebrush focal areas on existing leases, operators should be encouraged to reduce disturbance to greater sage-grouse habitat. At the time of approval of the Surface Use Plan of Operation portion of the Application for Permit to Drill, terms and conditions should be included to reduce disturbance to greater sage-grouse habitat, where appropriate and feasible and consistent with the rights granted to the lessee. Valid existing rights would be recognized and respected.  See <b>GRSG-M-FML-GL-002-Guideline</b> at MA #17.

	The BLM would continue to work with project proponents (including those from within the BLM) and the WGFD to site their projects in locations that meet the purpose and need for their project, but have been determined to contain the least sensitive habitats (based on vegetation, topography, or other habitat features) and resources whether inside or outside of PHMA. Valid existing rights would be recognized and respected.	
<b>Fluid Minerals Leased Estate</b>		
66	Master Development Plans would be considered and encouraged for projects involving multiple proposed disturbances within sage-grouse PHMA.	
67	Within sage-grouse PHMA, unitization would be encouraged as a means of minimizing adverse impacts to sage-grouse to reduce fragmentation and surface disturbing and disruptive activities. Require unitization when deemed necessary for proper development and operation of an area or to facilitate more orderly (e.g., phased and/or clustered) development as a means of minimizing adverse impacts to resources, including Greater Sage-Grouse, so long as the unitization plan adequately protects the rights of all parties, including the United States.	<b>GRSG-M-FMO-GL-005-Guideline</b> – In priority and general management areas and sagebrush focal areas 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.
68	For proposed actions in sage-grouse PHMA, determine whether a categorical exclusion is applicable and if so, closely examine the extraordinary circumstances, if applicable, to determine whether one or more exists that would require preparation of a NEPA analysis. If a categorical exclusion applies, and no extraordinary circumstances exist, determine whether preparing a NEPA analysis would help inform decision making.	
69	A reclamation bond would be required on all projects that is commensurate with the scope, scale, size of the project within sage-grouse PHMAs. Partial bonding may be appropriate depending on these factors.	
69a	No similar action	<b>GRSG-M-FML-ST-002-Standard</b> – In priority habitat management areas and sagebrush focal areas, 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 displayed in Table 2.
71	Where the federal government owns the mineral estate, 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.	The Forest Service has no jurisdiction over mineral estate when they are not the surface owner. The BLM is solely responsible for mineral estate under non-federal surface ownership.
72	Where the federal government owns the surface and the mineral estate is in non-federal ownership, 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.	<b>GRSG-M-FML-GL-003-Guideline</b> - In priority and general habitat management areas and sagebrush focal areas, where the federal government owns the surface and the mineral estate is in non-federal ownership coordinate with the mineral estate owner/lessee to apply appropriate stipulations, conditions of approval, conservation measures and required design features to the appropriate surface management instruments to the maximum extent permissible under existing authorities.
<b>Solid Leasable Minerals</b>		
75	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 Greater Sage-Grouse for purposes of the suitability criteria set forth at 43 CFR 3461.5(o)(1).	<b>GRSG-M-CM-ST-002-Standard</b> – Priority habitat management areas and sagebrush focal areas are essential habitat for maintaining greater sage-grouse for purposes of the suitability criteria set forth at 43 CFR 3461.5(o)(1).
76	Upon receipt of a coal lease application proposing underground mining methods that include surface operations and impacts within sage-grouse PHMAs, Criterion 15 would be applied and	<b>GRSG-M-CMUL-ST-001-Standard</b> – Apply all restrictions listed in the Timing, Distance, Density and Disturbance section to coal exploration and new coal lease projects.

	<p>the area would be identified as suitable for further coal leasing consideration after consultation with the state and, where applicable, surface management agency to determine that all or certain stipulated methods of coal mining will not have a significant long-term impact on sage-grouse. Stipulated methods may include, but not limited to, underground mining methods with no placement of surface facilities.</p> <p>Unsuitability is not applied to underground operations without surface impacts (43 CFR 3461.1) This would be consistent with IM WY-2012-019, which says that the BLM will assess potential impacts to sage-grouse through the NEPA process, and that the State regulatory agency would apply this mitigation, as well protective measures consistent with the State Policy for solid leasable mining action at the permitting stage.</p>	
77	<p>Coal exploration activities could be allowed in sage-grouse PHMAs if they can be completed in compliance to surface occupancy and disturbance and density stipulations analyzed through the DDCT process.</p>	<p>See GRSG-M-CMUL-ST-001-Standard at MA #76.</p> <p><b>GRSG-M-CML-GL-001-Guideline</b> – In priority and general habitat management areas and sagebrush focal areas, when coal leases are subject to readjustment, additional requirements should be included in the readjusted lease to protect and reduce threats to greater sage-grouse and their habitats to conserve, enhance, and restore habitat for long-term viability.</p>
<b>Solid Leasable Minerals (Other than Coal and Oil Shale)</b>		
78	<p>Exploration licenses and prospecting permits would be considered with appropriate mitigating measures.</p> <p>All non-energy leasable mineral activities would be considered in sage-grouse PHMAs, provided that the activities can be completed in compliance to surface occupancy and disturbance and density stipulations (Map 2-28) analyzed through the DDCT process.</p>	<p><b>GRSG-M-NEL-GL-001-Guideline</b> – In priority and general habitat management areas and sagebrush focal areas, at the time of issuance of prospecting permits, exploration licenses and leases, or readjustment of leases for non-energy leasable minerals, the Forest Service should provide recommendations to the Bureau of Land Management for the protection of greater sage-grouse and their habitats. Apply all restrictions listed in the Timing, Distance, Density and Disturbance section to non-energy leasable minerals exploration and development.</p> <p><b>GRSG-M-NEL-GL-002-Guideline</b> - In priority and general habitat management areas and sagebrush focal areas, the Forest Service should recommend to the Bureau of Land Management that expansion or readjustment of existing leases avoid, minimize, or mitigate the effects to greater sage-grouse and their habitat.</p>
<b>Locatable Mineral Activities</b>		
79	<p>1,761,547 acres are withdrawn from mineral entry for the protection of sensitive resources.</p> <p>252,161 acres within SFAs (see management action 139 for identification of SFAs) would be recommended for withdrawal from the General Mining Act of 1872, subject to valid existing rights. 894,061 acres would be considered for recommendation for withdrawal from mineral entry, based on risk to sage-grouse and its habitat from conflicting locatable mineral potential and development. A total of approximately 20,357,626 acres are open to locatable mineral entry (Map 2-23). Operators may be requested to submit modifications to the accepted notice or approved plan of operations so that the operations minimally impact PHMAs. The AO may convey to the operator suggested conservation measures, based upon the notice or plan level operations and the geographic area of those operations [also called the project area which is defined in 43 CFR 3809.5 and 36 CFR 228.3.</p> <p>These suggested conservation measures include measures that support the overall goals and objectives of the core population area strategy, though measures listed for protection of sage-grouse breeding, nesting, brood-rearing, and wintering may not be</p>	<p><b>GRSG-M-LM-ST-001-Standard</b> – In priority habitat management areas and sagebrush focal areas, approve Plans of Operation with mitigation to protect greater sage-grouse and their habitats, consistent with the rights of the mining claimant as granted by the Mining Law of 1872, as amended. Apply all restrictions listed in the Timing, Distance, Density and Disturbance section (GRSG-TDDD) to locatable minerals exploration and development.</p> <p><b>GRSG-M-LM-ST-002-Standard</b> – The disturbance cap described in GRSG-TDDD-ST-009-Standard will not be applied to foreclose development of locatable minerals on unpatented claims located under the General Mining Act of 1872, as amended; the disturbance from locatable mining will be accounted for in determining the percent disturbance and whether the cap has been exceeded.</p>

	<p>reasonable or applicable to the BLM’s determination of whether the proposed operations will cause unnecessary or undue degradation under 43 CFR 3809.5 and 36 CFR 228.3. The request containing the suggested conservation measures must make clear that the operator’s compliance is not mandatory.</p> <p>Notices or Plans of Operation, or modifications thereto, submitted following the issuance of this guidance: As part of the 15 day completeness review of notices [or modifications thereto] and 30 day completeness review of plans of operations [or modifications thereto], the proposed project area(s) where exploration, development, mining, access and reclamation would take place should be reviewed for overlap of PHMAs in the corporate GIS database. If there is overlap, the BLM AO may notify the operator of ways that they may minimize impacts to PHMAs and request the operator to amend its notice or plan to include such measures. The request to amend the submitted notice or plan of operations must make clear that the operator’s compliance is not mandatory and that including such measures is not a requirement for completeness of either the notice or a plan of operations, nor is it a condition of acceptance of the notice or approval of the plan of operations.</p>	
	<b>Salable Minerals</b>	
80	All salable mineral activities within sage-grouse PHMAs would be considered, provided they can be completed in compliance within surface occupancy, seasonal restrictions, and disturbance and density stipulations (Map 2-18) analyzed through the DDCT process.	<b>GRSG-M-MM-ST-001-Standard</b> – Apply all restrictions listed in the Timing, Distance, Density and Disturbance section to authorizations for mineral material sales and free use.
81	Closure and restoration of salable mineral pits no longer in use would be considered to meet sage-grouse habitat conservation objectives. Emphasis would be given to reclamation/restoration of sage-grouse PHMAs as a viable long term goal to improve sage-grouse habitat.	<b>GRSG-M-MM-ST-002-Standard</b> - Permits for mineral material operations in priority and general habitat management areas and sagebrush focal areas, must include appropriate requirements for reclamation of the site to restore, enhance, or maintain desired habitat conditions displayed in Table 2.
<b>Recreation and Visitor Services</b>		
	<b>Outdoor Recreation Management</b>	
82	BLM SRPs would be allowed in sage-grouse PHMAs, unless negative impacts to sage-grouse cannot be adequately mitigated.	<p><b>GRSG-R-ST-001-Standard</b> – In priority and general habitat management areas and sagebrush focal areas, do not authorize temporary recreation uses (i.e., facilities or activities) that result in loss of habitat or would have long-term (i.e., greater than 5 years) negative impact on greater sage-grouse or their habitats.</p> <p><b>GRSG-R-GL-001-Guideline</b> – In priority and general habitat management areas and sagebrush focal areas, terms and conditions that protect and restore greater sage-grouse habitats within the permit area should be included in new recreation special use authorizations. During renewal, amendment, or reauthorization, existing permits and operating plans should also be modified.</p>
82a	In PHMAs, do not construct new recreation facilities (e.g., campgrounds, trails, trailheads, staging areas) unless the development would have a net conservation gain to Greater Sage-Grouse habitat (such as concentrating recreation, diverting use away from critical areas, etc.), or unless the development is required for visitor safety or resource protection.	<b>GRSG-R-GL-002-Guideline</b> – In priority habitat management areas and sagebrush focal areas, new recreational facilities or expansion of existing recreational facilities (e.g., roads, trails, campgrounds), including special use authorizations for facilities and activities, should not be approved unless the development results in a net conservation gain to greater sage-grouse and/or their habitats (such as concentrating recreation, diverting use away from critical areas, etc.) or the development is required for visitor safety.
<b>Special Designations and Other Management Areas</b>		

84	New sage-grouse conservation ACECs would not be designated.	This LUP amendment would not designate Greater Sage-Grouse Special Interest Areas.
<b>Special Status species</b>		
4	Include the collection of baseline data and outline post-project monitoring components into project planning, as appropriate and necessary.	
12	<p>Existing notices and approved plans of operations under 43 CFR 3809<sup>7</sup>: For projects that overlap PHMAs, operators may be requested to submit modifications to the accepted notice or approved plan of operations so that the operations minimally impact PHMAs (core only). The AO may convey to the operator suggested conservation measures, based upon the notice or plan level operations and the geographic area of those operations (also called the project area, which is defined by the BLM in 43 CFR 3809.5 and the Forest Service in 36 CFR 228.3). These suggested conservation measures include measures that support the overall goals and objectives of the priority/core population area strategy and may not be reasonable or applicable to the BLM/Forest Service's determination of whether the proposed operations will cause unnecessary or undue degradation under 43 CFR 3809.5 or likely cause a significant disturbance of surface resources under 36 CFR 228.4. The request containing the suggested conservation measures must make clear that the operator's compliance is not mandatory.</p> <p>Notices or plans of operation, or modifications thereto, submitted following the issuance of this guidance: As part of the 15-day completeness review of notices (or modifications thereto) and 30-day completeness review of plans of operations (or modifications thereto), the proposed project area(s) where exploration, development, mining, access and reclamation would take place should be reviewed for overlap of sage-grouse PHMAs in the corporate GIS database. If there is overlap, the BLM/Forest Service AO may notify the operator of ways that they may minimize impacts to PHMAs (core only) and request the operator to amend its notice or plan to include such measures. The request to amend the submitted notice or plan of operations must make clear that the operator's compliance is not mandatory and that including such measures is not a requirement for completeness of either the notice or a plan of operations, nor is it a condition of acceptance of the notice or approval of the plan of operations.</p>	See <b>GRSG-M-LM-ST-001-Standard</b> at MA #79.
16	<p>The official Wyoming sage-grouse lek database is maintained by the WGFD in accordance with Appendix 4B of the Umbrella Memorandum of Understanding (MOU) between the WGFD and BLM/Forest Service (WGFD and BLM 1990).</p> <p>The MOU states that agencies will meet at least annually to coordinate and review the accuracy of data, and incorporate the most up-to-date information.</p>	
137	<p>The Greater Sage-Grouse adaptive management plan (Appendix D) provides regulatory assurance that unintended negative impacts to Greater Sage-Grouse habitat will be addressed before consequences become severe or irreversible.</p> <p>Adaptive management triggers are essential for identifying when potential management changes are needed in order to continue meeting Greater Sage-Grouse conservation objectives. With respect to sage-grouse, all regulatory entities in Wyoming, including the BLM and FS, use soft and hard triggers. Soft and hard triggers are focused on three metrics: 1) number of active</p>	<b>GRSG-GRSGH-ST-002-Standard</b> - When: 1) annual lek counts, wing counts, aerial surveys, habitat monitoring or Density Disturbance Calculation Tool evaluations show deviation from normal annual fluctuations in greater sage-grouse habitat or populations for two consecutive years that may indicate a long-term downward trend; or 2) monitoring identifies other negative population or habitat anomalies for greater sage-grouse, conduct an evaluation to determine causal factors and develop an appropriate response strategy. This strategy may include curtailment of

<sup>7</sup> These regulations apply to the exploration and development of locatable minerals on placer claims and lode claims, as well as exploration on tunnel sites and mineral processing operations on mill sites. The location and maintenance of claims and sites are regulated under 43 CFR Subpart 3830.

	<p>leks, 2) acres of available habitat, and 3) population trends based on annual lek counts.</p> <p><u>Soft Triggers Response:</u></p> <p>Soft triggers require immediate monitoring and surveillance to determine causal factors and may require curtailment of activities in the short- or long-term, as allowed by law. The project level adaptive management strategies will identify appropriate responses where the project’s activities are identified as the causal factor. The management agency (BLM and/or Forest Service) and the AMWG will implement an appropriate response strategy to address causal factors not attributable to a specific project or to make adjustments at a larger regional or state-wide level.</p> <p><u>Hard Trigger Response:</u></p> <p>Upon determination that a hard trigger has been tripped, the BLM and/or Forest Service will immediately defer issuance of discretionary authorizations for new actions for a period of 90 days. In addition, within 14 days of a determination that a hard trigger has been tripped, the AMWG will convene to develop an interim response strategy and initiate an assessment to determine the causal factor or factors (hereafter called the causal factor assessment).</p>	<p>activities that may adversely affect greater sage-grouse populations or habitat.</p> <p><b>GRSG-GRSGH-ST-003-Standard</b> - Variability in: 1) number of active leks; 2) acres of available greater sage-grouse habitat; or 3) greater sage-grouse population trends based on lek counts can provide catastrophic indicators that greater sage-grouse is not responding to conservation measures set forth in the plan or that large scale negative impacts to greater sage-grouse populations or habitat are occurring. If two of the preceding three indicators exceed 60% of normal variability in a year, or one of the preceding three indicators exceeds 40% of normal variability for three out of any five years, desired conservation results are not being attained and within 14 days the Adaptive Management Working Group (representatives from the Bureau of Land, Forest Service, US Fish and Wildlife Service, and State of Wyoming) will convene to develop an interim response strategy and initiate an assessment to determine the causal factors.</p>
138	<p>The Wyoming Greater Sage-Grouse 9-Plan LUP Amendment will include the requirement for the development of EIS /project-level adaptive management strategies in support of the population management objectives for Greater Sage-Grouse set by the State of Wyoming (State of WY EO 2011-05). These adaptive management strategies will be developed in partnership with the WGFD, project proponents, partners, and stakeholders and will incorporate the best available science. The purpose of these strategies is to address localized Greater Sage-Grouse population declines by providing the framework in which management will be changed if monitoring identifies significant negative population impacts. The current population objective is to maintain at least 67% of the 2005-2008 Greater Sage-Grouse Core Area Population within the State of Wyoming.</p>	
<b>Travel Management</b>		
86	<p>The Casper Field Office Poison Spider OHV Park (290 acres) would remain as an “open” OHV area.</p> <p>The non-sand dune portions of the following OHV “open” areas within sage-grouse PHMAs would be limited to existing roads and trails:</p> <ol style="list-style-type: none"> <li>1. Rawlins Field Office: Dune Pond Cooperative Management Area.</li> <li>2. Rock Springs Field Office: Portion of the Greater Sand Dunes Recreation Area.</li> </ol>	<p>There are no “open” OHV areas on National Forest System Lands included in this LUP amendment.</p>
87	<p>In PHMAs and GHMAs, 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).</p> <p>Temporary closure or restriction orders under these authorities are enacted at the discretion of the authorized officer to resolve management conflicts and protect persons, property, and public lands and resources. Where an authorized officer determines that off-highway vehicles are causing or will cause considerable adverse effects upon soil, vegetation, wildlife, wildlife habitat, cultural resources, historical resources, threatened or endangered species, wilderness suitability, other authorized uses, or other resources, the affected areas shall be immediately closed to the type(s) of vehicle causing the adverse effect until the adverse effects are eliminated and measures implemented to prevent recurrence. (43 CFR 8341.2) A closure or restriction order should be considered only after other management strategies and alternatives have been explored. The duration of temporary</p>	<p>Motorized travel is currently limited to designated roads and trails on National Forest System lands.</p>

	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.	
88	New primary and secondary roads would be avoided within 1.9 miles of the perimeter of occupied sage-grouse leks within sage-grouse PHMA. Other new roads would be prohibited within 0.6 miles of the perimeter of occupied sage-grouse leks within PHMA.	<b>GRSG-RT-ST-001-Standard</b> - Restrict construction of new category level 4 and 5 roads within 1.9 miles of the perimeter of occupied greater sage-grouse leks within priority habitat management areas and sagebrush focal areas unless construction allows decommissioning of an existing route that negatively affects greater sage-grouse. <b>GRSG-RT-ST-002-Standard</b> - Do not authorize any category of road construction within 0.6 miles from the perimeter of occupied leks in priority habitat management areas and sagebrush focal areas or 0.25 miles from the perimeter of occupied leks in general habitat management areas as described in GRSG-TDDD-ST-001 and 002-Standards.
89	Within sage-grouse PHMA, no upgrading of existing routes that would change route category or capacity would be allowed unless the upgrading would have minimal impact on sage-grouse in sage-grouse PHMA, was necessary for motorist safety, or eliminated the need to construct a new road.	<b>GRSG-RT-ST-003-Standard</b> - In priority habitat management areas and sagebrush focal areas, do not allow upgrading of existing routes that would change route category (level 1 through 5) or capacity unless the upgrading would have minimal impact on greater sage-grouse, is necessary for motorist safety, or eliminates the need to construct a new road.
90	In sage-grouse PHMAs, existing roads or realignments would be used to access valid existing rights that are not yet developed. If valid existing rights could not be accessed via existing roads, any new road would be constructed to the absolute minimum standard necessary, and the surface disturbance would be added to the total disturbance in the sage-grouse PHMA. If that disturbance exceeds 5% for that area, additional, effective mitigation necessary would be evaluated and implemented to offset the resulting loss of sage-grouse habitat.	<b>GRSG-RT-ST-004-Standard</b> - If necessary to construct new roads and trails in priority habitat management areas or sagebrush focal areas for one of the reasons listed in GRSG-RT-ST-003-Standard or to access valid existing rights, limit construction to the minimum standard, length, and number and avoid, minimize, and mitigate impacts. See the Density Disturbance Calculation information referenced in Appendix I.
91	For roads, primitive roads and trails not designated in travel management plans within sage-grouse PHMAs, natural reclamation of roads and trails would be allowed in appropriate situations where additional resource damage is not foreseeable. This would include primitive route/roads that were not designated in Wilderness Study Areas and within lands with wilderness characteristics that have been selected to be managed to retain those characteristics for protection.	<b>GRSG-RT-GL-003-Guideline</b> – In priority and general habitat management areas and sagebrush focal areas, when decommissioning roads and unauthorized routes, restoration activity should be designed to move habitat towards desired conditions displayed in Table 2.
92	Within sage-grouse PHMAs, when reseeding roads and trails, appropriate seed mixtures would be used and the use of transplanted sagebrush would be considered.	See <b>GRSG-GRSGH-GL-006-Guideline</b> shown at MA #100.
<b>Vegetation Management</b>		
93	Within sage-grouse PHMA and GHMA, the BLM would manage for vegetation composition and structure that reflects ESD or other methods that reference site potential or comparable standard to achieve sage-grouse and other resource objectives.	<b>GRSG-GRSGH-GL-007-Guideline</b> - When breeding and nesting habitat overlaps with other seasonal habitats, habitat should be managed for breeding and nesting desired habitat conditions displayed in Table 2.
94	Within sage-grouse PHMAs in northeast Wyoming (as mapped in WY EO 2011-5), vegetation treatments in nesting and wintering habitat that would reduce sagebrush canopy to less than 15% would not be conducted.	<b>GRSG-GRSGH-GL-002-Guideline</b> - Within priority habitat management areas and sagebrush focal areas in northeast Wyoming, vegetation treatments in nesting and wintering habitat that would reduce sagebrush canopy to less than 15% should be restricted.
95	For vegetation treatments in sagebrush within sage-grouse PHMAs, refer to Appendix A, WGFD Protocols for Treating Sagebrush to Benefit Sage-Grouse (WGFD 2011, as updated) and	<b>GRSG-GRSGH-GL-001-Guideline</b> – Sagebrush removal in priority habitat management areas and sagebrush focal areas and in

	<p>BLM Washington Office Instruction Memorandum 2013-128128 (Sage-grouse Conservation Related to Wildland Fire and Fuels Management).</p> <p>These recommended protocols would be used in determining whether proposed treatment constitutes a “disturbance” that would contribute toward the 5% threshold within sage-grouse PHMA maintenance. Additionally, these protocols would be used to determine whether the proposed treatment configuration would be expected to have neutral or beneficial impacts for PHMA (core only) populations or if they represent additional habitat loss or fragmentation.</p> <p>Treatments to enhance sagebrush/grasslands habitat for sage-grouse would be evaluated based upon habitat quality and the functionality/use of treated habitats post-treatment.</p> <p>The BLM would work collaboratively with partners at the state and local level to maintain and enhance sage-grouse habitats.</p>	wintering habitat should be restricted unless necessary to support attainment of desired habitat conditions displayed in Table 2.
96	<p>For vegetation treatments in sagebrush within PHMAs, refer to Appendix A, WGFD Protocols for Treating Sagebrush to Benefit Sage-Grouse (WGFD 2011, as updated). These recommended protocols, subject to seasonal conditions of approval, would be used in determining whether proposed treatment constitutes a “disturbance” that would contribute toward the 5% threshold for habitat maintenance.</p> <p>Additionally, these protocols would be used to determine whether the proposed treatment configuration would be expected to have neutral or beneficial impacts for PHMA (core only) populations or if they represent additional habitat loss or fragmentation.</p> <p>Treatments to enhance sagebrush/grasslands habitat for sage-grouse would be evaluated based upon habitat quality and the functionality/use of treated habitats post-treatment.</p> <p>The BLM would work collaboratively with partners at the state and local level to maintain and enhance sage-grouse habitats.</p> <p>Seasonal restriction would be applied, as needed, for implementing fuels management treatments according to the type of seasonal habitat present.</p>	See <b>GRSG-GRSGH-GL-001-Guideline</b> shown at MA #95.
97	Grazing would be deferred on treated areas for two full growing seasons unless vegetation objectives or vegetation recovery indicates a shorter or longer rest period is necessary based on vegetation monitoring results.	Grazing would be deferred on treated areas until vegetation objectives or appropriate vegetation recovery is achieved.
98	For vegetation treatments in sagebrush within sage-grouse PHMAs, refer to Appendix A, WGFD Protocols for Treating Sagebrush to Benefit Sage-Grouse (WGFD 2011, as updated).	
	<b>Vegetation Reclamation</b>	
99	<p>Reclamation of surface disturbances in sage-grouse PHMAs would be consistent with the Wyoming Reclamation Policy (BLM 2009a) and Appendix C.</p> <p>A monitoring plan would be developed for each restoration or reclamation project and reporting progress and changes in resource condition.</p>	<b>GRSG-GRSGH-ST-001-Standard</b> – Design habitat restoration projects to move towards the desired conditions displayed in Table 2 and incorporate the concepts outlined in Appendix C Reclamation Plan and Appendix D Monitoring Framework.
100	Areas for vegetation restoration and/or restoration criteria that include state sage-grouse conservation plans and appropriate local information would be identified. The use of native plants and seeds for restoration would be required unless the probability for success is low (non-native plants and seeds may be used as long as they meet sage-grouse habitat objectives), and restoration	<b>GRSG-GRSGH-GL-006-Guideline</b> - In priority and general habitat management areas and sagebrush focal areas, native plant species should be emphasized to restore, enhance, or maintain desired habitat conditions displayed in Table 2.

	<p>management would be designed to obtain long-term persistence based on ESD.</p> <p>Reestablishment of sagebrush cover and desirable understory plants would be the highest priority for restoration efforts.</p> <p>Landscape patterns that most benefit sage-grouse would be restored and created, considering potential changes in climate.</p>	
101	<p>Within sage-grouse PHMAs, implementation of restoration projects would be prioritized based on environmental variables that improve chances for project success in areas most likely to benefit sage-grouse.</p> <p>Restoration would be prioritized in seasonal habitats that are thought to be limiting sage-grouse distribution and/or abundance.</p>	
102	<p>Where probability of success or native seed availability is low or where there is a specific identified purpose that cannot be met with natives, non-native seeds could be used provided they meet sage-grouse habitat conservation objectives.</p> <p>The use of native seeds for fuels management treatment would be prioritized based on availability, adaptation (site potential), and probability of success. Where probability of success or native seed availability is low, non-native seeds may be used to meet Greater Sage-Grouse habitat objectives to trend toward restoring the fire regime. When reseeding, use fire resistant native and non-native species, as appropriate, to provide for fuel breaks.</p> <p>Native seed allocation would be prioritized for use in sage-grouse habitat.</p>	See <b>GRSG-GRSGH-GL-006-Guideline</b> shown at MA #100.
103	<p>Post ES&amp;R and BAER management would be designed 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 ES&amp;R and BAER projects to benefit sage-grouse (Eiswerth and Shonkwiler 2006).</p>	
104	<p>The role of existing seedings that are currently composed of primarily introduced perennial grasses in and adjacent to sage-grouse PHMAs would be evaluated to determine if they should be restored to sagebrush or habitat of higher quality for sage-grouse. If these seedings are part of an AMP/Conservation Plan or if they provide value in conserving or enhancing the rest of the PHMAs, no restoration would be necessary.</p> <p>The compatibility of these seedings for sage-grouse habitat or as a component of a grazing system would be assessed during the land health assessments (or other analyses [Forest Service only]) (Davies et al. 2011).</p>	
105	<p>Priority would be given for implementing specific sage-grouse habitat restoration projects in areas invaded by annual grasses first to sites that are adjacent to or surrounded by sage-grouse PHMAs. Areas invaded by annual grasses would be second priority for restoration when the sites are not adjacent to PHMAs, but are within 2 miles of PHMAs. The third priority for areas invaded by annual grasses habitat restoration projects would be sites beyond 2 miles of PHMAs. The intent would be to focus restoration outward from existing, intact habitat.</p>	See <b>GRSG-GRSGH-ST-001-Standard</b> shown at MA #99.
106	<p>In fire prone areas where sagebrush seed is required for sage-grouse habitat restoration, the BLM/Forest Service would consider establishing seed harvest areas that are managed for seed production and are a priority for protection from outside disturbances.</p>	
107	<p>Vegetation treatment proposals must include evaluation of soils, precipitation, invasive/exotic plants, as well as the current condition of sage-grouse PHMAs.</p> <p>Avoid aerial pesticide/herbicide spraying in favor of ground applications to minimize drift into non-target areas in Greater Sage-Grouse habitat unless benefits of treatments are likely to outweigh impacts.</p>	<p>Vegetation treatment proposals must include evaluation of soils, precipitation, invasive/exotic plants, as well as the current condition of greater sage-grouse habitat.</p> <p>See <b>GRSG-GRSGH-ST-001-Standard</b> at MA #99.</p>
<b>Grasshopper/Mormon Cricket Control and Management</b>		
108	<p>The BLM could implement treatments within sage-grouse PHMAs where outbreaks of grasshopper or Mormon cricket populations are expected to rise above economic levels.</p> <p>Treatments must be conducted only following reduced agent-area</p>	No similar direction.

	<p>treatments (RAATS) protocols. The BLM would work collaboratively with partners at the federal, state, and local levels, including the Wyoming Weed and Pest Districts within the counties where the treatment is to occur, to maintain and enhance sage-grouse habitats in a manner consistent with the core population area strategy for conservation.</p> <p>The BLM would be directed to utilize the Wyoming Grasshopper and Mormon Cricket Control website as a resource for updated information when conducting analysis of grasshopper and Mormon cricket control in sage-grouse habitats.</p> <p>Avoid aerial pesticide/herbicide spraying in favor of ground applications to minimize drift into non-target areas in Greater Sage-Grouse habitat unless benefits of treatments are likely to outweigh impacts.</p>	
<b>Wild Horse Management</b>		
109	<p>Within sage-grouse PHMAs, the BLM would review and consider amending BLM Herd Management Area Plans (HMAPs) to incorporate sage-grouse habitat objectives and management considerations for all BLM herd management areas (HMAs).</p>	<p>No similar direction – no wild horse herd management areas on National Forest System Lands in the planning area.</p>
110	<p>Sage-grouse PHMA (core only) management objectives would be considered when evaluating AMLs.</p>	<p>No similar direction – no wild horse herd management areas on National Forest System Lands in the planning area.</p>
111	<p>Sage-grouse PHMA (core only) management objectives would be considered when conducting land health assessments in BLM HMAs.</p>	<p>No similar direction – no wild horse herd management areas on National Forest System Lands in the planning area.</p>
112	<p>When conducting NEPA analysis for wild horse and burro management activities, water developments or other rangeland improvements for wild horses in sage-grouse PHMAs, the direct and indirect effects to sage-grouse populations and habitat would be addressed. Water developments or rangeland improvements would be implemented using the criteria identified for domestic livestock identified above in sage-grouse PHMAs.</p>	<p>No similar direction – no wild horse herd management areas on National Forest System Lands in the planning area.</p>
113	<p>Coordinate with other resources (Range, Wildlife, and Riparian) to conduct land health assessments within all BLM HMAs.</p>	<p>No similar direction – no wild horse herd management areas on National Forest System Lands in the planning area.</p>
<b>Wildland Fire and Fuels Management</b>		
114	<p>In sage-grouse PHMAs, fuels treatments would be designed and implemented with an emphasis on protecting existing sagebrush ecosystems and enhancing and protecting future sagebrush ecosystems (refer to WGFD Protocols for Treating Sagebrush to Benefit Sage-grouse [WGFD 2011, as updated]) and Appendix A.</p> <p>These recommended protocols would be used in determining whether proposed treatment constitutes a “disturbance” that will contribute toward the 5% threshold for habitat maintenance.</p> <p>Fuel treatments would be designed through an interdisciplinary process to expand, enhance, maintain, and protect Greater Sage-Grouse habitat. Green strips (using native fire resistant/resilient species) and/or fuel breaks would be used, where appropriate, to protect seeding efforts from subsequent fire events.</p> <p>In coordination with the USFWS and relevant state agencies, BLM planning units(Districts) with large blocks of Greater Sage-Grouse habitat would develop, using the assessment process described in Appendix A, a fuels management strategy which considers an up-to-date fuels profile, land use plan direction, current and potential habitat fragmentation, sagebrush and sage-</p>	<p>Same as MA 114 and: see <b>GRSG-GRSGH-GL-005-Guideline</b> at MA #10 and <b>GRSG-FM-ST-001-Standard</b> at MA #116.</p>

	<p>grouse ecological factors, and active vegetation management steps to provide critical breaks in fuel continuity, where appropriate. When developing this strategy, planning units would 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.</p> <p>Utilizing an interdisciplinary approach, a full range of fuel reduction techniques would be available. Fuel reduction techniques such as grazing, prescribed fire, chemical, biological, and mechanical treatments would be acceptable.</p> <p>Upon project completion, fuels projects would be monitored and managed to ensure long-term success, including persistence of seeded species and/or other treatment components. Invasive vegetation post-treatment would be controlled.</p> <p>Wildfire prevention plans would be developed that explain the resource value of sage-grouse habitat and include fire prevention messages and actions to reduce human-caused ignitions.</p>	
115	<p>Burned areas that are within sage-grouse PHMAs would be restored.</p> <p>Areas containing less than 5% canopy cover and have the potential for 5% canopy cover would be treated as disturbed pending an implementation management plan with trend data showing the area returning to functional sage-grouse habitat. This would be specific only to wildfire situations.</p> <p>The BLM/Forest Service could bring in BAR and BAER teams who would work collaboratively with partners at the federal, state, and local level to rehabilitate and restore sage-grouse habitats in a manner consistent with the core habitat population area strategy for conservation. DDCT reviews would be conducted in coordination with the WGFD Habitat Protection Program located in Cheyenne, Wyoming at the WGFD headquarters. Areas within sage-grouse PHMAs would be high priority for restoration of sage-grouse habitat beyond immediate response.</p>	
116	<p>For fuels management, the BLM would consider multiple tools for fuels reduction and would analyze in NEPA compliance documentation before electing to implement prescribed fire in PHMAs.</p> <p>If prescribed fire is used in Greater Sage-Grouse habitat, the NEPA analysis for the Burn Plan will address:</p> <ul style="list-style-type: none"> <li>• Why alternative techniques were not selected as a viable options</li> <li>• How Greater Sage-Grouse goals and objectives would be met by its use</li> <li>• How the COT Report objectives would be addressed and met</li> <li>• A risk assessment to address how potential threats to Greater Sage-Grouse habitat would be minimized.</li> </ul> <p>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 Greater Sage-Grouse habitat in PHMAs (e.g., creation of fuel breaks that would disrupt the fuel continuity across the landscape in stands where annual invasive grasses are a minor component in the understory, burning slash piles from conifer reduction treatments, used as a component with other treatment methods to combat annual grasses and restore native plant communities).</p> <p>Prescribed fire in known winter range only after the NEPA analysis for the Burn Plan has addressed the four bullets outlined above. Any prescribed fire in winter habitat would need to be designed to strategically reduce wildfire risk around and/or in the winter range and designed to protect winter range habitat quality. Refer to Appendix A, WGFD Protocols for Treating Sagebrush to Benefit Sage-grouse (WGFD 2011, as updated) and BLM Washington Office Instruction Memorandum 2013-128. If</p>	<p><b>GRSG-FM-ST-001-Standard</b> – In priority and general habitat management areas and sagebrush focal areas, when prescribed fire is used for fuels management or vegetation treatments, design the burn to move conditions towards those displayed in table 2. Restrict prescribed fire in areas of Wyoming big sagebrush, other xeric sagebrush species, where cheat-grass or other fire-invasive species occur, and/or within areas of less than 12-inch precipitation zones unless necessary to facilitate site preparation for restoration of greater sage-grouse habitat consistent with desired conditions in table 2.</p> <p><b>GRSG-FM-ST-002-Standard</b> – In priority and general habitat management areas and sagebrush focal areas, if it is necessary to use prescribed fire to facilitate site preparation for restoration of greater sage-grouse habitat consistent with desired conditions in table 2, the associated NEPA analysis must identify how greater sage-grouse desired conditions would be met, why alternative techniques were not selected, and how potential threats to greater sage-grouse habitat would be minimized.</p>

	prescribed fire activities are not in compliance with these protocols, the treatment would be considered a PHMA disturbance.	
117	Within sage-grouse PHMA, post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants (while controlling for erosion and treating infestation of invasive plant species), to return to suitable sage-grouse habitat.	See <b>GRSG-FM-ST-001-Standard</b> at MA #116.
118	Remove conifers encroaching into sagebrush habitats. Prioritize treatments closest to occupied sage-grouse habitats and near occupied leks, and where juniper encroachment is phase 1 or phase 2. Use of site-specific analysis and principles like those included in the FIAT report (Chambers et. al., 2014) and other ongoing modeling efforts to address conifer encroachment will help refine the location for specific priority areas to be treated.	<b>GRSG-GRSGH-GL-003-Guideline</b> – When removing conifers that are encroaching into greater sage-grouse habitat, avoid persistent woodlands (old growth relative to the site or more than 100 years old).
124	In sage-grouse PHMAs, and GHMAs, suppression would be a high priority and commensurate with values at risk. GHMAs would be assigned a priority commensurate with its importance in the local fire plan. Fire fighter and public safety would be the highest priority. Greater Sage-Grouse habitat would be prioritized commensurate with property values and other critical habitat to be protected, with the goal to restore, enhance, and maintain areas suitable for Greater Sage-Grouse. Within sage-grouse PHMAs (and PACs, if so determined by individual LUP efforts) would be the highest priority for conservation and protection during fire operations and fuels management decision making. The sage-grouse PHMAs (and PACs, if so determined by individual LUP efforts) would be viewed as more valuable than GHMAs when priorities are established. When suppression resources are widely available, maximum efforts would be placed on limiting fire growth in GHMA polygons as well. These priority areas will be further refined following completion of the Greater Sage-Grouse Landscape Wildfire and Invasive Species Habitat Assessments described in Appendix J.	<b>GRSG-FM-ST-003-Standard</b> - In priority and general habitat management areas and sagebrush focal areas suppress wildfire that moves habitat away from desired conditions in table 2.
<b>Wildlife and Fisheries Habitat Management</b>		
1	Continue to support the development of statewide sage-grouse seasonal habitat models for the State of Wyoming.	
2	Field Offices and Ranger Districts will work with project proponents, partners, and stakeholders to avoid or minimize impacts and/or implement direct mitigation (e.g., relocating disturbance, timing restrictions, etc.), and utilize BMPs and off-site compensatory mitigation where appropriate.	
3	Utilize the Wyoming Sage-grouse Implementation Team (SGIT) and Local Working Group plans or other state or cooperatively-developed plans, analyses, and other sources of information to guide development of conservation objectives for local management of sage-grouse habitats. The BLM and Forest Service will collaborate with appropriate Federal agencies, and the State of Wyoming as contemplated under Governor Executive Order 2013-3, to: (1) develop appropriate conservation objectives; (2) define a framework for evaluating situations where Greater Sage-Grouse conservation objectives are not being achieved on Federal land, to determine if a causal relationship exists between improper grazing (by wildlife or wild horses or livestock) and Greater Sage-Grouse conservation objectives; and (3) identify appropriate site-based action to achieve Greater Sage-Grouse conservation objectives within the framework.	
<b>Monitoring Effectiveness</b>		
125	The BLM, in coordination with the State of Wyoming and its agencies, other local partners and stakeholders, would establish monitoring framework (Appendix D) for sage-grouse populations and habitat that would be incorporated into individual project approvals, including small and in-house projects, as appropriate and necessary.	
<b>Density and Disturbance</b>		

126	<p>In sage-grouse PHMA (core only), the density of disturbance of an energy or mining facility (see Appendix I) would be limited to an average of one site per square mile (640 acres) within the DDCT, subject to valid existing rights. The one location and cumulative value of existing disturbances will not exceed 5 percent of suitable habitat of the DDCT area. Utilize the most current greater sage-grouse density disturbance process (Appendix J) or other state and/or federal agreed-upon process for compliance evaluations.</p>	<p><b>GRSG-TDDD-ST-008-Standard</b> – In priority-PHMAs and sagebrush focal areas, limit the density of activities related to oil and gas development or mining activities to no more than an average of one facility or mining activity per 640 acres, using the current Density Disturbance Calculation Tool process described in Appendix I or its replacement, subject to valid existing rights.</p>
127	<p>Inside sage-grouse connectivity habitat, all suitable habitat disturbed (any program area) will not exceed 5% of suitable habitat within the DDCT area using the DDCT process described in Appendix I.</p>	<p><b>GRSG-TDDD-ST-009-Standard</b> – In priority habitat management areas and sagebrush focal areas, do not permit surface disturbances and disruptive activities unless all existing discrete anthropogenic disturbances cover less than 5% of the suitable habitat in the surrounding area using the Density Disturbance Calculation Tool process or its replacement, as described in Appendix I. An exception to this standard is described in the Locatable Minerals section in GRSG-M-LM-ST-003-Standard.</p>
<b>Onsite and Offsite Mitigation</b>		
128	<p>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 in PHMA, 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.</p> <p>When compensatory mitigation is required, the BLM, in coordination with the State of Wyoming and its agencies and partners, will ensure an essential nexus and rough proportionality exists between the residual impacts that warrant compensatory mitigation and the compensatory mitigation actions, as determined by the best available science. This essential nexus and rough proportionality will be clearly described in the NEPA analysis, decision document, and land use authorization for a land-use authorization application.</p> <p>For in-kind mitigation, focus should be given to the list below, as appropriate:</p> <ol style="list-style-type: none"> <li>1. In-kind and onsite (on lease);</li> <li>2. In-kind and offsite within the project’s DDCT analysis area;</li> <li>3. In-kind and off-site within the same PHMA boundary;</li> <li>4. In-kind and adjacent to the affected PHMA within GHMAs;</li> <li>5. In-kind and offsite within the same 2006 WAFWA Strategy determined Management Zone as the impact.</li> </ol> <p>In-kind mitigation is generally preferred to out-of-kind mitigation, although there may be exceptions, including where out-of-kind mitigation would be more effective for achieving BLM’s resource, value, and function goals and objectives, as long as an essential nexus is maintained with the land use’s impacts. Where in-kind mitigation provides no net benefit to sage-grouse, or where other habitat types are most limiting to populations, mitigation should focus on habitats that provide the greatest benefit to the species.</p>	<p><b>GRSG-TDDD-GL-002-Guideline</b>— In-kind mitigation is preferred to out-of-kind mitigation. Where in-kind mitigation provides no net conservation gain to greater sage-grouse, or where other habitat types are most limiting to populations, mitigation should focus on habitats that provide the greatest benefit to the species. When approving mitigation requests, the following hierarchy should be considered:</p> <ol style="list-style-type: none"> <li>1. Onsite (on lease).</li> <li>2. Offsite within the project’s DDCT analysis area.</li> <li>3. Offsite within the same priority habitat management area or sagebrush focal area boundary.</li> <li>4. Adjacent to the affected priority habitat management area or sagebrush focal area within the general habitat management area boundary.</li> <li>5. Offsite within the same 2006 WAFWA Strategy determined Management Zone as the impact.</li> <li>6. Other areas as identified by the local unit.</li> </ol>
<b>Timing and Distance Restrictions</b>		
129	<p><b>Sage-grouse leks inside PHMAs:</b></p>	<p><b>GRSG-TDDD-ST-001-Standard</b> – In priority habitat management areas and sagebrush focal areas do not authorize new surface occupancy or surface disturbing activities on or within a 0.6 mile</p>

	<p>Surface occupancy and surface disturbing activities would be prohibited on or within a 0.6 mile radius of the perimeter of occupied sage-grouse leks (Map 2-3).</p> <p>The authorized officer may grant an exception if an environmental record of review determines that the action, as proposed or conditioned, would not impair the function or utility of the site for the current or subsequent seasonal habitat, life-history, or behavioral needs of Greater Sage-Grouse.</p>	<p>radius of the perimeter of occupied leks that are located in priority habitat management areas and sagebrush focal areas.</p>
130	<p><b>Sage-grouse leks outside PHMAs:</b></p> <p>Surface occupancy and surface disturbing activities would be prohibited or restricted on or within a 0.25 mile radius of the perimeter of occupied sage-grouse leks (Map 2-3).</p> <p>The authorized officer may grant an exception if an environmental record of review determines that the action, as proposed or conditioned, would not impair the function or utility of the site for the current or subsequent seasonal habitat, life-history, or behavioral needs of Greater Sage-Grouse.</p>	<p><b>GRSG-TDDD-ST-002-Standard</b> – In general habitat management areas, do not authorize new surface occupancy or surface disturbing activities on or within a 0.25 mile radius of the perimeter of occupied leks.</p>
131	<p><b>Sage-grouse breeding, nesting, and early brood-rearing habitat inside PHMA (core only):</b></p> <p>Surface disturbing and/or disruptive activities would be prohibited from March 15–June 30 to protect sage-grouse breeding, nesting, and early brood rearing habitat. This timing limitation would be applied throughout the sage-grouse PHMA (core only) area habitats. Activities in unsuitable habitats would be evaluated under the exception, waiver, and modification criteria and could be allowed on a case by case basis.</p> <p>Where credible data support different timeframes for this seasonal restriction, dates could be shifted by up to 14 days prior to or subsequent to the above dates.</p>	<p><b>GRSG-TDDD-ST-003-Standard</b> – In priority-PHMA habitat management areas and sagebrush focal areas, do not authorize new surface disturbing or disruptive activities from March 15 through June 30. Activities that meet the exception, waiver, and modification criteria may be authorized. Where credible data, based upon field analysis, support different timeframes for the seasonal restriction, dates may be shifted by up to 14 days before or subsequent to the above dates.</p>
132	<p><b>Sage-grouse breeding, nesting, and early brood-rearing habitat inside PHMA (connectivity only):</b></p> <p>Surface disturbing and/or disruptive activities would be prohibited within PHMA (connectivity only) from March 15–June 30 to protect breeding, nesting, and early brood-rearing habitats within 4 miles of the lek or lek perimeter of any occupied sage-grouse lek within identified connectivity areas. This timing limitation would be applied throughout the sage-grouse PHMA (connectivity only). Activities in unsuitable habitats would be evaluated under the exception, waiver, and modification criteria and may be allowed on a case-by-case basis.</p> <p>Where credible data support different timeframes for this seasonal restriction, dates could be shifted by 14 days prior or subsequent to the above dates.</p>	<p><b>GRSG-TDDD-ST-004-Standard</b> – Within priority-connectivity habitat management areas, do not authorize new surface disturbing or disruptive activities from March 15 through June 30 within 4 miles of the lek or lek perimeter of any occupied lek within identified priority-connectivity areas. Activities that meet the exception, waiver, and modification criteria may be authorized. Where credible data, based upon field analysis, support different timeframes for this seasonal restriction, dates may be shifted by 14 days before or subsequent to the above dates.</p>
133	<p><b>Sage-grouse breeding, nesting, and early brood-rearing habitat outside PHMAs:</b></p> <p>Surface disturbing and/or disruptive activities would be prohibited from March 15–June 30 to protect sage-grouse nesting and early brood rearing habitats within 2 miles of the lek or lek perimeter of any occupied lek located outside PHMAs.</p> <p>Where credible data support different timeframes for this restriction, dates could be shifted by 14 days prior or subsequent to the above dates.</p>	<p><b>GRSG-TDDD-ST-005-Standard</b> – In general habitat management areas, do not new authorize surface disturbing or disruptive activities from March 15 to June 30 within 2 miles of the lek or lek perimeter of any occupied lek located inside general habitat management areas. Activities that meet the exception, waiver, and modification criteria may be authorized. Where credible data, based upon field analysis, support different timeframes for this restriction, dates may be shifted by 14 days before or subsequent to the above dates.</p>
134	<p><b>Sage-grouse winter concentration areas:</b></p> <p>Surface disturbing and/or disruptive activities in mapped sage-grouse winter concentration areas would be prohibited from December 1–March 14 to protect PHMA (core only) populations</p>	<p><b>GRSG-TDDD-ST-006-Standard</b> – Within mapped winter concentration areas in priority habitat management areas and sagebrush focal areas, do not authorize new surface disturbing or disruptive activities from December 1 through March 14 to protect</p>

	<p>of sage-grouse that use these winter concentration habitats. This timing limitation would be applied to all winter concentration areas within sage-grouse PHMA.</p> <p>Activities in unsuitable habitats within PHMAs would be evaluated under the exception, waiver, and modification criteria and could be allowed on a case-by-case basis.</p> <p>Protection of additional mapped winter concentration areas in GHMAs would be implemented where winter concentration areas are identified as supporting populations of sage-grouse that attend leks within PHMA (core only). Appropriate seasonal timing restrictions and habitat protection measures would be considered and evaluated in all identified winter concentration areas.</p>	<p>priority-PHMA habitat area and sagebrush focal area populations of greater sage-grouse that use these winter concentration habitats. Activities not located in suitable habitat that meet the exception, waiver, and modification criteria may be authorized.</p> <p><b>GRSG-TDDD-ST-007-Standard</b> – Within mapped winter concentration areas in priority-connectivity and general habitat management areas, do not authorize new surface disturbing or disruptive activities from December 1 through March 14 where winter concentration areas are identified as supporting populations of greater sage-grouse that attend leks within priority-PHMA and sagebrush focal areas.</p>
	<b>Predation</b>	
135	<p>The BLM would implement strategies and techniques in land management decisions that address predators shown to pose a threat to sage-grouse (Appendix F).</p> <p>The BLM would support and encourage other agencies in their efforts to minimize impacts from predators on sage-grouse where needs have been documented.</p>	<p>The Forest Service would implement strategies and techniques in land management decisions that address predators shown to pose a threat to sage-grouse (Appendix F).</p> <p><b>GRSG-PR-GL-001-Guideline</b> – Efforts by other agencies to minimize impacts from predators on greater sage-grouse should be supported and encouraged where needs have been documented.</p>
	<b>Noise</b>	
136	<p>The BLM would work with proponents to limit project related noise where it would be expected to reduce functionality of habitats that support PHMA area populations.</p> <p>The BLM would evaluate the potential for limitation of new noise sources on a case-by-case basis as appropriate.</p> <p>BLM's near-term goal would be to limit noise sources that would be expected to negatively impact PHMA sage-grouse populations and to continue to support the establishment of ambient baseline noise levels for occupied PHMA leks.</p> <p>As additional research and information emerges, specific new limitations appropriate to the type of projects being considered would be evaluated and appropriate limitations would be implemented where necessary to minimize potential for noise impacts on sage-grouse PHMA population behavioral cycles.</p> <p>As new research is completed, new specific limitations would be coordinated with the WGFD and partners.</p> <p>Noise levels at the perimeter of the lek should not exceed 10 dBA above ambient noise.</p>	<p><b>GRSG-TDDD-GL-001-Guideline</b> – During lekking (March 1 to May 15) anthropogenic disturbances, including noise at 10 dB above ambient (not to exceed 20-24 dB) to lekking birds, should be restricted from 6 pm to 9 am at a distance of 0.6 mile from the perimeter of an occupied lek.</p>

**Table 3. Seasonal Habitat Desired Conditions for Greater Sage- grouse.**

ATTRIBUTE	INDICATORS	DESIRED CONDITION
<b>AREAS MANAGED FOR BREEDING AND NESTING <sup>1,2,3</sup> (Seasonal Use Period March 15-June 30) Apply 5.3 miles from occupied 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>7,9</sup>	8 to 32 inches in black sage and 12 to 32 inches in all other areas
		All Wyoming NFs: 16 to 32 inches

ATTRIBUTE	INDICATORS	DESIRED CONDITION
	Mesic sites <sup>7,10</sup>	
	Predominant sagebrush shape <sup>6</sup>	>50% in spreading <sup>11</sup>
	Perennial grass canopy cover <sup>6,7</sup> Arid sites <sup>6,7,9</sup> Mesic sites <sup>6,7,10</sup>	≥10% ≥15%
	Perennial grass height <sup>6,7,8</sup>	Provide overhead and lateral concealment from predators <sup>6</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>AREAS MANAGED FOR BROOD-REARING/SUMMER<sup>1</sup> (Seasonal Use Period July 1-November 30)</b>		
	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>	8 to 20 inches in black sage and 12 to 32 inches in all other areas
	Perennial grass canopy cover and forbs <sup>7,8</sup>	>15%
Cover	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 December 1-March 14)</b>		
	Seasonal habitat extent <sup>6,7,8</sup>	>80% of the winter habitat
	Sagebrush canopy cover above snow <sup>6,7,8</sup>	>10%
Cover and Food	Sagebrush height above snow <sup>6,7,8</sup>	>10 inches <sup>14</sup>
<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. <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. <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. <sup>4</sup> Buffer distance may be changed only if 3 out of 5 years of telemetry studies indicate the 5.3 miles is not appropriate. <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. <sup>6</sup> Stiver, S.J., E.T. Rinkes, D.E. Naugle, P.D. Makela, D.A. Nance, and J.W. Karl. In Press. <i>Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment Tool</i> . Bureau of Land Management and Western Association of Fish and Wildlife Agencies, Technical Reference XXXX -X. U.S. Bureau of Land Management, Denver, Colorado. Submitted for publication. <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. <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. <sup>9</sup> 10–12 inch precipitation zone; <i>Artemisia tridentata wyomingensis</i> is a common big sagebrush sub-species for this type site (HAF 2014). <sup>10</sup> ≥12 inch precipitation zone; <i>Artemisia tridentata vaseyana</i> is a common big sagebrush sub-species for this type site (HAF 2014). <sup>11</sup> Sagebrush plants with a spreading shape provide more protective cover than sagebrush plants that are more tree- or columnar shaped (HAF 2014). <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 greater sage-grouse habitat requirements. <sup>13</sup> Preferred forbs are listed in HAF Table III-2 (HAF 2014). 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. <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.		

**Table 4. Grazing Guidelines for Greater Sage-grouse Seasonal Habitat.**

Seasonal Habitat	Grazing Guidelines
Areas managed for breeding and nesting <sup>1</sup> within 5.3 miles of occupied leks	Perennial grass height: <sup>2</sup> When grazing occurs during breeding and nesting season (March 15 to June 30) manage for upland perennial grass height of: 7 inches <sup>3,4,5,6</sup> When grazing occurs post breeding and nesting season (July 1 to November 30) manage for 4 inches <sup>4,5,8</sup> of perennial grass height.
Areas managed for brood rearing and summer habitat <sup>1</sup>	Retain an average stubble height of 4 inches for herbaceous riparian/mesic meadow vegetation <sup>7,9</sup>
Winter <sup>1</sup>	<35% use of sagebrush

<sup>1</sup> For descriptions of Seasonal Habitat and Seasonal Periods of greater sage-grouse see table 1.

<sup>2</sup> Grass heights only apply in breeding and nesting habitat with  $\geq 10\%$  sagebrush cover to support nesting.

<sup>3</sup> Holloran et al. 2005. *Greater sage-grouse nesting habitat selection and success in Wyoming*.

<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. *A meta-analysis of greater sage-grouse *Centrocercus urophasianus* nesting and brood-rearing habitats*. *Wildlife Biology* 13(1): 42-50.

<sup>6</sup> Due to variability of annual precipitation and forage production <sup>7</sup> stubble height may not be possible every year, even in the absence of livestock grazing.

<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 at the end of the growing season.

<sup>9</sup> Stubble height to be measured in the meadow areas used by greater sage-grouse for brood-rearing (not on the hydric greenline).

## 6.0 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 Amendment. 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 and additional interagency coordination with the U.S. Forest Service and U.S. Fish and Wildlife Service.

The following table (Table 3) lists the USFWS Threatened, Endangered, or proposed species that are being evaluated for this Biological Assessment (BA).

**Table 3-USFWS endangered, threatened and proposed species and critical habitat potentially occurring in the analysis area and that may be influenced by the preferred alternative.**

SPECIES (Status)	HABITAT DESCRIPTION and RANGE	Units in which the species is known or suspected to be present in the analysis area, and/or containing suitable or critical habitat in the analysis area									EVALUATION CRITERIA	INITIAL BIOLOGICAL DETERMINATION
		Bridger Teton	Pinedale	Kemmerer	Rock Spring	Rawlins	Medicine Bow	Casper	Thunder Basin	Newcastle		
<b>Mammals</b>												
Black-footed ferret (Exp.) <i>Mustela nigripes</i>	All populations are experimental and are found in the Rawlins field office. They require established prairie dog towns for food and shelter (Hoffmeister 1986), which primarily occur in grassland and sagebrush habitats in Wyoming. Such areas are characteristic of prairie, grassland plains, and surrounding mountain basins up to 3,200 meters (10,500 ft.)					X				X		NE, NJ
Canada lynx (T) <i>Lynx canadensis</i>	Montane and subalpine coniferous forests above 4,000 feet; lodgepole pine, subalpine fir and Engelmann spruce.	X	X			X	X					NE
Canada lynx ( <i>Lynx Canadensis</i> ) critical habitat	Montane and subalpine coniferous forests above 4,000 feet; lodgepole pine, subalpine fir and Engelmann spruce.	X	X			X	X					NE
Grizzly Bear (T) <i>Ursus arctos horribilis</i>	Extensive forest cover often interspersed with grasslands and meadows. In Wyoming these	X	X	X								NE

	habitats are typically above 1,500 m (932 mi) (Schwartz et al. 2002).													
Preble's Meadow Jumping Mouse ( <b>T</b> ) <i>Zapus hudsonius preblei</i>	Species found in both riparian and grassland communities. They are found under debris at the base of shrubs and trees or in open grasslands.					X	X	X						NE
Northern Long-eared Bat ( <b>Proposed T</b> ) <i>Myotis septentrionalis</i>	Species found primarily in coniferous or deciduous forests								X	X	X			NJ
Gray Wolf (Non-essential experimental)	habitat generalists and historically occupied most habitats in the Northern Hemisphere	X	X	X	X	X								NJ
<b>Birds</b>														



Western yellow-billed cuckoo (T) <i>Coccyzus americanus</i>	Requires large blocks of riparian woodlands (50 acres/20 hectares or more) within low to moderate elevation arid to semiarid landscapes. It occurs in wetland areas throughout Wyoming.	X	X	X	X							NLAA
Western yellow-billed cuckoo (T) <i>Coccyzus americanus</i>	Requires large blocks of riparian woodlands (50 acres/20 hectares or more) within low to moderate elevation arid to semiarid landscapes. It occurs in wetland areas throughout Wyoming.				X							NE
<b>Fish</b>												
Bonytail chub (E) <i>Gila elegans</i>	<i>Gila elegans</i> were generally found in pools and eddies in the absence of, although occasionally adjacent to, strong current and at varying depths generally over silt and silt-boulder substrates.											NE
Bonytail chub ( <i>Gila elegans</i> ) Critical habitat	Critical habitat includes Colorado River, Yampa River, Dinosaur National Monument west, Ruby Canyon west. The species does not occur in planning areas. However, Water depletions in Wyoming may affect the species and/or critical habitat in downstream reaches.											NE
Humpback chub (E) <i>Gila cypha</i>	The species does not occur in planning area, however, water depletions in Wyoming may affect the species and/or critical habitat in downstream reaches.											NE
Humpback chub ( <i>Gila cypha</i> ) critical habitat	Critical habitat includes Colorado River, Yampa River, Dinosaur National Monument west, Ruby Canyon west. The species does not											NE





<i>neomexicana ssp. coloradensis</i>	streams on level or slightly sloping floodplains and drainage bottoms. It is restricted to Laramie and Platte counties with ten percent being on State lands and three occurrences on Federal lands (USFWS 2004).										
Desert Yellowhead (T) <i>Yermo xanthocephalus</i>	The species is found only in shallow deflation hollows in outcrops of Miocene sandstones and limestones of the Split Rock Formation at its junction with the White River Formation. The species is currently known from a single population of plants scattered over an area of 20 ha (50 ac). in Fremont County Wyoming.				X						NE
<b>Plants</b>											
Ute ladies'-tresses (T) <i>Spiranthes diluvialis</i>	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.	X	X	X	X		X	X	X		NE
Western prairie fringed orchid (T) <i>Platanthera praeclara</i>	North American tall grass prairie species found most often on unplowed, calcareous prairies and sedge meadows The species is not found in Wyoming. Upstream depletions to the Platte River system in Colorado and Wyoming may affect the species in Nebraska.										NE

## 6.1 Blowout Penstemon (*Penstemon haydenii*) - Endangered

### Species/Habitat Description

Blowout penstemon (*Penstemon haydenii*) is a perennial herb, typically twelve inches or less in height, with six to ten groups of milky-blue to pale lavender flowers. *Penstemon haydenii* can be recognized by its large, milky-lavender flowers that smell faintly of vanilla and its blue-green, waxy foliage. Flowering plants have broad-based, clasping leaves that taper abruptly to a narrow tip, while vegetative plants have thin, grass-like leaves. Individual plants produce multiple stems that can survive burial in shifting, wind-blown sand. The plants occur only in sites with little competing vegetation or where strong winds have created depressions in the sand called "blowouts".

Historically, *Penstemon haydenii* was thought to be endemic to the Nebraska Sandhills. The Nebraska Sandhills is an extensive area with unique vegetation and soils.

In Wyoming, *Penstemon haydenii* is found in sparsely vegetated sandy blowouts in the early stages of plant community development composed of blowout grass (*Redfieldia flexuosa*), lemon scurf-pea (*Psoralidium lanceolatum*) and thickspike wheatgrass (*Elymus lanceolatus*) or Indian ricegrass (*Achnatherum hymenoides*). Shifting sand dunes are prevented from becoming fully stabilized and overgrown because of wind and gravity. The dunes may be sixty to one hundred twenty feet high on typically steep slopes with elevations between 1,768 and 2,286 meters (5,800 and 7,500 feet).

### Life History

Budding for *Penstemon haydenii* occurs from early May through early June. Flowering occurs from mid-May through Mid-late June. Fruiting occurs from late May through early June.

*Penstemon haydenii* is a pioneer species. It is one of the first plants to establish itself on sand dunes at the base of mountains and ridges. In Wyoming, it blooms in June and is pollinated by insects. Twenty-six species of solitary bees and one bee-like wasp visit this plant in Wyoming, seeking both nectar and pollen rewards. Once pollinated, the flowers ripen into capsule-like fruits each containing twenty to thirty seeds. By summer's end the seeds have matured and the capsules split open and release the seeds into the wind. Buried seeds remain viable and will only germinate after an ideally cool, moist spring. Once a plant germinates, it can live for several years but does not necessarily flower each year.

### Status, Distribution and Designated or Proposed Critical Habitat

*Penstemon haydenii* was listed as an endangered species on September 1, 1987.

Historically *Penstemon haydenii* was a common plant in blowouts in the Nebraska sandhills (Pool 1914). With the encroachment of succeeding Sandhill prairie plants, the blowout penstemon is not able to compete.

The plant's current known range in Wyoming consists of the Ferris Dunes area in northwest Carbon County, where the plant is restricted to two habitat types: steep, northwest facing slopes of active sand dunes with less than five percent vegetative cover; and north-facing sandy slopes on the lee side of active blowouts with twenty five to forty percent vegetative cover. Known populations in Wyoming are found between 2,036 to 2,268 m (6,680-7,440 ft.) in elevation. Systematic surveys are recommended in areas with sand blowout features at lower elevations (below 2,042 m or 6,700 ft.).

### Threats

*Penstemon haydenii* was listed as an endangered species due to its small numbers and habitat limitations. It is believed that the direct cause of reduced habitat is due to fire control and livestock grazing practices. However, overgrazing of the sandhills caused the blowouts to occur creating better habitat for the species. With better management practices which include more controlled grazing and fire protection measures, competing vegetation is allowed to become established (73 FR 58261, October 6, 2008).

Drought conditions have also been thought to contribute to the decline of *Penstemon haydenii* population numbers. The lack of moisture discourages the development of the seeds and promotes a prolonged dormant stage. Also, the larvae of the pyralid moth, which bores into the stem and root crowns of the plant has been known to cause a seventy five percent mortality rate in affected plants.

## **6.2 Colorado Butterfly Plant (*Gaura neomexicana* var. *coloradensis*) - Threatened Species/Habitat Description**

*Gaura neomexicana* ssp. *coloradensis* (Colorado butterfly plant) is a member of the Evening primrose family (*Onagraceae*). The members of this family are characterized by having flowers with four petals that are joined at the base into a slender tube located above the seed-producing stem.

*Gaura neomexicana* ssp. *coloradensis* is a perennial plant that generally lives an average of two to six years. Characteristically the plants are 45 to 60 centimeters (18 to 24 inches) tall with leaves in excess of 3.8 cm (one and a half in) long.

*Gaura neomexicana* ssp. *coloradensis* have a single to multiple reddish, hairy stem(s) that measure 50 to 80 cm (two to three ft.) tall. The lower leaves of the plant are lance-shaped with smooth or wavy-toothed margins and range from five to 15 cm (two to six in.) in length, while those on the stem are smaller and less abundant. The flowers are bilaterally symmetrical and similar in shape to the hind and fore wings of a butterfly. The flowers consist of four reddish sepals and four white petals that will first appear white but as the plant ages the flowers will become pink (Heidel 2008). The individual flowers are typically five to 14 millimeters (0.25 to 0.5 in). Only a few flowers are open at any given time. Flowers are assembled in a branched, elongate inflorescence above the leaves. Flowers are found below the rounded buds and above the mature fruits of the plant. The hard, nutlike fruits are four-angled and do not have a stalk. Non-flowering plants consist of a stem-less, basal rosette of oblong, hairless leaves three to 18 cm (one to seven in) long (Marriott 1987; Fertig 1994; Fertig et al. 1994; Fertig 2000, 2000, 2001).

*Gaura neomexicana* ssp. *coloradensis* is generally found in wetland habitats comprised of sub-irrigated, alluvial soils. The common place to find the plant is around meandering streams on level or slightly sloping floodplains and drainage bottoms. Typically the plants occur in the high plains at 1,524 to 1,951 m (5,000 to 6,400 ft.) *Gaura neomexicana* ssp. *coloradensis* requires early to mid-succession riparian habitat generally among native grasses such as *Agrostis stolonifera* (red top) and *Poa pratensis* (Kentucky bluegrass) on wetter sites; and *Glycyrrhiza lepidota* (wild licorice), *Cirsium flodmanii* (Floodman's thistle), *Grindelia squarrosa* (curlytop gumweed) and *Equisetum laevigatum* (smooth scouring rush) on drier sites. This plant prefers open habitat not obstructed by other overgrown vegetation characteristic of places that have been disturbed in recent years.

### **Life History**

*Gaura neomexicana* ssp. *coloradensis* is a short lived, perennial herb that flowers from late June to late September or early October (Heidel 2008). Fruits begin to mature in late July and will continue to develop through September (Fertig 1994). Colorado butterfly plant reproduces entirely by seed.

The herb lives vegetatively in a basal root for several years before it will begin bearing fruit, which it does once and then dies. Moths are thought to be the primary pollinators, with pollination occurring in late evening or during the night. Individual plants may produce 143-383 fruits, each containing 1-4 seeds (Mountain West Environmental Services 1985; Munz 1938). Population growth rates are based on seedling establishment and rosette maturity which is dependent on summer precipitation (Marriot et.al 1988; Floyd 1995a; Fertig 1996, 1997, 1998a, 1998b; Floyd and Ranker 1998). The vegetative rosettes are capable of producing a stable population through rough climatic years when seedling establishment may be reduced. Years of ideal climate may produce episodic establishment of large seedling recruitment classes which may be important for the long term growth, replenishment and survival of populations (Floyd and Ranker 1998).

### **Status, Distribution and Designated or Critical Habitat**

*Gaura neomexicana ssp. coloradensis* was listed as a threatened species on October 24th 1998. *Gaura neomexicana ssp. Coloradensis* occurs in southeastern Wyoming, north central Colorado, and extreme western Nebraska, mostly on private lands. No known occurrences of the Colorado butterfly plant in Wyoming are located on BLM or FS public lands. Two occurrences are known on the F.E. Warren Air Force Base, while other occurrences are on private or state lands. Annual monitoring of these populations by Wyoming Natural Diversity Database has continued for the past twenty years and is ongoing (Heidel 2005).

On January 11, 2005, seven units in Wyoming were designated as critical habitat for *Gaura neomexicana .ssp. coloradensis* (70 FR 1940). The units are: 1) Tepee Ring Creek; 2) Bear Creek East; 3) Bear Creek West; 4) Little Bear Creek/Horse Creek; 5) Lodgepole Creek West; 6) Lodgepole Creek East; and 7) Borie.

The final designation of critical habitat for *Gaura neomexicana .ssp. coloradensis* included the following critical habitat primary constituent elements: 1) Sub-irrigated, alluvial soils on level or low-gradient floodplains and drainage bottoms at elevations of 1,524 to 1,951 meters (5,000 to 6,400 feet); 2) A mesic moisture regime, intermediate in moisture between wet and dry, streamside communities dominated by sedges, rushes, cattails, and dry upland shortgrass prairie; 3) Early- to mid-succession riparian (streambank or riverbank) plant communities that are open and without dense or overgrown vegetation (including hayed fields that are disked every 5 to 10 years at a depth of 20 to 30 centimeters (8 to 12 inches), grazed pasture, other agricultural lands that are not plowed or disked regularly, areas that have been restored after past aggregate extraction, areas supporting recreation trails, and urban/wildland interfaces); and 4) Hydrological and geological conditions that maintain stream channels, floodplains, floodplain benches, and wet meadows that support patterns of plant communities associated with *Gaura neomexicana .ssp. coloradensis* (65 FR 62302, January 11, 2005).

### **Threats**

Threats that affect *Gaura neomexicana ssp. coloradensis* are the use of non-selective broadleaf herbicides, mowing and haying and the channelization and fragmentation of waterways. *Gaura neomexicana ssp. coloradensis* also needs disturbances to open ground for them to succeed. In the past, flooding was the main disturbance that created and sustained open habitat for *Gaura neomexicana ssp. coloradensis* to establish and flourish. Wildfire and grazing have historically opened areas up for the growth of *Gaura neomexicana ssp. coloradensis*. The most serious threats are competition from non-native plants or replacement of early successional vegetation, and conversion of rangelands for crop agriculture or urban expansion (Fertig 1998b; 2000; Munk 1999).

### 6.3 Desert yellowhead (*Yermo xanthocephalus*) – Threatened

#### Species/Habitat Description

*Yermo xanthocephalus* (Desert yellowhead) is a tap-rooted, glabrous (hairless) perennial herb with leafy stems to 30 cm (12 in) high. The leathery leaves are alternate, lance-shaped to oval, four to 25 cm (1.5 to ten in) long and often folded along the midvein. Leaf edges are smooth or toothed. Flower heads are many (25 to 180) and crowded at the top of the stem. Each head contains four to six perfect yellow disk flowers (ray flowers are absent) surrounded by four to six yellow, keeled involucre bracts (modified leaves below flower head). The pappus (ring of hairs) on the achenes (seeds) consists of many white capillary bristles (Dorn 1991; Dorn 2001; Dorn 2006).

The species is found only in shallow deflation hollows in outcrops of Miocene sandstones and limestones of the Split Rock Formation at its junction with the White River Formation (Van Houten 1964; Love 1961). The hollows are known to accumulate drifting snow and may be more moist than surrounding areas. The vegetation at these sites are typically sparse, consisting of low cushion plants and scattered clumps of *Oryzopsis hymenoides* (Indian ricegrass) (Fertig 1995).

#### Life History

*Yermo xanthocephalus* usually flowers from mid-June to August and may prolong flowering, or flower for a second time in September (Heidel 2002). The growing season has an average of 124 days (Scott and Scott 2009). This species is pollinated by visually-oriented insects which are attracted to its bright disk flowers and bracts (Dom 1991). Ants and nectar-feeding butterflies were noted as frequent visitors to desert yellowhead flowers (Heidel et al. 2011).

*Yermo xanthocephalus* is a long-lived perennial that produces sexually by seed and possibly asexually by vegetative buds. *Yermo xanthocephalus* is pollinated by visually-oriented insects attracted to its bright disk flowers and bracts (Dorn 1991).

#### Status, Distribution and Designated or Proposed Critical Habitat

*Yermo xanthocephalus* was listed as a threatened species on September 24 1997. On March 16, 2004 (69 FR 12278-12290), critical habitat was designated for *Yermo xanthocephalus* in Fremont County, Wyoming. The designated critical habitat is approximately 146 hectares (360 acres) of Federal lands managed by BLM in the Beaver Rim area.

*Yermo xanthocephalus* is currently known from a single population of plants scattered over an area of 20 ha (50 ac). Originally, Dorn (1991) estimated that there were approximately 500 plants within 1 ha (2.5 ac); however, this was only a visual estimate. Plant communities associated with *Yermo xanthocephalus* include, but are not be limited to, sparsely-vegetated cushion plant communities with scattered clumps of *Oryzopsis hymenoides* (Indian rice grass) between 2,043 and 2,073 m (6,700 and 6,800 ft.) in Fremont County Wyoming.

The desert yellowhead has approximately 146 ha (360 ac) of designated critical habitat which occurs in Fremont County Wyoming. The critical habitat occurs entirely on land managed by the Bureau of Land Management in the Beaver Rim area approximately 10 km (6 mi) north of Sweetwater Station in southern Fremont County, Wyoming. The primary constituent elements for Desert yellowhead consist of, but are not limited to:

- Recent soils derived from sandstones and limestones of the Split Rock Formation at its junction with the White River Formation. These are shallow, loamy soils of the Entisol order that can be classified as coarse-loamy over sandy-skeletal, mixed, Lithic Torriorthent. The surface stratum

has little organic matter and subsurface layers show no accumulation of humus, clay, gypsum, salts, or carbonates.

- Plant communities associated with desert yellowhead include, but may not be limited to, sparsely vegetated cushion plant communities with scattered clumps of *Oryzopsis hymenoides* (Indian ricegrass) between 2,043 and 2,073 m (6,700 and 6,800 ft.) in Fremont County, Wyoming. Species common to these communities include *Arenaria hookeri* (Hooker's sandwort), *Astragalus kentrophyta* (thistle milkvetch), *Hymenoxys acaulis* (stemless hymenoxys), and *Phlox muscoides* (squarestem phlox). These cushion-plant communities also contain natural openings.
- Topographic features/relief (outcroppings, cliffs, and hills) and physical processes, particularly hydrologic processes, that maintain the shape and orientation of the hollows characteristic of *Yermo xanthocephalus* habitat (through microscale dynamics of local winds and erosion) and maintain moisture below the surface of the ground (through sheet wash from the adjacent outcroppings, cliffs, and hills). (Federal Register / Vol. 69, No. 51 / Tuesday, March 16, 2004 / Rules and Regulations).

### Threats

*Yermo xanthocephalus* has a small population size and a restricted distribution which inherently makes it vulnerable to catastrophic events. The entire known range of *Yermo xanthocephalus* occurs on 20 ha (50 ac) in southern Fremont County, Wyoming. When *Yermo xanthocephalus* was first listed, oil and gas development was the most severe and immediate threat to the species through potential habitat destruction. In addition, habitat destruction by domestic livestock and native ungulates, the tires of vehicles during illegal use of the area and foot traffic of humans visiting the area may cause damage to plants and habitat through the crushing of plants, destruction of seeds, and compaction or erosion of soil.

Researchers have also found that flowering levels decline in drought years. They have also found that *Yermo xanthocephalus* seeds have capacity for wind dispersal. Water erosion also appears to influence distribution patterns (Heidel 2002). Fertig (1995) characterized the species as being adaptable to severe habitats and having low annual reproductive output.

## 6.4 Ute Ladies' -tresses (*Spiranthes diluvialis*) - Threatened

### Species/Habitat Description

*Spiranthes diluvialis*, or commonly known as the Ute ladies'-tresses is a perennial orchid (family Orchidaceae). The orchid first appears above ground as a rosette of thickened grass-like leaves that is very difficult to distinguish from other vegetation. Its leaves are up to 1.5 cm (0.6 in) wide and 28 cm (11 in) long; the longest leaves are near the base. The usually solitary flowering stem is 20 to 50 cm (eight to 20 in) tall, terminating in a spike of three to fifteen white or ivory flowers.

*Spiranthes diluvialis* occurs in soils moist at the surface throughout the growing season. Soils are generally silty-loam often underlain with cobble and gravel. The habitat settings are: early to mid-successional riparian habitats (i.e. well established soils and vegetation) along perennial streams and rivers such as moist stream edges, high flow channels, old oxbows, vegetated point bars, and other fluvial features with appropriate hydrology; and areas supported by groundwater and sometimes supplemented by irrigation water, such as wet meadows and springs (Fertig *et al.* 1994; USFWS 1995; Fertig 2000; 57 FR 2048). *Spiranthes diluvialis* appears to be well adapted to disturbance caused by water movement through flood plains as well.

Besides hydrology, common habitat features include dominance by perennial graminoids and forbs and low vegetative cover. Where colonies occur in more wooded areas, plants are usually found on the edges of small openings and along trails (Ward and Naumann 1998). *Spiranthes diluvialis* is intolerant of crowding and competition. The orchid may persist for some time in the grassy understory of these woody riparian shrublands, but do not appear to thrive under these conditions (Ward and Naumann 1998).

### **Life History**

Flowering of *Spiranthes diluvialis* occurs from mid-July through August. However, in some locations it may bloom in early July or may still be in flower as late as early October. Some individuals remain under ground or do not flower each year (Arft 1993).

Because of the unique anatomy of orchid flowers, only certain insects can accomplish pollination. Reproduction of the Ute ladies'-tresses orchid is strictly sexual, with bumblebees (*Bombus* spp.) and anthophorans (*Anthophora* spp.) (Sipes and Tepedino 1995) as the primary pollinators. These insects visit the orchids for the nectar and pollination is accomplished incidentally.

### **Status, Distribution and Designated or Proposed Critical Habitat**

The Ute ladies'-tresses (*Spiranthes diluvialis*) was federally listed as threatened on January 17, 1992 (57 FR 2048) in its entire range. No critical habitat has been designated for the species. To date, no recovery plan has been approved for this species. However, a draft recovery plan has been written (USFWS 1995).

In Wyoming, *Spiranthes diluvialis* typically occurs on the eastern plains in moist valley bottoms where small perennial rivers and streams are fed by ground water.

### **Threats**

Factors that could affect *Spiranthes diluvialis* include natural or human-directed disturbances, such as the modification of the hydrology, increased recreation use, introduction or proliferation of invasive species, improper herbicide use, reduction or loss of pollinators and improper season and stocking rate of livestock grazing (USFWS 1995). Also, hay mowing, or fire, may hinder maintaining habitat in suitable condition for the orchid by reducing cover, litter, and weeds, especially when these occur during the flowering period (Arft 1995; Moseley 1998).

Many *Spiranthes diluvialis* locations are in more mountainous or rural locations and are not as susceptible to the direct effects of urban development; however, some scattered locations are subject to rural development such as gravel pit excavations, irrigation diversions, and construction of irrigation canals, roads and bridges. Channelization of waterways and construction of levees that isolate a stream from its floodplain prevent formation and maintenance of suitable habitat (USFWS 2003). It also eliminates periodic disturbances that remove competitive shrub stands which also re-saturates and rejuvenates old and new habitats (Moseley 1998; Fertig 2000; USFWS 2003).

Recreational development may cause either direct (placing trails or campgrounds in occupied or suitable habitat) or indirect (changes in hydrology, spread of invasive species) impacts to *Spiranthes diluvialis* (USFWS 2003). Campground facilities, road and parking lot construction and improvements, trails, and fisheries improvements result in increased access to and use of riparian and wetland areas that support *Spiranthes diluvialis*. Water-related activities are a common concern for continued viability of *Spiranthes diluvialis* throughout Wyoming as well (USFWS 2003).

A newly emerging and potentially serious threat to the orchid range wide is the proliferation of invasive native and non-native plant species. *Spiranthes diluvialis* is susceptible to below-ground competition, such as from strongly rhizomatous species, or above-ground competition that reduces light such as taller trees and shrubs. Tamarisk is of particular concern as it readily invades newly formed habitat before *Spiranthes diluvialis* can become established, is extremely competitive and may change soil surface chemistry through deposition of salty leaf litter. Management of invasive species, while a high priority for many agencies and those in the public, requires a high and continuous investment in labor and other resources in order to achieve success. This effort is often difficult to sustain over time.

## **6.5 Western prairie-fringed orchid (*Platanthera praeclara*)-Endangered**

### **Species/Habitat Description**

*Platanthera praeclara*, the Western prairie fringed orchid is distinguished by its large flowers (up to 1 ½ inches in length), large angular column, and broadly triangular petals. The lateral lobes of the lip on the western species are often, but not always, narrower than those on the eastern species.

*Platanthera praeclara* is a stout, erect, long-lived perennial with a showy open raceme (spike) of up to two dozen white to creamy white flowers often an inch or more in size, each with a long nectar spur. The sepals of the orchid are tinged with pale green. The lip, or lower petal, of each flower, is deeply three-lobed and fringed. The single smooth stem can grow from two and a half to four feet tall. There are two to five simple elongate leaves which are thick and hairless.

*Platanthera praeclara* occurs most often in remnant native prairies and meadows. It has also been observed at disturbed sites such as oil fields and roadside ditches. In the southern part of its range it is more likely to be found in mesic upland prairies and in the north in wet prairies and sedge meadows. It is also known from prairies and swales in sand dune complexes that are fed by shallow underground water.

### **Life History**

*Platanthera praeclara* is a long-lived perennial. It emerges in May and blooms in June through July in the Northern parts of its range. *Platanthera praeclara* is a plant of the tall grass prairie and requires direct sunlight for growth. The flowers are fragrant at night and are pollinated by large sphinx moths, which is required for seed set. Any threat to these insects, such as the use of insecticides, is a threat to the *Platanthera praeclara*.

### **Status, Distribution and Designated or Proposed Critical Habitat**

On September 28, 1989, *Platanthera praeclara* was classified as endangered under the endangered species act of 1973 as amended.

The Western prairie fringed orchid (*Platanthera praeclara*) is known to occur in seven states and one Canadian province. It was first documented by the Lewis and Clark expedition. The species historic range extends from the Red River valley of Manitoba, Minnesota, and North Dakota, spreading southeastward to Iowa and Missouri and westward to northeastern Oklahoma, eastern Kansas, central Nebraska and eastern South Dakota. (Sather 1991).

*Platanthera praeclara* is not known to occur in Wyoming. As the species requires the maintenance of functional and dynamic tallgrass prairie, it is unlikely that the species will ever be found to occur within the State. The potential for effects is limited to depletion issues surrounding the Platte River drainage basin though no critical habitat is designated for this species.

## **Threats**

Because the species does not occur in the state of Wyoming, threats to the species within the state would only occur from water depletions. Since 1978, the FWS has consistently found through formal section 7 consultations with Federal agencies that actions resulting in depletions to flows in the Platte River system are likely to jeopardize the continued existence of one or more federally-listed threatened or endangered species and adversely modify critical habitat (Instruction Memorandum No. WY-2007-039).

## **6.6 Bonytail (*Gila elegans*) - Endangered**

### **Species/Habitat Description**

*Gila elegans*, the bonytail, are medium-sized (less than 600 mm or 23.62 in) fish in the minnow family. Adult *Gila elegans* are gray or olive colored on the back with silvery sides and a white belly. The adult *Gila elegans* have an elongated body with a long, thin caudal peduncle. The head is small and compressed compared to the rest of the body. The mouth is slightly overhung by the snout and there is a smooth low hump behind the head that is not as pronounced as the hump on a humpback chub.

Vanicek (1967) reported that *Gila elegans* were generally found in pools and eddies in the absence of, although occasionally adjacent to, strong current and at varying depths generally over silt and silt-boulder substrates. Adult *Gila elegans* are sympatric with humpback chub in shoreline eddies among emergent boulders and cobble, and adjacent to swift current (Valdez 1990). The diets of *Gila elegans* are presumed similar to that of the humpback chub (USFWS 2002).

### **Life History**

*Gila elegans* are considered a species that is adapted to main stem rivers because it has been observed in pools and eddies (Vanicek 1967; Minckley 1973). Spawning of *Gila elegans* has never been observed in a river, but ripe fish were collected in Dinosaur National Monument in Utah during late June and early July suggesting that spawning occurred at water temperatures of about eighteen degrees Celsius (64.4 degrees Fahrenheit) (Vanicek and Kramer 1969). Similar to other closely related *Gila* species, bonytail probably spawn in rivers in spring over rocky substrates; spawning has been observed in reservoirs over rocky shoals and shorelines. It has been recently hypothesized that flooded bottomlands may provide important *Gila elegans* nursery habitat.

### **Status, Distribution and Designated or Proposed Critical Habitat**

*Gila elegans* was first listed as endangered on April 23, 1980 (45 FR 27710). It is currently designated as endangered throughout its entire range.

Currently, no documented self-sustaining populations exist in the wild. Formerly reported as widespread and abundant in main stem rivers (Jordan and Evermann 1896), its populations have been greatly reduced. Remnant populations presently occur in the wild in low numbers (USFWS 2002). The species is not known to occur in Wyoming. However, the species is included in the document because management actions in Wyoming may affect critical habitat for the species by extension through water depletions.

### **Threats**

The primary threats to *Gila elegans* are stream flow regulation and habitat modification; also, competition with and predation by nonnative fishes; hybridization with other native *Gila* species; poor land-use practices, degraded water quality, pesticides, and pollutants (USFWS 2002). The

existing habitat, altered by these threats, has been modified to the extent that it impairs essential behavior patterns, such as breeding, feeding, and sheltering. Threats to *Gila elegans* in relation to hybridization are essentially the same threats identified for humpback chub. *Gila elegans* were extirpated in some areas primarily because of rotenone poisoning and cold-water releases from dams (USFWS 2002).

## 6.7 Colorado pikeminnow (*Ptychocheilus lucius*) - Endangered

### Species/Habitat Description

*Ptychocheilus lucius*, the Colorado pikeminnow or squawfish, are the largest cyprinid fish (minnow family) native to North America. It is an elongated pike-like fish that during pre-development times may have grown as large as six feet in length and weighed nearly one hundred pounds (Behnke and Benson 1983). Today, *Ptychocheilus lucius* rarely exceed three feet in length or weigh more than 18 pounds; such fish are estimated to be forty-five to fifty-five years old (Osmundson et al. 1997). The mouth of this species is large and nearly horizontal with long slender pharyngeal teeth (located in the throat), adapted for grasping and holding prey. Adults are strongly counter shaded with a dark, olive back, and a white belly. Young *Ptychocheilus lucius* are silvery and usually have a dark, wedge-shaped spot at the base of the caudal fin.

*Ptychocheilus lucius* are long-distance migrators. They live in warm-water reaches of river main stems and larger tributaries, and require uninterrupted stream passage for spawning migrations and dispersal of young. The species is adapted to a hydrologic cycle characterized by large spring peaks of snow-melt runoff and low, relatively stable base flows (Junk et al. 1989; Johnson et al. 1995). *Ptychocheilus lucius* use relatively deep, low-velocity eddies, pools, and runs that occur in near-shore areas of main river channels (Tyus and McAda 1984; Valdez and Masslich 1989; Tyus 1990, 1991; Osmundson et al. 1995). In spring, *Ptychocheilus lucius* use floodplain habitats, flooded tributary mouths, flooded side canyons, and eddies that are available only during high flows (Tyus 1990, 1991; Osmundson et al. 1995). Gravel and cobble deposits are usually found in the habitat to be used for spawning.

### Life History

The diet of *Ptychocheilus lucius* longer than 7.6 to 10.2 cm (three to four in) consists almost entirely of other fish. (Vanicek and Kramer 1969). Males become sexually mature earlier and at a smaller size than do females, though all are mature by about age 7 and 500 mm (20 in) in length (Vanicek and Kramer 1969; Seethaler 1978; Hamman 1981).

*Ptychocheilus lucius* are long-distance migrators; adults move hundreds of miles to and from spawning areas, and require long sections of river with unimpeded passage. Adults require pools, deep runs, and eddy habitats maintained by high spring flows. High spring flows provide an important cue to prepare adults for migration (Harvey et al. 1993). These high spring flows maintain channel and habitat diversity, flush sediments from spawning areas, rejuvenate food production, form gravel and cobble deposits used for spawning, and rejuvenate backwater nursery habitats.

Spawning occurs in the *Ptychocheilus lucius* after spring runoff at water temperatures typically between eighteen and twenty three degrees Celsius (64.4°F and 73.4°F). It has occurred as early as June 15<sup>th</sup> in some years and as late as August 15<sup>th</sup>. Although direct observation of *Ptychocheilus lucius* spawning is not possible, in one study, radio telemetry indicated spawning may occur over cobble-bottomed riffles (Tyus 1990).

Known spawning sites are also in canyon-bound reaches (McAda 2000). Because of their mobility and environmental tolerances, adult *Ptychocheilus lucius* are more widely distributed than other life stages. Distribution patterns of adults are stable during most of the year (Tyus 1990, 1991; Irving and Modde 2000), but distribution of adults change in late spring and early summer due to migration to spawning (Tyus and McAda 1984; Tyus 1985, 1990, 1991; Irving and Modde 2000).

After hatching and emerging from the spawning substrate, *Ptychocheilus lucius* larvae drift downstream to backwaters in sandy, alluvial regions, where they remain through most of their first year of life (Holden 1977; Tyus and Haines 1991; Muth and Snyder 1995). Backwaters and the physical factors that create them are vital to successful recruitment of early life stages of *Ptychocheilus lucius*. It is important to note that these backwaters are formed after cessation of spring runoff within the active channel and are not floodplain features. *Ptychocheilus lucius* larvae occupy these in-channel backwaters soon after hatching. They tend to occur in backwaters that are large, warm, deep (average, about 0.3 m or 1 foot in the Green River), and turbid (Tyus and Haines 1991). Recent research (Day *et al.* 1999a, 1999b; Trammell and Chart 1999) has confirmed these preferences and suggested that a particular type of backwater is preferred by *Ptychocheilus lucius* larvae and juveniles.

### **Status, Distribution and Designated or Proposed Critical Habitat**

The *Ptychocheilus lucius* was first listed on March 11, 1967 (32 FR 4001). Full protection under the Act of 1973 occurred on January 4, 1974. It is currently designated as endangered throughout its range, except in the Salt and Verde River drainages in Arizona. Based on early fish collection records, archaeological finds, and other observations, the *Ptychocheilus lucius* was once found throughout warm water reaches of the entire Colorado River Basin down to the Gulf of California, and including reaches of the upper Colorado River and its major tributaries, the Green River and its major tributaries, and the Gila River system in Arizona (Seethaler 1978). *Ptychocheilus lucius* have never been found in colder, headwater areas.

Major declines in *Ptychocheilus lucius* populations occurred during the dam-building era of the 1930s through the 1960s. Behnke and Benson (1983) summarized the decline of the natural ecosystem, pointing out that dam, impoundments, and water use practices drastically modified the river's natural hydrology and channel characteristics throughout the Colorado River Basin. Dams on the main stem broke the natural continuum of the river ecosystem into a series of disjunct segments, blocking native fish migrations, reducing temperatures downstream of dams, creating lacustrine habitat, and providing conditions that allowed competitive and predatory nonnative fishes to thrive both within the impounded reservoirs and in the modified river segments that connect them. This has reduced the ideal habitat of the species. The highly modified flow regime in the lower basin coupled with the introduction of nonnative fishes decimated populations of native fish.

No self-sustaining populations of this species are currently known to exist in Wyoming. No recent sightings have been reported in Wyoming. However, in 1988, an individual was captured from the Little Snake River in Wyoming, which is a tributary to the Yampa River in Colorado where populations are known to exist. Management actions that involve water depletions in Wyoming may affect critical habitat for the species in states located downstream.

### **Threats**

The primary threats to *Ptychocheilus lucius* are stream flow regulation and habitat modification; competition with and predation by nonnative fishes; and pesticides and pollutants (USFWS 2002). The existing habitat, altered by these threats, has been modified to the extent that it impairs essential

behavior patterns, such as breeding, feeding, and sheltering. These impairments are described in further detail below. Data collected by Osmundson and Kaeding (1991) indicated that during low water year's nonnative minnows capable of preying on or competing with larval endangered fishes greatly increased in numbers.

Threats from pesticides and pollutants include accidental spills of petroleum products and hazardous materials; discharge of pollutants from uranium mill tailings; and high selenium concentration in the water and food chain (USFWS 2002). Accidental spills of hazardous material into critical habitat can cause immediate mortality when lethal toxicity levels are exceeded. Pollutants from uranium mill tailings cause high levels of ammonia that exceed water quality standards. High selenium levels may adversely affect reproduction and recruitment (Hamilton and Wiedmeyer 1990; Stephens et al. 1992; Hamilton and Waddell 1994; Hamilton *et al.* 1996; Stephens and Waddell 1998).

## **6.8 Humpback Chub (*Gila cypha*) - Endangered**

### **Species/Habitat Description**

*Gila cypha*, the humpback chub, is a medium-sized freshwater fish (less than 500 mm or 19.7 in) of the minnow family. The adults have a pronounced dorsal hump, a narrow flattened head, a fleshy snout with an inferior-subterminal mouth, and small eyes. It has silvery sides with a brown or olive colored back.

Backwaters, eddies, and runs have been reported as common capture locations for young-of-year *Gila cypha* (Valdez and Clemmer 1982). Data indicates that young utilize shallow areas. Habitat suitability index curves developed by Valdez *et al.* (1990) indicate young-of-year prefer average depths of 0.64 m (2.1 ft.) with a maximum of 1.55 m (5.1 ft.). Average velocities were reported at 0.06 meters per second (0.2 feet per second). Valdez et al. (1982), Wick et al. (1979), and Wick et al. (1981) found adult *Gila cypha* in water averaging fifty feet in depth with a maximum depth of ninety two feet. In these localities, humpback chub were associated with large boulders and steep cliffs. Gorman and Stone (1999) reported that ripe male *Gila cypha* aggregated in areas of complex habitat structure (i.e., matrix of large boulders and travertine masses combined with chutes, runs, eddies, 0.5–2.0 m deep) and were associated with deposits of clean gravel. Generally, *Gila cypha* show fidelity for canyon reaches and move very little (Miller *et al.* 1982; Archer *et al.* 1985; Burdick and Kaeding 1985; Kaeding *et al.* 1990). Tyus and Karp (1989) reported that *Gila cypha* occupy shoreline eddy habitats. They also reported that spring peak flows were important for reproductive success because availability of these habitats is greatest during spring runoff.

### **Life History**

Tyus and Karp (1991) found that *Gila cypha* spawn during spring and early summer following peak flows at water temperatures of about twenty degrees Celsius (68°F). They estimated that the spawning period for humpback chub ranges from May into July, with spawning occurring earlier in low-flow years and later in high-flow years; spawning was thought to occur only during a four to five week period (Karp and Tyus 1990). Peak hatch of *Gila* larvae occur on the descending limb of the hydrograph following spring runoff at maximum daily water temperatures of approximately 20 to 21°C (68 to 69.8°F) (Chart and Lentsch 1999). Although *Gila cypha* are believed to broadcast eggs over mid-channel cobble and gravel bars, spawning in the wild has not been observed for this species.

*Gila cypha* do not make extensive migrations (Karp and Tyus 1990). In some areas the *Gila cypha* were essentially restricted to a 1.6 km (1 mi) reach. These results were based on the recapture of

Carlin-tagged fish and radio telemetry studies conducted from 1979 to 1981 (Valdez et al. 1982) and 1983 to 1985 (Archer et al. 1985; USFWS 1986; Kaeding et al. 1990).

Chart and Lentsch (1999) estimated hatching dates for young *Gila* between 1992 and 1995. They determined that hatching occurred on the descending limb of the hydrograph as early as 9 June 1992 at a flow of 139 cubic meters per second (m<sup>3</sup>/s) (4908.7 cubic feet per second (ft<sup>3</sup>/s) and as late as July 1, 1995 at a flow of 731 m<sup>3</sup>/s (25,815 ft<sup>3</sup>/s). Instantaneous daily river temperatures on hatching dates overall years ranged from twenty to twenty two degrees Celsius (68 to 71.6°F). Newly hatched larvae average 6.3–7.5 mm (0.25-0.3 in) total length (TL) (Holden 1973; Suttkus and Clemmer 1977; Minckley 1973; Snyder 1981; Hamman 1982; Behnke and Benson 1983; Muth 1990), and 1-month-old fish are approximately 20 mm (0.79 in) long (Hamman 1982). No evidence exists of long-distance larval drift (Miller and Hubert 1990; Robinson *et al.* 1998). Upon emergence from spawning gravels, *Gila cypha* larvae remain in the vicinity of bottom surfaces (Marsh 1985) near spawning areas (Chart and Lentsch 1999).

High spring flows that simulate the magnitude and timing of the natural hydrograph provide a number of benefits to *Gila cypha*. Bank-full and over-bank flows provide allochthonous energy input to the system in the form of terrestrial organic matter and insects that are utilized as food. High spring flows clean spawning substrates of fine sediments and provides physical cues for spawning. High flows also form large re-circulating eddies used by adult fish (Chart and Lentsch 1999). High spring flows (50 percent exceedance or greater) have been correlated with increased recruitment of *Gila cypha* (Chart and Lentsch 1999).

#### **Status, Distribution and Designated Critical Habitat**

*Gila cypha* was listed as endangered on March 11, 1967. The USFWS designated critical habitat for the *Gila cypha* on March 21, 1994 (59 FR 13374). Historic abundance of the *Gila cypha* are unknown and historic distribution is surmised from various reports and collections that indicate the species presently occupies about 68% of its historic habitat (Tyus 1998).

There are no known occurrences of *Gilia cypha* in Wyoming (USFWS 2002). However, the species is included in the document because management actions in Wyoming may affect critical habitat for the species by extension through water depletions.

#### **Threats**

The primary threats to *Gila cypha* are stream flow regulation and habitat modification; competition with and predation by nonnative fishes; parasitism (Asian tapeworm); hybridization with other native *Gila* species; pesticides and pollutants (USFWS 2002). The existing habitat, altered by these threats, has been modified to the extent that it impairs essential behavior patterns, such as breeding, feeding, and sheltering. Threats to *Gila cypha* are flow regulation and habitat modification, predation by nonnative fishes, and pesticides and pollutants. Although historic data are limited, the apparent range-wide decline in *Gila cypha* is likely due to a combination of factors including alteration of river habitats by reservoir inundation, changes in stream discharge and temperature, competition with and predation by introduced fish species, and other factors such as changes in food resources resulting from stream alterations (USFWS 1990). Also, extensive human alterations throughout the basin prior to faunal surveys may have depleted or eliminated the species from some river reaches before its occurrence was documented.

### **6.9 Kendall Warm Springs Dace (*Rhinichthys osculus thermalis*) - Endangered**

### **Species/Habitat Description**

*Rhinichthys osculus thermalis*, the Kendal warm springs dace, belongs to the Cyprinidae family. It is the only fish species to inhabit the eighty five degrees Fahrenheit spring water of Kendall Warm Springs in the Bridger Teton National Forest in Wyoming. Adults range from one to two inches in length. They have a greyish-green body with dark blotches and a dark lateral stripe on their sides.

*Rhinichthys osculus thermalis*, Kendall warm springs dace, habitat is limited to only one area. *Rhinichthys osculus thermalis* are confined to one stream approximately three hundred meters (328 yards) in length. It originates at a series of thermal springs near the base of a bluff. The Kendall Warm Springs are located at 2,390 meters (7,840 ft.) in elevation. The springs flow southwest towards the Green River for a distance of 300m (984.25 ft.), before it cascades into the river over a travertine embankment. (Binns 1978).

### **Life History**

*Rhinichthys osculus thermalis* spawn year-round, however, Gryska and Hubert (1997) found evidence that reproduction decreases in the winter. Researchers witnessed fewer larval fish drifting in January than in May through August. *Rhinichthys osculus thermalis* inhabit fairly shallow pools and stream not more than 0.31 meters (1 ft.) in depth. Plant growth within the water is necessary for escape cover and protection from the current. Fry also utilize the vegetation as nursery areas (USFWS 1982).

Stomach analysis of *Rhinichthys osculus thermalis* indicates they feed on benthic invertebrates and epiphytic organisms (Gryska and Hubert 1997). They suck and scrape invertebrates from the substrate by using a subterminal mouth specialized for benthic foraging. Benthic invertebrates occurring in the Kendall Warm Springs stream include Odonata (*Argia*, *Erythemis*), Trichoptera (*Cheumatopsyche*, *Hydroptila*), Coleoptera (*Elmidae*, *Hydrophilidae*), Diptera (*Heleidae*, *Stratiomyiidae*, *Tendipedidae*, *Tipulidae*), Amphipoda (*Hyaella azteca*), Hydracarina, and Gastropoda (*Lymnaea*, *Planorbidae*) (Binns 1978).

### **Status, Distribution**

On October 13, 1970 (35 FR 6047) *Rhinichthys osculus thermalis* was listed as endangered under the Endangered Species Preservation Act of 1966 (80 Stat. 926; 16 U.S.C. 668aa(c)). On January 4, 1974 (39 FR 1171) the species was “grandfathered” into the Endangered Species Act of 1973, as amended (ESA).

*Rhinichthys osculus thermalis* is only known to occur in the Bridger-Teton field office in Sublette County Wyoming. *Rhinichthys osculus thermalis* are confined to one stream approximately three hundred meters (328 yd.) in length which originates at a series of thermal springs. When the species was first listed, its habitat was fragmented into two sections by a road built across the stream prior to 1934. The road culvert bisected the stream downstream from the stream’s origin. Since the listing, the road culvert has since been removed and replaced with a bridge which spans the stream (USFS 1997) allowing reconnection of the habitat. The habitat ends with a waterfall which plunges downward to the non-thermal Green River below. *Rhinichthys osculus thermalis* are believed to occupy their entire historic range (Hubbs and Kuhne 1937; Kaya et al. 1992).

### **Threats**

The habitat remains in relatively good condition. However, alterations by recreational users have occurred through the construction of a series of dams/pools near the springs and also through the contamination of the springs and stream by soaps, shampoos, and detergents. Bathing, wading, and

washing clothes in the Kendall Warm Springs area is currently prohibited, but some illegal activities have continued to occur. Other threats to the species include research efforts, oil and gas development, livestock grazing, recreation, reservoir construction, wildfire, acid rain, and herbicide/pesticide use (USFWS, 2007).

A number of natural predators of *Rhinichthys osculus thermalis* are present in its habitat. Dragonfly nymphs prey on larvae and small juvenile *Rhinichthys osculus thermalis* (Gryska and Hubert 1997). Other potential predators are dippers (*Cinclus mexicana*), Brewer's blackbirds (*Euphagus cyanocephalus*), great blue herons (*Ardea herodias*), and wandering garter snakes (*Thamnophis elegans vagrans*) (USFWS, 2007).

## **6.10 Pallid Sturgeon (*Scaphirhynchus albus*)-Endangered**

### **Species/Habitat Description**

*Scaphirhynchus albus*, the pallid sturgeon, is an ancient species that has existed during the dinosaur era. *Scaphirhynchus albus* are considered to be one of the most poorly known and infrequently seen freshwater fishes in North America. *Scaphirhynchus albus* are one of the largest (76 to 172 cm, 30 to 60 in) fishes found in the Missouri-Mississippi River drainage. They weigh up to thirty-nine kilograms (85 pounds). They are typically light brown on the dorsal surface and white underneath. It has a flattened, shovel-shaped snout. Fleshy chin barbels are located about one third the distance between the mouth and snout. They also have inner barbels which are located about one half the length of the outer barbels. *Scaphirhynchus albus* have a long, slender, flattened and armored region from the dorsal fin to the tail fin (caudal peduncle), which has a long upper lobe.

*Scaphirhynchus albus* is a bottom dweller, found in areas of strong current and firm sand bottom in the main channel of large turbid rivers. Little is known about pallid sturgeon life requirements; however, we do know that they prefer large, turbid, free-flowing riverine habitats with rocky substrates. Pallid sturgeons are well adapted to life on the river bottom and inhabit areas of swifter water.

### **Life History**

*Scaphirhynchus albus* grow very slowly, and mature late. They feed on small fishes and immature aquatic insects. Spawning occurs from June through August. The barbels, used to sense the river bottom and identify prey, allow the mouth to quickly capture it. Prey consists of aquatic insects and small bottom dwelling fish. *Scaphirhynchus albus* have been known to live beyond sixty years of age. They do not reach sexual maturity until about age twenty.

*Scaphirhynchus albus* are known to hybridize in nature with the closely related sturgeon, and it is thought that loss of habitat and reproductive cues (water level raises) are the likely causes. Since their former unique spawning habitats have been altered or lost largely due to damming, altered hydrology, and channelization, both species are forced to spawn at the few remaining acceptable locations. Fertilization occurs externally, and hybridization occurs when eggs and sperm of the two species are mixed in the river water as it flows over the gravelly spawning beds.

### **Status, Distribution and Designated or Proposed Critical Habitat**

*Scaphirhynchus albus* was listed by the U.S. Fish & Wildlife Service as endangered on September 6, 1990, in accordance with provisions of the Endangered Species Act of 1973, as amended.

The range of *Scaphirhynchus albus* includes the headwaters of the Missouri River (Fort Benton-Great Falls, Montana) through the Mississippi River to New Orleans, Louisiana. *Scaphirhynchus*

*albus* has not been documented in Wyoming. However, the species is included in the document because management actions in Wyoming may affect critical habitat for the species by extension through water depletions within the Platt River drainage basin.

### **Threats**

Because the species does not occur in the state of Wyoming, threats to the species within the state would only occur from water depletions. Since 1978, the FWS has consistently found through formal section 7 consultations with Federal agencies that actions resulting in depletions to flows in the Platte River system are likely to jeopardize the continued existence of one or more federally-listed threatened or endangered species and adversely modify critical habitat (Instruction Memorandum No. WY-2007-039).

## **6.11 Razorback sucker (*Xyrauchen texanus*) - Endangered**

### **Species/Habitat Description**

*Xyrauchen texanus*, the razorback sucker, is a fish belonging to the family Catostomidae (meaning “down mouth”). The *Xyrauchen texanus* have ventral mouths with thick lips covered with papillae and no scales on its head. Suckers are bottom browsers, sucking up or scraping off small invertebrates, algae, and organic matter with their fleshy, protrusible lips (Moyle 1976). *Xyrauchen texanus* are the only sucker with an abrupt sharp-edged dorsal keel behind its head. The keel becomes larger with age. The head and keel are dark, the back is olive-colored, the sides are brownish or reddish, and the abdomen is yellowish white (Sublette et al. 1990). Adults often exceed three kg (six lb.) in weight and six hundred mm (two feet) in length. *Xyrauchen texanus* are long-lived. The *Xyrauchen texanus* adult can live forty-four to fifty years. *Xyrauchen texanus* reaches maturity between two and seven years of age (Minckley 1983). They can produce viable gametes even when quite old. Survival adaptations include the ability to spawn in a variety of habitats and flows regimes, and over a long season.

Outside of the spawning season, adult *Xyrauchen texanus* occupy a variety of shoreline and main channel habitats including slow runs, shallow to deep pools, backwaters, eddies, and other relatively slow velocity areas associated with sand substrates (Tyus 1987; Tyus and Karp 1989; Osmundson and Kaeding 1989; Valdez and Masslich 1989; Osmundson and Kaeding 1991; Tyus and Karp 1990). *Xyrauchen texanus* are also known to be in off-channel habitats, flooded side canyons, washes, side channels and tributaries (Muth et al. 1998). Habitat requirements of young and juvenile *Xyrauchen texanus* in the wild are not yet well known, particularly in native riverine environments.

### **Life History**

*Xyrauchen texanus* can spawn as early as age 3 or 4, when they are 35.6 cm (14.4 in) or more long. Depending on water temperature, spawning can take place as early as November or as late as June. In the upper Colorado River basin, razorbacks typically spawn between mid-April and mid-June. These fish reportedly migrate long distances to spawn, congregating in large numbers in spawning areas. Sexually mature *Xyrauchen texanus* are generally collected on the ascending limb of the hydrograph from mid-April through June (depending on the specific location). Tyus and Karp (1990) and Osmundson and Kaeding (1991) reported off-channel habitats to be much warmer than the main stem river. *Xyrauchen texanus* presumably moved to these areas for feeding, resting, sexual maturation, spawning, and other activities associated with their reproductive cycle.

### **Status, Distribution and Designated or Proposed Critical Habitat**

The *Xyrauchen texanus* was first listed on October 23, 1991 (56 FR 54957). It is currently designated as endangered throughout the entire range of the species. On March 14, 1989, the USFWS was petitioned to conduct a status review of the *Xyrauchen texanus* (56 FR 54957). The final rule stated, "Little evidence of natural recruitment has been found in the past thirty years, and numbers of adult fish captured in the last 10 years demonstrate a downward trend relative to historic abundance."

Critical habitat was designated for *Xyrauchen texanus* on March 21, 1994 (59 FR 13374).

Historically, *Xyrauchen texanus* were found in the main stem Colorado River and major tributaries in Arizona, California, Colorado, Nevada, New Mexico, Utah, and in Mexico (Ellis 1914; Minckley 1983). Between 1992 and 1995 larval *Xyrauchen texanus* were collected in the middle and lower Green River and within the Colorado River inflow to Lake Powell (Muth 1995). Average fecundity recorded in studies ranged from 100,800 to 46,740 eggs per female (Bestgen 1990).

Although the species has not been found in Wyoming, there is potential for the species to travel up the Little Snake River, which flows into Colorado from Wyoming and ends up in the Yampa River (USFWS 2002). The main reason this species is included in the document is because management actions in Wyoming may affect critical habitat for the species by extension through water depletions.

### **Threats**

The primary threats to *Xyrauchen texanus* are stream flow regulation and habitat modification; competition with and predation by nonnative fishes; and pesticides and pollutants (USFWS 2002). The existing habitat, altered by these threats, has been modified to the extent that it impairs essential behavior patterns, such as breeding, feeding, and sheltering. Significant changes have occurred in *Xyrauchen texanus* habitat through diversion and depletion of water, introduction of nonnative fishes, and construction and operation of dams" (56 FR 54957) and reservoirs. Dams on the main stem of the river and its major tributaries have segmented the river system, blocked migration routes, and changed much of the river habitat into lake habitat. Dams have also drastically altered flows, temperatures, and channel geomorphology.

Wydoski and Wick (1998) identified starvation of larval *Xyrauchen texanus* due to low zooplankton densities in the main channel and loss of seasonal floodplain habitats which provide adequate zooplankton densities for larval food as one of the most important factors limiting recruitment. Lower regulated river discharges, channelization, and levee construction has restricted access to those floodplain habitats. Reduction in spring peak flows may hinder the ability of *Xyrauchen texanus* to form spawning aggregations, because spawning cues are reduced (Modde and Irving 1998).

## **6.12 Wyoming Toad (*Bufo baxteri*) - Endangered**

### **Species/Habitat Description**

*Bufo baxteri* (Wyoming toad) adults have a snout-vent length that averages about 5.6 cm (2.2 in). Female *Bufo baxteri* grow slightly larger than males. The dorsal surface of the body has rounded warts intermediate in size. The cranial crests fuse medially to form an elongated boss-a ridge with a median groove. Cutting tubercles on the hind foot are well developed. Background color is dark brown, gray, or greenish with small dark blotches and a rather indistinct median line. Some *Bufo baxteri* have well defined light lateral stripes. The belly is spotted; males have a dark throat. This

toad can be distinguished by other toad species present in Wyoming by the small adult size and fused cranial crests.

Historically, *Bufo baxteri* habitat included floodplain ponds, small ponds and lakes produced by irrigation runoff, and many small seepage lakes within the Laramie Basin (Jennings et al. 2001). Currently, *Bufo baxteri* are found in sedge and grass wet meadows at the margins of lakes and ponds on the floodplain of streams in the Basin. The habitat has been described as bogs created by underground water collecting into seepage lakes (Baxter 1987). *Bufo baxteri* typically breed within the edges of bays, ponds, and irrigated meadows where water is shallow and vegetation is plentiful. The abundant vegetative cover provides important protection from summer evaporation. Numerous small seepage lakes, river courses, and irrigation water provide the moist areas essential to *Bufo baxteri* survival (USFWS 1991).

### **Life History**

*Bufo baxteri* is endemic to Wyoming. It is believed to be a glacial relict found only in the Laramie Basin (Jennings et al. 2001). Adult *Bufo baxteri* are insectivorous. They eat ants, beetles, and other invertebrates (USFWS 1991). Tadpoles primarily feed on algae.

In early summer, *Bufo baxteri* are active during the daylight hours. In late July, toad activity during the daylight hours is less common. It is thought that *Bufo baxteri* become nocturnal during the dry portion of summer (starting late July) and remains mostly underground during the day. It is thought that *Bufo baxteri* burrow into softer soils such as areas that have been tilled by pocket gophers for hibernation (USFWS 1991). Toads have been observed using rodent burrows and areas of high vegetation at night. During warm afternoons *Bufo baxteri* were observed digging shallow impressions in the open substrate possibly for thermo- and osmo-regulation and predator avoidance (Parker 2000).

Breeding generally occurs in water that is less than 15.2 centimeters (6 in) deep. Adult *Bufo baxteri* typically appear at breeding sites from mid-May to mid-June when daytime temperatures reach Twenty-one degrees Celsius (70°F). Males appear first and call to attract females. Breeding typically occurs. Tadpoles usually complete their development by late August. Males begin breeding at three years of age while females begin breeding at two years of age (USFWS 1991).

### **Status, Distribution**

*Bufo baxteri* was listed as federally endangered on February 16, 1984 (USFWS 1984). A recovery plan for the species was approved in 1991.

Dr. George Baxter of the University of Wyoming first discovered the *Bufo baxteri* in 1946. At that time, *Bufo baxteri* was considered abundant, although it was restricted to a relatively small range of less than 1,554 square kilometers (600 mi<sup>2</sup>). *Bufo baxteri* was originally found from many breeding sites in the floodplains of the Big and Little Laramie rivers. During the 1970s, *Bufo baxteri* populations declined drastically. An extensive survey of the Laramie Basin in 1980 found only one population (Jennings et al. 2001). Since 1983, all Wyoming toad observations have come from an area approximately 77.7 square kilometers (30 mi<sup>2</sup>), located 16 to 24 kilometers (ten to 15 mi) southwest of Laramie around Mortenson Lake (USFWS 1991). The species is found within the Rawlins field office in Wyoming. Attempts to introduce the *Bufo baxteri* at several locations, including Mortenson Lake in the Mortenson Lake National Wildlife Refuge (NWR), Lake George, and Rush Lake at the Hutton Lake NWR (Jennings et al. 1991) have been made.

## Threats

The primary threat to *Bufo baxteri* is the amphibian chytrid fungus (*Batrachochytrium dendrobatidis*). Chytrid fungus has been implicated in declines and extinctions of amphibian species worldwide. Several other diseases have also been observed affecting *Bufo baxteri*, including “red-leg,” “short tongue syndrome” and adult enema syndrome. Red-leg symptoms include red legs and anus. Red leg is a fatal bacterial infection. Short tongue syndrome is a disease that causes toads to miss their target when attempting to capture food items (Geraud and Keinath 2004).

Water diversions, quantity and quality of water, infectious disease, predation, pesticide use, grazing and irrigation practices, weather events, climate changes and lack of genetic diversity may also affect species survival and abundance. Pesticide use may also affect food sources for *Bufo baxteri* (Geraud and Keinath 2004).

## 6.13 Least Tern (*Sterna antillarum*)-Endangered

### Species/Habitat Description

Least tern (*Sterna antillarum*) is the smallest member of the gull and tern family. They measure 20 to 23 cm (eight to nine in) long and having a 51 cm (20 in) wingspread. Males and females appear identical. They have a black crown, white forehead, gray back, gray wings above with white below, orange legs and a black-tipped yellow bill. Immature *Sterna antillarum* have darker feathers, a dark bill and dark eye stripes on white heads.

Least tern nests in small groups on barren beaches of sand, gravel or shells, on dry mudflats and salt-encrusted soils (salt flats) and at sand and gravel pits along rivers. Nesting locations are usually at higher elevations and away from the water edge. This is because nesting starts when the river flows are high and small amounts of sand are exposed. Nests are often several hundred meters from the water (Rumancik 1987, 1988).

### Life History

Least tern feed on small fish and crustaceans. The food is taken by diving from the air into shallow water. They also feed on insects, mollusks, and annelids (Whiteman 1988). During the breeding season, *Sterna antillarum* usually feed within a few hundred meters of the nesting colony.

Least tern arrives on breeding grounds in early May. Nesting success depends on the presence of bare or nearly barren sandbars, favorable water levels during nesting and food abundance. *Sterna antillarum* spend four to five months at their breeding sites. They arrive at breeding areas from late April to early June (Faanes, 1983). The nest is an inconspicuous, unlined scrape usually containing three brown spotted eggs. Egg-laying and incubation occur from late May through early August. Eggs hatch in about twenty days and chicks are typically fledged in another twenty days.

### Status, Distribution and Designated or Proposed Critical Habitat

On May 28, 1985 *Sterna antillarum* was listed as endangered in accordance with provisions of the Endangered Species Act of 1973, as amended.

Historically, *Sterna antillarum* nested along the Colorado (in Texas), Red, Rio Grande, Arkansas, Missouri, Ohio and Mississippi River systems. Currently, they are known to nest in the Mississippi and Rio Grande River basins from Montana south to Texas and from eastern New Mexico and Colorado to Indiana and Louisiana (Campbell 1935; Janssen 1986). The species has not been known to occur in Wyoming. However, the species is included in the document because management

actions in Wyoming may affect critical habitat for the species by extension through water depletions within the Platte River drainage basin.

### **Threats**

Because the species does not occur in the state of Wyoming, threats to the species within the state would only occur from water depletions. Since 1978, the FWS has consistently found through formal section 7 consultations with Federal agencies that actions resulting in depletions to flows in the Platte River system are likely to jeopardize the continued existence of one or more federally-listed threatened or endangered species and adversely modify critical habitat (Instruction Memorandum No. WY-2007-039).

## **6.14 Piping Plover (*Charadrius melodus*) -Endangered**

### **Species/Habitat Description**

The Piping plover (*Charadrius melodus*) is a sandy-gray, robin-sized shorebird with one dark breast band (Wilcox 1959; Haig 1992). It has a dark stripe across the crown during the breeding season. Other characteristics include a white wing stripe and a white rump that is visible in flight.

Piping plover nest on sandbars and sand and gravel beaches with short, sparse vegetation along inland lakes, on natural and dredge islands in rivers, in gravel pits along rivers and on salt-encrusted bare areas of sand, gravel or pebbly mud on interior alkali ponds and lakes.

### **Life History**

Piping plovers feed along the water's edge on small insects, worms, terrestrial insects, crustaceans and mollusks (Haig 1992).

Piping plover is present on breeding grounds from late March through August. Nests are shallow, scraped depressions occasionally lined with small pebbles, shells or other material. A clutch of four eggs is usually laid in late May or early June with hatching in twenty seven to thirty one days. *Charadrius melodus* are considered monogamous, but because nests are often destroyed at the beginning of the breeding season, new mates are known to have been chosen. One brood per year is characteristic of *Charadrius melodus*; however, females are capable of laying several clutches if a nest is destroyed (Haig 1992). Both eggs and young are tended by both parents.

### **Status, Distribution and Designated or Proposed Critical Habitat**

On December 11, 1985, *Charadrius melodus* was listed as endangered in the Great Lakes watershed of both the United States and Canada, and as threatened in the remainder of its range in the U.S. (Northern Great Plains, Atlantic and Gulf Coasts, Puerto Rico, Virgin Islands), Canada, Mexico, Bahamas, and the West Indies, (USFWS 1985, COSEWIC 2001).

*Charadrius melodus* occur along shorelines around alkaline lakes as well as reservoir beaches, river islands and adjacent sand pits and beaches on large lakes (Haig and Pilsner 1993). The species has not been known to occur in Wyoming. However, the species is included in the document because management actions in Wyoming may affect critical habitat for the species by extension through water depletions.

### **Threats**

Because the species does not occur in the state of Wyoming, threats to the species within the state would only occur from water depletions. Since 1978, the FWS has consistently found through formal section 7 consultations with Federal agencies that actions resulting in depletions to flows in the

Platte River system are likely to jeopardize the continued existence of one or more federally-listed threatened or endangered species and adversely modify critical habitat (Instruction Memorandum No. WY-2007-039).

## **6.15 Western yellow-billed cuckoo (*Coccyzus americanus*) - Threatened**

### **Species/Habitat Description**

The western yellow-billed cuckoo (*Coccyzus americanus*), is a medium-sized bird of about thirty centimeters (12 in) in length, and weighing about sixty grams (two ounces). The species has a slender, long-tailed profile with a fairly stout and slightly down-curved bill which is blue-black with yellow on the basal half of the lower mandible. The feathers are grayish-brown above and white below with rufous primary flight feathers. The tail feathers are boldly patterned with black and white below. The legs are short and bluish-gray and adults have a narrow, yellow eye ring. Juveniles resemble adults; however, the tail patterning is less distinct, and the lower bill may have little or no yellow. Males and females differ slightly. Males tend to have a slightly larger bill, and the white in the tail tends to form oval spots, whereas in females, the white spots tend to be connected and less distinct (Hughes 1999).

*Coccyzus americanus*, is one of two subspecies of the Western yellow-billed cuckoo (UDWR 2003). The western subspecies is found intermittently throughout the western United States in dense riparian vegetation, including cottonwood and willow stands, tamarisk thickets, Russian olive, willows, and orchards.

Two hectares of dense riparian vegetation is considered the absolute minimum size for cuckoo occupancy, as no cuckoos have been detected successfully nesting in patches smaller than two hectares."(Corman and Magill 2000, Halterman et al 2001).

### **Life History**

The breeding season is in late spring. Nests are generally built from four to ten feet off the ground in riparian vegetation. Both the male and the female incubate the three to four eggs for nine to eleven days. Both parents feed the young which fledge in approximately three weeks (Kaufmann 1996).

Western yellow-billed cuckoos primarily consume insects such as caterpillars, cicadas, beetles, grasshoppers, and katydids, as well as lizards, frogs, eggs of other birds, berries, and small fruits. Population density appears to rise and fall in relation to insect outbreaks (Kaufmann 1996).

### **Status, Distribution and Designated or Proposed Critical Habitat**

In 2012, the western subspecies of the yellow-billed cuckoo was proposed as threatened under the ESA (78 Federal Register 61621-61666). The USFWS has found that the species population status warrants listing.

In Wyoming, the Wyoming Natural Diversity Database, WYNDD, ranks the State Abundance of Yellow-billed Cuckoos, as 'Very Rare' - fewer than 1000 resident individuals (Keinath and Beauvais 2002). Others consider it an uncommon summer resident (WGFD 1997, Dorn and Dorn 1999). The accuracy of these designations is still unclear given the lack of survey data. There have been very few observations reported in Wyoming and fewer still that have documented breeding. Breeding was documented within the city limits of Sheridan in 1980 (Downing 1990). Within the last twenty-five years breeding was suspected along East Wolf Creek and Big Goose Creek near Sheridan, along the North Platte River in Rawhide Wildlife Habitat Management Area (WHMA), near Springer WHMA in Goshen County and along the South Fork Miller Creek north of Sundance.

## Threats

Threats *Coccyzus americanus* face are related to habitat destruction and degradation, livestock use of riparian areas, water withdrawals, and human development. Hughes (1999) also summarized effects of heavy pesticide use during the last fifty years, which has likely contributed to population declines by removing and/or poisoning prey. The pesticide use may have also resulted in directly poisoning birds and causing egg shell thinning.

## 6.16 Whooping Crane (*Grus americana*) - Endangered

### Species/Habitat Description

*Grus Americana* (Whooping crane) adults are snow white, except for black primary feathers on the wings, and a bare red face and crown. The bill is a dark olive-gray which will turn lighter during the breeding season. The eyes are yellow and the legs and feet are gray-black. The neck is long; the bill is long, dark and pointed; and the legs are long, thin and black. There is a patch of reddish-black bristly feathers on the top and back of the head. Black feathers on the side of the head below the yellow eye look like a long, dark moustache. *Grus Americana* is the only large white bird with black wingtips that flies with its neck straight out in front and the legs trailing far behind. It also is the only one that walks or stands on long thin legs and does not swim.

Immature cranes are a reddish cinnamon color that results in a mottled appearance as the white feather bases extend. The juvenile plumage is gradually replaced through the winter months and becomes predominantly white by the following spring as the dark red crown and face appear. Yearlings achieve the typical adult appearance late in their second summer or fall.

*Grus Americana* continue to use ancestral breeding areas, migration routes and wintering grounds. Over the last fifty years, there has been little natural dispersal of the species. Low population numbers likely have contributed to this lack of dispersal into new habitats and territories.

The breeding habitat for *Grus americana* is typically poorly drained wetlands in the headwaters of the Nyarling, Sass, Klewi, and Little Buffalo rivers. The area is poorly drained and interspersed with multiple shallow-water wetlands of various sizes, shapes and depths. The wetlands are separated by narrow ridges that are vegetated with white spruce (*Picea glauca*), black spruce (*P. mariana*), tamarack (*Larix laricina*), willows (*Salix* spp.) and an understory of dwarf birch (*Betula glandulosa*), Labrador tea (*Ledum groenlandicum*) and bear berry (*Arctostaphylos uvalursi*). Bulrush (*Scirpus validus*) is the dominant plant in the potholes used for nesting; although cattail (*Typha* spp.), sedge (*Carex aquatilis*), musk-grass (*Chara* spp.), and other aquatic plants are common (Lewis 1995).

### Life History

*Grus Americana* are omnivorous, obtaining foods from soil, water, and vegetation. At their grounds, they feed primarily on mollusks, crustaceans, aquatic insects, minnows, frogs, and snakes (Allen 1956, Novakowski 1966). During migration, frogs, fish, plant tubers, crayfish, insects, and waste grains in harvested fields comprise the whooper's diet. In winter, *Grus Americana* feed primarily on crabs and clams. They will wander into upland areas following flooding by rain to feed on acorns, snails, mice, voles, crayfish, grasshoppers, and snakes (Bishop and Blankinship 1982, Hunt 1987).

*Grus Americana* are monogamous and form life-long pair bonds but will re-mate following the death of a mate. Typically they construct nests of bulrush and lay one to three eggs in late April and early May. The incubation period is about twenty nine to thirty one days. *Grus Americana* will re-nest if the first clutch is lost or destroyed before mid-incubation. Both sexes share incubation and brood-

rearing obligations. Even though most pairs lay two eggs, seldom does more than one chick reach fledging.

### **Status, Distribution and Designated or Proposed Critical Habitat**

On March 11, 1967, *Grus Americana* were listed as an endangered species under the Endangered Species Preservation Act of 1966 (80 Stat. 926; 16 U.S.C. 668aa(c)). On January 4, 1974 (39 FR 1171) the species was “grandfathered” into the Endangered Species Act of 1973, as amended (ESA).

*Grus Americana* occur exclusively in North America and were likely never very common in historic times. The principal historic breeding range stretched across central North America from central Alberta through southern Saskatchewan and Manitoba, northeastern North Dakota, western Minnesota, southern Wisconsin, northern Iowa, and northern Illinois (Allen 1952). In 1975 the US Fish and Wildlife Service and Canadian Wildlife Service tried to establish an experimental Whooping crane population within the Rocky Mountains. Whooping crane eggs were placed in the nests of Sandhill cranes. The experiment did not work because the Whooping cranes thought they were Sandhill cranes and they didn't breed or establish a new population. No Whooping cranes are known to occur in Wyoming at this time. The species is included in the document because management actions in Wyoming may affect critical habitat for the species by extension through water depletions.

### **Threats**

Because the species does not occur in the state of Wyoming, threats to the species within the state would only occur from water depletions. Since 1978, the FWS has consistently found through formal section 7 consultations with Federal agencies that actions resulting in depletions to flows in the Platte River system are likely to jeopardize the continued existence of one or more federally-listed threatened or endangered species and adversely modify critical habitat (Instruction Memorandum No. WY-2007-039).

## **6.17 Black-Footed Ferret (*Mustela nigripes*) - Endangered**

### **Species/Habitat Description**

Black-footed ferret (*Mustela nigripes*) is the only species of ferret native to North America (USFWS 2012a) These slender mustelids are distinguished by their black feet, tail tip, and “mask” across their eyes that contrast the yellowish buff to white coloring of their upper bodies and nearly white forehead, muzzle and throat (USFWS 2012b). *Mustela nigripes* are medium-sized, typically weighing between 0.64 to 1.13 kilograms (1.4 to 2.5 lb.) and measuring 48.26 to 61 centimeters (19 to 24 in) in length, including a 12.7 to 15.23 cm (five to six in) tail with males being slightly larger than the females. They also have large front paws, with claws for digging, as well as large ears and eyes (USFWS 2012a, USFWS 2012b).

The *Mustela nigripes* is intrinsically linked to the prairie dog (USFWS 2000). They require established prairie dog towns for food and shelter (Hoffmeister 1986), which primarily occur in grassland and sagebrush habitats in Wyoming. Such areas are characteristic of prairie, grassland plains, and surrounding mountain basins up to 3,200 meters (10,500 ft.) (USFWS 2003). All active prairie dog towns or complexes of towns, large enough to support ferrets are considered potential *Mustela nigripes* habitat. Although other factor, such as disease potential, may alter the suitability of the habitat for black-footed ferret.

## Life History

*Mustela nigripes* live in prairie dog colonies year-round and are solitary, except during brief periods of the breeding season and when kits are still trailing their mothers. They are strongly nocturnal and spend much of the day below ground, appearing aboveground mostly at night. They exhibit a bimodal activity pattern, being most active in the first few hours after sundown (1700-2400) and in the early morning (0300-0600), but can be found aboveground any time of night (Clark et al. 1983, Clark 1989, Marinari 1992). Individual *Mustela nigripes* usually do not return to the same burrow every morning, but rather relocate frequently.

Breeding season for the *Mustela nigripes* occurs during March and April, with the female producing four to five young per year in May or June. The young ferrets do not come above ground until they are six weeks old (Adult 1996). The young become increasingly solitary from August through early September, and are self-sufficient from early October.

The size and shape of *Mustela nigripes* home ranges are strongly determined by distribution and density of prairie dogs. This appears to be especially true of females. Male home ranges, while tracking prairie dogs as well, also appear to be positioned to overlap the home ranges of several females. Home range boundaries are typically well-defined and individuals attempt to exclude others of the same gender. Boundaries are delineated by scent-marking, which expresses the individual's identity, sexual condition, and social status. Males will mark and patrol their home ranges more diligently in February and March as breeding season approaches. This causes them to spend more time and travel greater distances on the surface, making them more vulnerable to predation (Miller et al. 1996). Aggression is rarely observed in the *Mustela nigripes*, suggesting that scent marks are effective signals.

Their diet primarily consists of prairie dog (90%), and secondarily of mice, rabbits, birds, reptiles, and insects (10%) (Andelt 1996). The species is opportunistic and will feed on carrion. *Mustela nigripes* require a large amount of food due to a high metabolism. Hunting takes place at night, although females with young may hunt during the day.

## Status, Distribution and Designated or Proposed Critical Habitat

*Mustela nigripes* were listed as endangered in 1967 under a precursor to the Endangered Species Act of 1973 (32 FR 4001, March 1967). On March 6, 2013, the U.S. Fish and Wildlife Service (Service) issued a letter acknowledging 'block clearance' for the State of Wyoming in response to a request from the Wyoming Game and Fish Department. This letter provides acknowledgement that the likelihood of identifying wild ferrets in Wyoming, outside of those resulting from reintroductions, is distinctly minimal. As a result, black footed ferrets in Wyoming are treated as experimental.

*Mustela nigripes* were probably never abundant, although they originally inhabited extensive grassland areas of the Great Plains, from Texas to southern Saskatchewan, Canada (USFWS 2000). Their range extended from the Rocky Mountains east through the Dakotas and south through Nebraska, Kansas, Oklahoma, Texas, New Mexico, and Arizona.

Currently, free-ranging *Mustela nigripes* occur only in eight reintroduction sites established by the USDI Fish and Wildlife Service since 1991 (Figure 3): Shirley Basin (Wyoming); Badlands National Park/ Conata Basin/ Buffalo Gap National Grassland (South Dakota); Charles M. Russell National Wildlife Refuge/ neighboring lands (Montana); Fort Belknap Indian Reservation (Montana); Aubrey Valley (Arizona); Cheyenne River Sioux Tribal lands (South Dakota); Coyote Basin (Colorado/ Utah); and Janos (Chihuahua, Mexico) (USDI Fish and Wildlife Service 2002).

## Threats

Threats to the species include habitat loss and fragmentation, sylvatic plague, genetic drift, canine distemper, deliberate poisoning, and shootings (K. Esch et. al. 2005).

## 6.18 Canada Lynx (*Lynx canadensis*) - Threatened

### Species/Habitat Description

*Lynx Canadensis* (Canada lynx) are medium-sized cats with an average adult male weighing ten kilograms (22 lb.) and measuring eighty-five centimeters (33.5 in) in length, including the tail. Adult females average slightly smaller weighing 8.5 kilograms (19 lb.) and measuring eighty-two centimeters (32 in) in length, including the tail. *Lynx Canadensis* are distinguished by long tufts on their ears, as well as large, well-furred paws, and a short, black-tipped tail. During the summer months, their pelage is reddish to gray-brown; whereas in winter, their pelage is more grayish-brown mixed with buff or pale brown with grayish-white or buff-white fur on their torso, legs, and feet (USFWS 2005, USFWS 2012c).

*Lynx Canadensis* inhabit forests with cold, snowy winters that offer snowshoe hare as the primary prey base. In North America, these forests are classified as boreal forests (taiga) consisting mainly of cold tolerant mixed conifers; primarily spruce (*Picea* spp.) and fir (*Abies* spp.) (USFWS 2005). Precipitation is mainly in the form of snow. Snow conditions are an important factor in the location of *Lynx Canadensis* since they are well adapted to surviving cold winters in deep snow. *Lynx Canadensis* lives in the boreal forests of North America from Alaska to Newfoundland, descending into the lower 48 states in northern New England (Maine, New Hampshire, New York, Vermont), the Western Great Lakes region (Michigan, Minnesota, Wisconsin), the Pacific Northwest (Oregon, Utah, Washington), and the Rocky Mountains (Colorado, Idaho, Montana, Wyoming) (McCord and Cardoza 1982). In lower latitudes, less than 50 degrees north, boreal forests transition to deciduous temperate forest in the Northeast and Great Lakes, and to subalpine forest in the West. Potentially suitable habitat may occur in high elevation spruce-fir habitat throughout Wyoming (USFWS 2005).

### Life History

*Lynx Canadensis* are solitary carnivores with the ability to change reproductive output in accordance with variable, and sometimes cyclical, food availability. Adult *Lynx canadensis* are social only during the breeding season, between February and early April, when they form breeding pairs. They are polygamous and seasonally polyestrous; females cycle continuously until bred during the breeding season. Females typically give birth to one to five kittens (mean = 3.7 kittens) (McCord and Cardoza 1982).

Studies of *Lynx Canadensis* from Montana and Wyoming show that they have two different types of movement: daily and exploratory. Daily movements, typically within the home range, average two to four kilometers. Exploratory or dispersal movements can range from seven to thirty-nine kilometers and take the animal outside their home range territory (Squires and Laurion 2000). However, fragmentation of habitat in southern regions may lead to increased ranges of movement between suitable foraging and denning sites (Kochler and Brittell 1990). *Lynx Canadensis* will occasionally abandon established home ranges and become nomadic when prey is extremely scarce (McCord and Cardoza 1982).

Lynx hunt by night for their most common prey, the snowshoe hare, which can make up 70 percent of their diet (Zevloff 1988). In Canada, Alaska, and Washington snowshoe hares comprised 35-97% of *Lynx canadensis* diet (Koehler and Aubry 1994). Secondary prey includes red squirrels,

ground squirrels, grouse, porcupine (*Erethizon dorsatum*), beaver (*Castor canadensis*), muskrat (*Ondatra zibethicus*), deer mice (*Peromyscus* spp.), voles (*Microtus* spp.), shrews (*Sorex* spp.), and even some fish. Deer (*Odocoileus* spp.) and moose (*Alces alces*) occasionally appear in *Lynx canadensis* diets, mostly as carrion (Tumlison 1987, Ruediger et al. 2000).

#### **Status, Distribution and Designated or Proposed Critical Habitat**

On March 24, 2000 *Lynx Canadensis* was federally listed as threatened by the USFWS (65 FR 16052) in accordance with provisions of the Endangered Species Act of 1973, as amended.

*Lynx Canadensis* occupied Wyoming prehistorically (Kurten and Anderson 1980), as well as historically and into the present (Reeve et al. 1986). The best contiguous *Lynx Canadensis* habitat in Wyoming is in the northwestern and western portion of the state. The remainder is highly fragmented, widely dispersed, and typically isolated by large expanses of arid shrubland (Ehle and Keinath 2002). The distribution of documented *Lynx Canadensis* specimens and observations in Wyoming indicate that they most consistently occupy the Salt River, Wyoming, Teton, Wind River, Gros Ventre, and Absaroka mountain ranges (Reeve et al. 1986).

Critical habitat for the Canada lynx (50 CFR 17.95(a)) has been designated for portions of Fremont, Lincoln, Park, Sublette, and Teton Counties, including parts of Yellowstone National Park and the Bridger-Teton and Shoshone National Forests.

#### **Threats**

Threats to the species include but are not limited to habitat fragmentation, habitat destruction which reduces habitat for potential prey, deforestation, fire, predators, human interactions, vehicle collisions, disease, poaching and oil and mineral developments (Meaney and Beauvais 2004).

### **6.19 Grizzly Bear (*Ursus arctos*) - Threatened**

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

Grizzly bear (*Ursus arctos*) is large, powerful bear with a massive head, small eyes, prominent nose, small rounded ears, and short tail (Pasitschniak-Arts 1993). The species is recognized by its dished facial profile, prominent shoulder hump, and long, slender, slightly re-curved fore claws twice the length of the hind claws (Pasitschniak-Arts 1993, Wilson and Ruff 1999). Dorsal guard hairs of some individuals from western North America are variegated and show a silver tipped or grizzled appearance, hence the name grizzly.

*Ursus arctos* occupy a variety of habitats throughout their range. They are highly adaptable and are capable of exploiting different landscapes given their lifestyle and intelligence. *Ursus arctos* habitat in the lower 48 States is characterized by extensive forest cover often interspersed with grasslands and meadows. In Wyoming these habitats are typically above 1,500 m (932 mi) (Schwartz et al. 2002). Home ranges must include sites suitable for hibernation. Denning sites are most commonly located in the subalpine fir stands on north-facing exposures (Craighead et al. 1995).

#### **Life History**

Except for mating and caring for the young, *Ursus arctos* primarily lead solitary lives, spending most of their time foraging, or looking for food. Mating occurs from June through July. *Ursus arctos* embryos do not begin to develop until the mother begins her winter hibernation, although mating may have taken place up to 6 months before. As with other bears, if the mother has not accumulated enough fat to sustain her as well as developing cubs, the embryos typically do not develop. Cubs

depend upon their mother's milk for almost a year, stay with their mother for up to 3 years, and reach breeding maturity at about 4 1/2 to 5 1/2 years.

Prior to the growing season, grizzly bears congregated on ruminant wintering grounds. As succulent plant species became available, bears concentrate their activity at feeding sites in open areas near cover. After the growing season, bears will move to moist sites where succulent grasses and forbs remained available throughout the season. As valley vegetation declined, bears moved to the lodgepole pine forests to exploit late season foods such as whitebark pine seeds, berries, mushrooms (*Russula* spp.), and smilacina rhizomes.

*Ursus arctos* utilize a variety of foods including whitebark pine seeds, army cutworm moths, ants, earthworms, rodents, spawning cutthroat trout (*Oncorhynchus clarki*), ungulates (winter-killed or weakened animals, young in the spring and summer, bull elk weakened by the rut in the fall, and wolf kills), gut piles of hunter killed elk and moose, fungal sporocarps, horsetails (*Equisetum arvense*), graminoids, forbs, berries, roots (especially roots of the biscuitroot) and anthropogenic foods such as garbage, pet food, and livestock (Kendall 1980, Mace et al. 1997, Mattson 2001, Mattson et al. 1991a, Mattson et al. 1991b, Mattson et al. 2002a, Mattson et al. 2002b, Mattson and Reinhardt 1995, Mattson and Reinhardt 1997, Schwartz et al. 2003). Researchers believe ungulates and whitebark pine seeds appear to be the two most important foods for *Ursus arctos*, followed by army cutworm moths and spawning cutthroat trout (Mattson et al. 1991a, Mattson et al. 1991b, Mattson et al. 1992). On average, ungulate meat comprises nearly half of the annual energy intake for adult females and more than half for adult males (Reinhardt et al. 2001).

Intensive feeding occurs in autumn prior to denning. The most frequently used denning habitat is located in subalpine fir forest (Craighead et al. 1995). Mean den emergence among males was the fourth week in March and ranged from the first week in February to the fourth week in May.

### **Status, Distribution and Designated or Proposed Critical Habitat**

The grizzly bear was listed as threatened in the lower 48 States under the Endangered Species Act by the U.S. Fish and Wildlife Service in 1975 (Fed. Reg. 40:145, 31734-31736).

Historically, the range of the grizzly in North America extended south from Alaska to northern Mexico and east from the Pacific coast to the Canadian Prairies and U.S. Great Plains west of the Mississippi River (Hall and Kelson 1959, Schwartz et al. 2003). They also occurred throughout most of Wyoming (Long 1965). Currently, five populations remain below the Canadian border. The population in Wyoming is located in the northwestern portion of the state (Servheen 1999). In Wyoming and elsewhere the grizzly bear has expanded its range in the past two decades and has reoccupied historic habitats. Current range expansion of the *Ursus arctos* population is particularly evident in the southern portion of the ecosystem in Wyoming (Schwartz et al. 2002).

### **Threats**

The primary reasons for the decline of grizzly bear in North America are excessive human-caused mortality and habitat loss (Schwartz et al. 2003). Displacement of *Ursus arctos* from quality habitats, resulting from roads and other man-made structures such as fences and buildings may prevent dispersal; force bears to use poorer quality sites, increase intraspecific competition by further forcing more bears into limited remote habitat, and may cause social disruption in areas away from developments and roads (Kasworm and Manley 1989, McLellen 1989). These disturbances may result in displacement and/or disruption of normal behavior patterns such as copulation, movement, denning, foraging, physiological arousal without overt behavioral response, and even direct loss of habitat via avoidance.

Environmental events, such as drought and climate change may also pose significant threats to long-term persistence of small isolated populations and are therefore real threats to persistence of the grizzly bear population in Wyoming. Researchers are particularly concerned about impacts of future climate warming on two very important foods, seeds of whitebark pine and aggregated army cutworm moths. These two species occur at high elevations and are therefore particularly susceptible to climate warming.

## **6.20 Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*) - Threatened**

### **Species/Habitat Description**

Preble's meadow jumping mouse (*Zapus hudsonius preblei*) is a relatively small rodent with an extremely long tail, large hind feet and long hind legs. The tail is bicolored, lightly-furred and typically twice as long as the body. They have a distinct, dark, broad stripe on its back that runs from head to tail and is bordered on either side by gray to orange-brown fur. The hair on the back of all jumping mice appears coarse compared to other mice. The underside fur is white and much finer in texture (Kruttsch 1954, Fitzgerald et al. 1994).

*Zapus hudsonius preblei* is generally found at elevations between 2,318 m (7,600 ft.) and 1,418 m (4,650 ft.) (U.S. Fish and Wildlife Service 1998). They inhabit well developed riparian habitat with adjacent, relatively undisturbed, grassland communities and a nearby water source (Bakeman 1997). Well-developed riparian habitat includes a dense combination of grasses, forbs and shrubs; a taller shrub and tree canopy may be present. The shrub canopy is often willow (*Salix* spp.); However, other shrub species, such as snowberry (*Symphoricarpos* sp.), chokecherry (*Prunus virginiana*), hawthorn (*Crataegus* sp.), Gambel's oak (*Quercus gambelli*), alder (*Alnus incana*), river birch (*Betula fontinalis*), skunkbrush (*Rhus trilobata*), wild plum (*Prunus americana*), lead plant (*Amorpha fruticosa*), dogwood (*Cornus sericea*) and others also may occur (Bakeman 1997, Shenk and Eussen 1998).

### **Life History**

*Zapus hudsonius preblei* are able to travel long distances (Ryon 1999, Shenk and Sivert 1999a). *Zapus hudsonius preblei* constructs day nests composed of grasses, forbs, sedges, rushes, and other available plant material. Nests are typically globular in shape or simply raised mats of litter and are most commonly above ground but have also been observed below ground. Nests are generally found under debris at the base of shrubs and trees or in open grasslands. An individual mouse can have multiple day nests in both riparian and grassland communities and have been observed abandoning a nest after approximately a week of use. Hibernation nests occur underground both within and outside of the one hundred year floodplain. *Zapus hudsonius preblei* typically enter hibernation nests between September and October and emerge the following May. *Zapus hudsonius preblei* does not store food. They survive on fat stores accumulated prior to hibernation.

Fecal analyses conducted on the species show that their diet consists primarily of insects and fungi after emerging from hibernation. In May, their diet shifts to fungi, moss, and pollen during mid-summer (July and August), with insects again added in September. The shift in diet, along with shifts in mouse movements, suggests that the *Zapus hudsonius preblei* may require specific seasonal diets. Perhaps the diet is related to the physiological constraints imposed by hibernation. *Zapus hudsonius preblei* have also been observed climbing grass stalks to forage on the seed heads.

### **Status, Distribution and Designated or Proposed Critical Habitat**

*Zapus hudsonius preblei* was listed as a threatened subspecies under the ESA in May of 1998 (63 FR 26517). *Zapus hudsonius preblei* is found in both the North and South Platte River basins, from the eastern flank of the Laramie Mountains and the Laramie Plains in southeastern Wyoming, south along the eastern flank of the Front Range in Colorado and into the headwaters of the Arkansas River Basin near Colorado Springs, Colorado (Long 1965; Hall 1981 Fitzgerald et al. 1994). The semi-arid climate of southeastern Wyoming and eastern Colorado limits the extent of riparian (river) corridors and restricts the range of *Zapus hudsonius preblei* within this region.

*Zapus hudsonius preblei* has not been found east of Cheyenne, Wyoming or on the extreme eastern plains in Colorado (Beauvais 2001). The eastern boundary for the subspecies is likely defined by the dry short grass prairie which may present a barrier to eastward expansion (Beauvais 2001).

### **Threats**

*Zapus hudsonius preblei* have numerous predators including garter snakes (*Thamnophis* spp.), prairie rattlesnakes (*Crotalus viridus*), bullfrogs (*Rana catesbiana*), foxes (*Vulpes vulpes* and/or *Urocyon cinereoargenteus*), house cats (*Felis catus*), long-tailed weasels (*Mustela frenata*), and raptors (Shenk and Sivert 1999, Schorr 2001). Other potential predators of jumping mice include coyotes (*Canis latrans*), barn owls (*Tyto alba*), great horned owls (*Bubo virginianus*), western screech owls (*Otus kennicottii*), long-eared owls (*Asio otus*), northern harriers (*Circus cyaneus*), northern pike (*Esox lucius*) and creek chub (*Semolilus atromaculatus*) (Whitaker 1963).

Other mortality factors for *Zapus hudsonius preblei* include drowning and occasional losses associated with vehicles (Shenk and Sivert 1999, Schorr 2001).

Habitat loss, alteration, degradation, and fragmentation resulting from urban development, flood control, water development and other human land uses, especially in riparian habitat, have adversely impacted *Zapus hudsonius preblei* populations.

## **6.21 Northern Long-eared Bat (*Myotis septentrionalis*) - Proposed**

### **Species/Habitat Description**

A medium-sized bat species, the northern long-eared bat adult body weight averages 5 to 8 g, with females tending to be slightly larger than males. Fur is medium to dark brown on its back, dark brown, but not black, ears and wing membranes, and tawny to pale-brown fur on the ventral side. The northern long-eared bat is distinguished from other *Myotis* species by its long ears (average 17 mm (0.7 in)) that, when laid forward, extend beyond the nose but less than 5 mm (0.2 in) beyond the muzzle. The tragus is long, pointed, and symmetrical. Within its range, the northern long-eared bat can be confused with the little brown bat (*Myotis lucifugus*) or the western long-eared myotis (*Myotis evotis*).

Northern long-eared bats forage primarily in coniferous or deciduous forests. They are short-distance migrants, the distance between summer habitat and the hibernaculum typically being 56 km (35 mi) (Hester and Grenier 2005) to 89 km (55 mi) (USFWS 2014) or less.

Northern long-eared bats predominantly overwinter in hibernacula that include caves and abandoned mines. Hibernacula used by northern long-eared bats are typically large, with large passages and entrances, relatively constant, cooler temperatures, and with high humidity and no air currents. They are typically found roosting in small crevices or cracks in cave or mine walls or ceilings, often with only the nose and ears visible, thus are easily overlooked during surveys. To a lesser extent, northern

long-eared bats have been found overwintering in other types of habitat including abandoned railroad tunnels, more frequently in the northeast portion of the range.

During the summer, northern long-eared bats typically roost singly or in colonies underneath bark or in cavities or crevices of both live trees and snags. Males and non-reproductive females' summer roost sites may also include cooler locations, including caves and mines. Northern long-eared bats have also been observed roosting in colonies in human made structures, such as buildings, barns, park pavilions, sheds, cabins, under eaves of buildings, behind window shutters, and in bat houses. Northern long-eared bats most likely are not dependent on a certain species of trees for roosts throughout their range; rather, certain tree species will form suitable cavities or retain bark and the bats will use them opportunistically. Structural complexity of habitat or available roosting resources may be more important factors. The species appears to favor areas with greater canopy cover, and often roosts below the canopy, but higher on slopes. Northern long-eared bats switch roosts often, typically every 2-3 days. Bats switch roosts for a variety of reasons, including, temperature, precipitation, predation, parasitism, and ephemeral roost sites.

### **Life History**

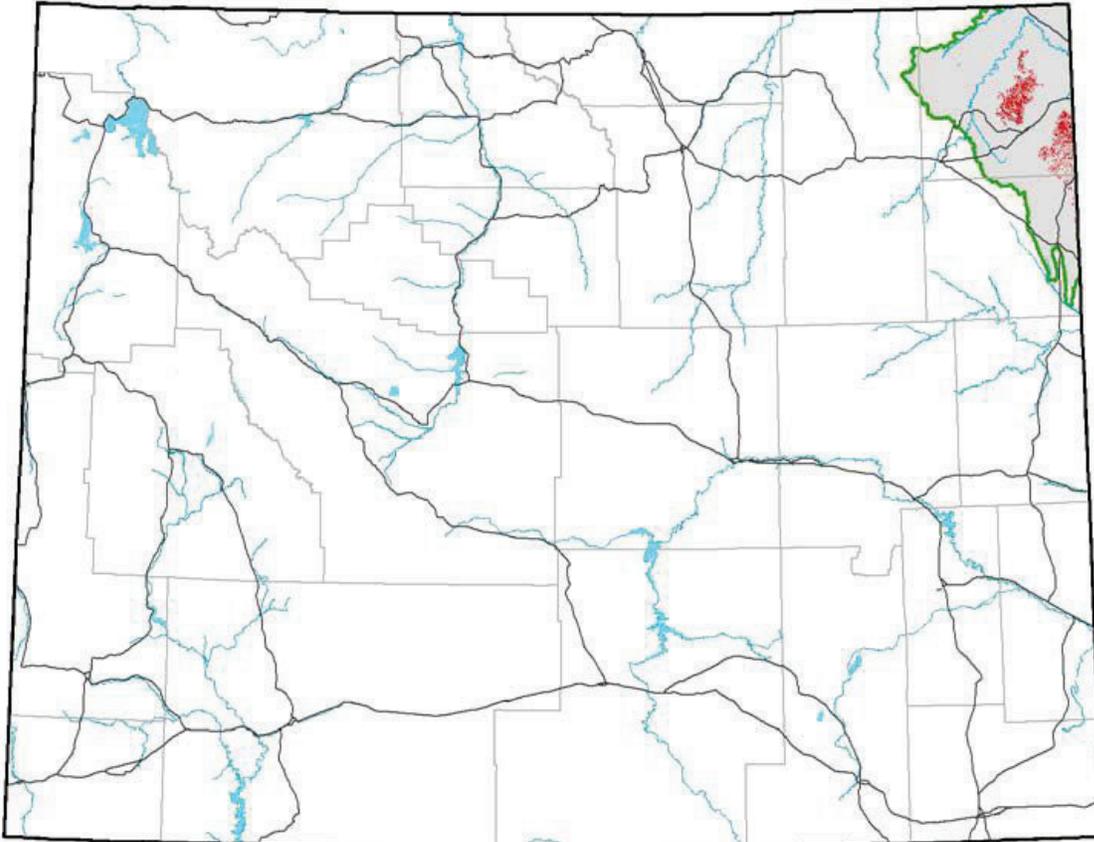
Northern long-eared bats hibernate during the winter months to conserve energy from increased thermoregulatory demands and reduced food resources. In general, northern long-eared bats arrive at hibernacula in August or September, enter hibernation in October and November, and leave the hibernacula in March or April. In the Black Hills northern long-eared bats typically enter hibernacula by October 1 and depart before May 15 (Reeves pers. Comm). Northern long-eared bats have shown a high degree of philopatry (using the same site multiple years) for a hibernaculum, although they may not return to the same hibernaculum in successive seasons.

Typically, northern long-eared bats are not abundant and compose a small proportion of the total number of bats hibernating in a hibernaculum. Although usually found in small numbers, the species typically inhabits the same hibernacula with large numbers of other bat species, and occasionally are found in clusters with these other bat species. Other species that commonly occupy the same habitat include: little brown bat, big brown bat, eastern small-footed bat, tri-colored bat, and Indiana bat. Northern long-eared bats exhibit significant weight loss during hibernation. The northern long-eared bat is not considered a long-distance migratory species; short migratory movements between summer roost and winter hibernacula have been documented. Movements from hibernacula to summer colonies may be further. Several studies show a strong homing ability of northern long-eared bats in terms of return rates to a specific hibernaculum, although bats may not return to the same hibernaculum in successive winters.

Breeding occurs from late July in northern regions to early October in southern regions and commences when males begin to swarm hibernacula and initiate copulation activity. Hibernating females store sperm until spring, exhibiting a delayed fertilization strategy. Ovulation takes place at the time of emergence from the hibernaculum, followed by fertilization of a single egg, resulting in a single embryo; gestation is approximately 60 days. Maternity colonies, consisting of females and young, are generally small, numbering from about 30 to 60 individuals. Adult females give birth to a single pup typically in late May or early June, but may occur as late as July. Juveniles typically start flying at 21 days. Adult longevity is estimated to be up to 18.5 years.

The northern long-eared bat has a diverse diet including moths, flies, leafhoppers, caddisflies, and beetles, with diet composition differing geographically and seasonally. Foraging techniques include hawking (catching insects in flight) and gleaning in conjunction with passive acoustic cues.

Emerging at dusk, most hunting occurs above the understory, but under the canopy on forested hillsides and ridges, rather than along riparian areas. This coincides with data indicating that mature forests are an important habitat type for foraging.



**Map 2. Wyoming Natural Diversity Database Predicted Northern-Long-Eared Bat Distribution in Wyoming.**

**Status, Distribution**

On October 2, 2013, the USFWS proposed the northern long-eared bat for listing as Endangered under the ESA (USFWS 2013a). Unless otherwise referenced, the species information in this BA came from the Proposed Rule in the FR notice (USFWS 2013a). It was determined that the northern long-eared bat is in danger of extinction, predominantly due to the threat of white-nose syndrome (WNS). However, other threats (the present or threatened destruction, modification, or curtailment of its habitat or range; overutilization for commercial, recreational, scientific, or educational purposes; other natural or manmade factors affecting its continued existence) when combined with WNS heighten the level of risk to the species.

NatureServe gives this species a global conservation rank G2/G3, meaning that the species is imperiled, with a high to moderate risk of extinction or elimination due to restricted range, relatively

few populations or occurrences, recent and widespread declines, threats, or other factors (NatureServe 2013).

Most BLM field offices have not inventoried for presence of northern long-eared bat. As further surveys are conducted, previous and current factors affecting areas with northern long-eared bat will be addressed on a case-by-case basis.

### **Regional and Local Distribution**

The northern long-eared bat ranges across much of the eastern and north central U.S., and all Canadian provinces west to the southern Yukon Territory and eastern British Columbia. In the U.S., the species' range reaches from Maine west to Montana, south to eastern Kansas, eastern Oklahoma, Arkansas, and east to the Florida panhandle. Throughout the majority of the species' range it is patchily distributed, and historically was less common in the southern and western portions of the range than in the northern portion of the range. Although they are typically found in low numbers in inconspicuous roosts, most records of northern long-eared bats are from winter hibernacula surveys. Wyoming has no known hibernacula (likely due to lack of survey effort, suitability of habitat, and extent of range) (Hester and Grenier 2005).

The U.S. portion of the northern long-eared bat's range can be described in four parts: the eastern population, Midwestern population, the southern population, and the western population. Historically, the northern long-eared bat was most abundant in the eastern portion of its range.

The northern long-eared bat is generally less common in the western portion of its range (Map 2); it is considered common in only small portions of the western range (e.g., Black Hills) and uncommon or rare in the western extremes of the range (e.g., Wyoming, Kansas, Nebraska). The northern long-eared bat is considered abundant in the Black Hills having been observed hibernating and during the summer.

### **Threats**

It was determined that the northern long-eared bat is in danger of extinction, predominantly due to the threat of WNS. WNS is a disease caused by the cold-loving fungus, *Pseudogymnoascus (Geomyces) destructans*. First observed in New York in 2006, WNS has spread rapidly across the Northeast and into the Midwest and Southeast. Throughout the range of WNS, up to 99 percent of infected bats die from the disease. Although there is uncertainty about the spread of WNS, experts agree that the fungus will likely spread throughout the United States (USFWS 2013b).

The northern long-eared bat is also threatened by the loss and degradation of summer habitat caused by human development, and by collision with or barotrauma (injury to the lungs due to a change in air pressure) caused by wind turbines. Mine closures and vandalism of winter roosts and hibernacula also pose threats to this species (USFWS 2013b). These additional threats (the present or threatened destruction, modification, or curtailment of its habitat or range; overutilization for commercial, recreational, scientific, or educational purposes; other natural or manmade factors affecting its continued existence) when combined with WNS heighten the level of risk to the species (USFWS 2013a).

## **6.22 Gray Wolf (Canis Lupus) – Non-essential experimental**

### **Species/habitat Description**

The gray wolf (*Canis lupus*) is the largest of the wild canids. It has a long bushy tail and erect, slightly rounded ears. Its legs are longer, feet larger, and chest narrower than a dog of similar size.

The wolf has long, thick, coarse fur that is typically grizzled gray but that can vary from black through white. The most common pelt colors in the northern Rocky Mountains are grizzled gray and black (USFWS 1994). Average height at the shoulders is 65-80 cm; total length (nose to tip of tail) is 1.3 to 1.5m with some individuals approaching 1.8m; and weight ranges from 36-41 kg for females and 41-50 kg for males (Ginsberg and Macdonald 1990).

Wolves are habitat generalists and historically occupied most habitats in the Northern Hemisphere including all of Wyoming, and populations flourished in areas with plentiful large prey (Fitzgerald et al. 1994, Long 1965, Mech 1970). The presence of abundant prey, which in Wyoming is elk, and relatively low levels of human activity are the main habitat requirements for wolves.

Human activities associated with highways, roads, and other linear corridors cause fragmentation of wolf ranges and result in the death of wolves (Paquet and Carbyn 2003). Persistent occupancy of wolves is usually assured at road densities below 0.6-0.7 km/km<sup>2</sup>. Road density is the measurable manifestation of human activity and the mortality of wolves is caused by the humans using the roads, rather than road density per se. Roads with low use can provide travel corridors for wolves.

### **Life History**

Wolves are social animals that live in groups, called packs, which typically include a breeding pair (the alpha pair), their offspring, and other non-breeding adults. Wolves are capable of mating by age two or three and sometimes form a lifelong bond. They can live 13 years and breed past 10 years of age. On the average, five pups are born in early spring and are cared for by the entire pack. For the first six weeks, pups are reared in dens. Dens are often used year after year, but wolves may also dig new ones or use some other type of shelter, such as a cave.

Pups depend on their mother's milk for the first month, then are gradually weaned and fed regurgitated meat brought by pack members. By the time pups are seven to eight months old they are almost fully grown and begin traveling with the adults. After a year or two, young wolves may leave to try to find a mate and form a pack. Lone, dispersing wolves have traveled as far as 600 miles in search of a mate or territory.

Wolf packs live within territories, which they defend from other wolves. Their territories range in size from 50 square miles to more than 1,000 square miles, depending on the available prey and their seasonal movements. Wolves travel over large areas to hunt, as far as 30 miles in a day. Although they usually trot along at five miles per hour, wolves can run as fast as 40 miles per hour for short distances.

### **Regional and Local Distribution**

As recently as the mid-nineteenth, century gray wolves existed throughout most of North America (Nowak 1983, Young and Goldman 1944). Wolves were present throughout the northern Rocky Mountain region prior to colonization by Europeans which resulted in reduction of native ungulate populations, introduction of livestock, and persecution of wolves (Lopez 1978, Young 1944). By the 1940s, wolves persisted only in isolated locations in the United States. In the late 1970s wolves were dispersing into the mountainous areas near Glacier-Waterton Lakes National Parks in Alberta, Canada, just across the border (Ream and Mattson 1982). And then in 1985 a pack of 12 wolves crossed the border from Alberta to Glacier National Park (Robbins 1986). Breeding was documented in 1986, for the first time in 50 years in the U.S. (Ream et al. 1989), and by 1992 at least 50 individuals were known to reside in at least four packs along the continental divide of Montana (Fritts et al. 1995, Pletscher et al. 1997, Ream et al. 1991). Wolves were documented from Idaho since the early 1980s. Prior to reintroduction, lone wolves have ventured into the GYA on a number

of occasions (USFWS 1994), and a single wolf was documented in northwestern Wyoming in 1992 (Fritts et al. 1995).

After many years of effort and planning, wolves were reintroduced into the Greater Yellowstone Area (GYA) in 1995-1996 (USFWS 1994). This effort targeted large tracts of federal public lands (Yellowstone National Park (YNP) and the surrounding U.S. Forest Service wilderness areas) that supported large populations of wild ungulates and had a relatively low likelihood for wolf-human conflicts. Today wolves are found in the northwestern portion of Wyoming, largely in the GYA (Maps 2-6). There are 14 packs in YNP and 7 that spend most of their time in Wyoming (WGFD 2003). Numerous sightings of wolves suggest that they roam over much of western Wyoming. The known distributional extent of these wandering wolves is the Bighorn Mountains and Ten Sleep to the east, Morgan, Utah (outside Ogden) to the south and into Idaho to the west (Jimenez 2004). Wolves have been sighted southwest of Meeteetse and around Worland and Thermopolis. Wolves are also routinely seen around Kemmerer and Cokeville, and Lander, and have shown up east of Rock Springs. In these southern portions of the Red Desert, the wild prey density is very low and cattle and sheep density is higher; the wolves switch to the available prey and conflicts result. Although wolves can prey on pronghorn, these ungulates do not constitute consistent dietary items.

### **Threats**

Human-caused mortality including legal and illegal harvest, depredation control, and vehicle collisions are the largest cause of mortality and is the only source of mortality that can significantly affect wolf populations at recovery levels (USFWS 2000). In the GYA, of 20 documented wolf mortalities in 2000, nine were human-caused (six control actions, two vehicle collisions, and one illegal take), six resulted from natural causes, and five were of unknown cause (USFWS et al. 2001). Researchers have found that if annual mortality exceeds 30-40%, population growth of wolves may be suppressed (Ballard et al. 1987, Fuller 1989, Keith 1983). The response of wolves to humans is variable, as can be expected in a long-lived animal with a large degree of social transmission. Wolves are sensitive to human predation and harassment, which influence the distribution and survival of wolves. However, human-caused mortality is consistently noted as the major problem (Paquet and Carbyn 2003). Loss of habitat is a trend to be expected as human populations increase and more development occurs.

In unexploited populations annual mortality is 45% for yearlings and 10% for adults (USFWS 1994). Intraspecific conflict between neighboring packs, starvation, disease and injury are the primary causes of mortality (Mech et al. 1998). However, natural mortality does not regulate populations in the northern Rockies (USFWS 2000).

Flexible food habits, high annual productivity, and dispersal capabilities enable wolves to respond to natural and human-induced disturbances. These traits confer a high degree of resiliency on wolves (Weaver et al. 1996). Wolf distribution will ultimately be defined by the interaction of wolves' ecological requirements and human tolerance (Paquet et al. 2001), not by artificial delineations that are administratively determined. In short, ungulate abundance and distribution and human settlement patterns will define wolf habitat. The network of public lands in western Montana, central Idaho, and northwest Wyoming facilitates connectivity between the three sub-populations and the public lands in the rest of the Rocky Mountain west will provide dispersal routes. Wolf populations will fluctuate as a result of management actions, natural mortality, legal harvest, illegal take, wolf productivity, and ungulate population fluctuations.

Gray wolves occur in disjunct populations in the conterminous United States, and management goals will be set to maintain this population structure. Computer simulations of disjunct wolf populations indicate that these populations can survive as long as there is at least occasional movement between populations, and human persecution is not excessive and prey is sufficiently abundant (Callaghan 2002, Haight et al. 1998). Furthermore, it is the long-term levels of mortality and immigration that are important, more so than the short-term fluctuations in dispersal and mortality. However, one ultimate factor that will determine whether wolves persist where they have been reintroduced, and where they disperse, is human attitude. This will require a concerted effort on the part of federal and state agencies and of nongovernmental groups. Another significant factor is stochastic: fire, weather (drought and/or hard winters), and disease. These unpredictable and often uncontrollable factors can create unforeseen circumstances and results on recovering wolf populations.

The Yellowstone fires of 1988 took out old growth, which caused a decline in the moose population. The hard winter of 1996-1997 caused a decline in the elk populations, as has the current drought. Disease can present a surprising vulnerability. The introduction in the early 1980s of a human-introduced canine parvovirus to the wolves at Isle Royale caused a crash in the wolf population from 50 to 14 animals in a period of two years (Smith et al. 2003). The effect of epizootics and enzootics on wolf population dynamics is not well documented. Where information is available, an estimated 2–21% of wolf mortality is due to disease. The transmission of disease from domestic dogs, e.g. parvovirus, is a grave conservation concern (Paquet and Carbyn 2003). Rabies is infrequent in wolf populations. Sarcoptic mange is an epizootic of concern, and some researchers suggest that it could be a regulating factor in canid populations. Other arthropod parasites are known but do not cause significant problems. Viral infections of concern are distemper and canine hepatitis.

The economic forces present often drive decisions that affect the status of wolves. Market interests usually run counter to conservation and restoration activities because the former cater to short-term financial gain rather than long-term sustainability of the environment. Wolves and their protection may encourage society to value biological diversity and the tangible and intangible benefits of such a species in our lives (Paquet and Carbyn 2003).

## **7.0 Effects of Selected Alternative**

This Biological Assessment only addresses changes in management that will occur from the Amendment. Existing management conditions that would not be changed as a result of the Amendment will not be analyzed in this document.

### **7.1 Blowout Penstemon (*Penstemon haydenii*) - Endangered**

#### **7.1.1 Effects of Selected Alternative**

##### **Lands and Realty**

Amendment changes conducted under the lands and realty management program would only prove to benefit the blowout penstemon. Activities under the lands and realty program include: manage sage-grouse PHMAs (Action 30), seasonal timing constraints (Action 31), restrictions which protect sage-grouse on new right-of-way corridors in greater sage-grouse habitat (Action 32), designing of powerlines and guy wires to minimize wildlife related impacts and constructed to the latest APLIC standards (Action 34, 35, 38), reclamation of sites (Action 35), prohibition of wind turbines in Greater Sage-Grouse habitat (Action 36), avoidance of MET tower supports in PHMA (Action 38), retention of PHMAs (Action 40), identification of sage-grouse habitat in mineral right areas or

conservation easement areas (Action 41), acquisition of Greater Sage-Grouse lands (Action 42), and consideration of non-mineral withdrawal actions to protect the species (Action 43).

Lands and realty management actions included in the Amendment are not likely to occur in the dunal habitats of the blowout penstemon because Greater Sage-Grouse occur in lands dominated by large sagebrush stands. Actions that would not affect the species include the management of sage-grouse PHMAs and the installation of perch deterrents. However, changes in some of the lands and realty management actions included in the 9-plan Amendment may inadvertently protect the species through land acquisitions, retentions, and reclamations.

### **Livestock**

All of the documented occurrences of blowout penstemon reside within sand dune habitats included in the Rawlins field office. Many of the livestock management actions in the Amendment include habitat improvements for greater sage-grouse through the following: evaluation of opportunities to coordinate management plans and strategies under a single management plan with other agencies and stake holders and include sage-grouse management (Action 22), develop voluntary grazing strategies that improve sage-grouse populations and habitat (Action 45), adjustments to grazing management (Action 46, 139), sage-grouse habitat objectives and management would be incorporated into all grazing permit renewals (Action 48), progress toward achieving land health standards in sage-grouse PHMAs (Action 49), management of voluntarily relinquished permits or preferences (Action 50), coordinate with permittees/lessees to develop drought contingency plans (Action 52), evaluate and modify existing range improvements to improve sage-grouse habitat (Action 53), designate specific routes and timeframes for trailing which includes the avoidance of stopovers in sage-grouse leks (Action 54), promote balanced grazing between upland and riparian areas (Action 55), manage range improvements in a way that promotes sage-grouse and its habitats (Action 56), and evaluate and modify effects on sage-grouse from spring and seep developments such as pipelines and structures (Action 57).

Livestock management actions included in the Amendment are not likely to occur in the dunal habitats of the blowout penstemon because Greater Sage-Grouse occur in lands dominated by large sagebrush stands. Actions that would not affect the species include Action 22, 45, 46, 139, 48, 49, 50, 53, 54, 56, and 57. However, changes in some of the Livestock management program may inadvertently protect the species through the development of a drought contingency plan (Action 52), which could reduce grazing pressure in nearby blowout penstemon habitats and the promotion of balanced grazing (Action 55) which could also alleviate heavy grazing impact in one specific area.

### **Mineral Resources**

Minerals management actions in the Amendment include the following: designing roads which minimize impacts in sage-grouse PHMAs (Action 20), protective modifications to lease stipulations within sage-grouse habitat (Action 58, 60, 61, 62, 63, 66, 68, 71, 72, 75, 77, 78, 80, 81). Other actions include, proposed withdrawal recommendations of some areas of PHMA from mineral exploration (Action 79, 139), minimization and avoidance of surface disturbances (Action 79), prohibit strip mining near sage-grouse (Action 76), prohibition of geophysical operations near sage-grouse, right-of-way and vehicle limitations, timing restrictions during breeding season (Action 60), working with permittees/lessees to apply sage-grouse conservation measures, distance limitations (Action 60, 66) minimization of habitat fragmentation (Action 62, 67), noise reduction, and minimize impacts to related sensitive resources.

Planning measures which consider the construction of a master plan for development or leasing when impacts to sage-grouse could occur (Action 66), noise, timing and distance restrictions (Action 60), requiring reclamation plans (Action 69a), and implementing a reclamation bond in sage-grouse areas (Action 69) would not affect the blowout penstemon because no surface disturbing activities would occur.

Because greater sage-grouse do not reside in the same habitat required by blowout penstemon, management actions intended to protect sage-grouse would not directly affect blowout penstemon. Since the species may occur in the same geographical area, some management actions may indirectly affect the species. No negative effects are anticipated to occur. Inadvertent, beneficial actions may include limitations or exclusion of road developments, minimization and avoidance of surface disturbances, minimization of habitat fragmentation, and implementing measures to reduce pollutants. These actions could reduce overall impacts and limit road access within or leading to blowout penstemon habitat which would benefit the species.

### **Recreation**

BLM SRPs and Forest Service Recreation SUAs would be continued to be allowed in sage-grouse PHMA, unless negative impacts to sage-grouse cannot be adequately mitigated (Action 82).

The issuance of BLM SRP's and Forest Service recreation SUA's has already been consulted on during the planning process of their respective land use plans. However, the change in this document and the area which needs to be consulted on would be the closing of SRP's and SUA's in PHMAs sage-grouse habitats when negative impacts cannot be mitigated. The closing of any BLM SRP or Forest Service Recreation SUA in PHMAs would not directly affect the blowout penstemon.

### **Special Designations**

No new special designation actions are included in Amendment (Action 84). As such, special management actions would not affect the blowout penstemon.

### **Special Status Species**

Special status species management action include the collection of sage-grouse baseline data during project planning (Action 4), the modification of existing notices and plans to minimally impact PHMAs (Action 12), agencies will meet annually to coordinate and review sage-grouse data (Action 16), development of adaptive management strategies in support of the population management objectives for sage-grouse (Action 137), maintain at least 67% of the 2005-2008 Greater Sage-Grouse PHMA population within the State of Wyoming (Action 138), and all existing planning decision will be retained unless vacated or modified by decisions in this plan amendment (Action 25).

Actions included in the special species management program such as the collection of data (Action 4), agencies meeting annually to coordinate sage-grouse data (Action 16), and the development of adaptive management strategies (Action 137), retainment of existing plans unless modified in the Amendment (Action 25), would not affect the blowout penstemon because no surface disturbing actions would occur. However, Action 12 which includes the modification of existing notices and plans to minimally impact PHMAs may indirectly benefit the species by reducing impacts to PHMAs. The reduction of impacts in PHMAs may also indirectly benefit blowout penstemon which may occur in nearby habitats.

## **Travel Management**

Travel management actions described in the Amendment include restricting motorized travel to existing roads and trails, until route designations are made during subsequent implementation of travel management planning (Action 18), designate routes with priority habitat and assess existing plans for consistency with sage-grouse conservation objectives (Action 19), non-sand dune portions of the Dune Pond Cooperative Management Area within sage-grouse PHMAs would be limited to existing roads and trails (Action 86, 87), avoidance of new road construction within 1.9 miles of habitat (Action 88), restricting upgrades or new road construction within greater sage-grouse habitat (Action 89), development of new roads would be constructed to the absolute minimum value (Action 90), natural reclamation of roads and trails would be allowed in travel management plans within sage-grouse PHMAs, in appropriate situations where additional resource damage is not foreseeable (Action 91), when reseeding roads and trails within sage-grouse PHMAs, appropriate seed mixtures would be used and the use of transplanted sagebrush would be considered (Action 92).

Travel management actions such as the minimization, reclamation, avoidance, restriction and closure of various roads may inadvertently benefit the species even though greater sage-grouse do not occur in the same habitat as the blowout penstemon (Action 18, 86, 88, 89). For example, blowout penstemon may be protected if a road restriction or closure in sage-grouse habitat blocks access to a road which leads to dunal habitat. The use of approved seed mixtures (Action 92) and implementation of travel management plans (Action 18) would likely have no effect on the blowout penstemon.

## **Vegetation**

Vegetation management actions include, the application of seasonal restrictions for implementing vegetation management treatments and monitoring to benefit sage-grouse (Action 6), design range projects in a manner that minimizes potential for invasive species establishment and to monitor and treat invasive species associated with existing range improvements (Action 9), vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species (Action 11), work with various agencies and stake holders to coordinate and enhance Greater Sage-Grouse population and habitat (Action 22), improvement of vegetation composition and structure to benefit sage-grouse (Action 93, 95, 100, 107), restrict sagebrush activities that reduces sagebrush canopy to less than 15% (Action 94), development of recommended protocols and treatments to protect sage-grouse and sage-grouse habitat (Action 95, 96), deferment of livestock grazing on vegetative treatments to improve habitat (Action 97), recommendations on vegetative treatments (Action 98, 100, 101, 104, 105), reclamation or restoration of surface disturbances in sage-grouse habitats (Action 99, 100, 101, 103, 106), the use of native seeds which are certified weed free for fuels treatments (Action 100, 102, 103, 104), pest treatments to control Wyoming grasshopper and Mormon cricket outbreaks in Greater Sage-Grouse PHMA areas (Action 108).

The use of herbicide on noxious and invasive species (Action 11), vegetation treatments (Actions 93, 94, 95, 100, 102, 103, 104, 105, 107) and pest control treatments for Wyoming grass hopper and Mormon crickets (Action 108) have already been consulted on in their respective Land Use plans using agency approved protocols. However, the changes in the amendment would direct managers to use updated sage-grouse information which would benefit the sage-grouse. For example, managers can better control insect outbreaks in PHMAs if the PHMAs are identified.

Vegetation management actions such as season restrictions (Action 6), monitoring efforts (Action 9), and working collaboratively with various agencies (Action 22) are not expected to directly or indirectly impact occupied or potential blowout penstemon habitat because no surface disturbing

actions would occur. However, actions that minimize the potential for the spread of noxious and invasive weeds (Action 9), deferment of livestock (Action 97), and the improvement of vegetative composition (Action 93, 95, 100, 107) may inadvertently benefit the species through improve habitat conditions.

### **Wild Horses**

Wild horse management action include incorporating rangeland improvements for wild horses in greater sage-grouse PHMA habitats(Action 109), consideration of sage-grouse PHMAs when evaluating AML's (Action 110), considering sage-grouse PHMAs when conducting land health assessments (Action 111), addressing direct and indirect effects to sage-grouse populations and habitats when conducting NEPA analysis for wild horse and burro management activities (Action 112), and to coordinate with all other resources to conduct land health assessments within all BLM HMAs (Action 113).

All the wild horse management actions discussed in the Amendment include protective measures such as the consideration of sage-grouse when conducting land health assessments (Action 111) and during AML evaluation (Action 110). It also includes identifying direct and indirect effect of sage-grouse during NEPA analysis when water or range improvements are necessary (Action 112). Based on known locations of blowout penstemon as shown on USFWS maps (USFWS 2013), none of the known blowout penstemon sites are located in herd management areas. As such, none of these actions would occur within or near blowout penstemon habitat because wild horse HMA's do not occur within blowout penstemon habitat.

### **Wildland Fire**

Wildland fire management actions included in the Amendment include, fire and fuels management which contributes to the protection and enhancement of sagebrush habitat that supports sage-grouse populations (Action 26), complete and continue to update Greater Sage-Grouse Landscape Wildfire & Invasive necessary to maintain sagebrush habitat to support interconnecting sage-grouse populations which includes identification of annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments (Action 27), implementation of coordinated inter-agency approach to fire restrictions for sage-grouse (Action 28), utilization of fire management strategies and tactics to achieve sage-grouse resource objectives (Action 29), fuel treatments would be implemented with an emphasis of protecting and enhancing PHMAs (Action 114), restoring burned areas within PHMAs (Action 115), post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants to return to suitable sage-grouse habitat(Action 117), avoiding treatments in areas containing old trees or persistent woodlands (Action 118), and management actions to benefit sage-grouse during fire suppression activities (Action 124).

Wildland fire management actions are not expected to directly impact occupied or potential blowout penstemon habitat. Preferred habitat for the plant is sparsely vegetated sand dunes, which generally do not burn and it is not likely that fires associated with wildland fire management would be prescribed in such areas. Also, because greater sage-grouse do not reside in the same habitat required by blowout penstemon, wildland fire management actions intended to protect sage-grouse would not affect blowout penstemon. No surface disturbing wildfire resource actions which are pre-planned such as the use of prescribed burns would occur without proper analysis and implementation of all appropriate conservation measures in order to ensure the protection of the Blowout penstemon.

## **Wildlife and Fisheries**

Wildlife and fisheries management actions described in the Amendment include protocols for sage-grouse monitoring (Actions 1, 3, 125), development of landscape level restoration, conservation and maintenance strategies (Actions 8, 14, 15, 21) application of required design features (Action 10), addition of new sage-grouse habitat (Action 13), limitation of oil and gas development densities (Action 126), limitation of all surface disturbances to 5% per 640 acres (Action 127), mitigation protocol (Actions 5, 7, 128), prohibition of surface disturbing activities within 0.6 mile radius of occupied sage-grouse leks within PHMAs (Action 129), prohibition of surface disturbing activities within 0.25 mile radius of occupied sage-grouse leks outside PHMAs (Action 130), timing restrictions in breeding, nesting, and brooding PHMA habitat (Actions 17, 131, 132, 133, 134), promote control of predators to sage-grouse or sage-grouse habitat (Action 135), and implementation of noise restrictions (Action 136).

Because greater sage-grouse do not reside in the same habitat required by blowout penstemon, management actions intended to protect sage-grouse would not adversely affect blowout penstemon. However, because the species may occur in the same geographical area, some management actions may inadvertently benefit the species. Beneficial actions may include restrictions on oil and mineral developments, restrictions of surface disturbing activities, and increased mitigation protocol. Other management actions such as the implementation of noise restrictions (Action 135) and timing restrictions (Actions 17, 131, 132, 133 and 134) would have no effect on blowout penstemon.

## **Cumulative Effects**

The following analysis focuses on cumulative impacts according to the ESA, Section 7 Consultation Handbook definition (USFWS 1998a); the incremental impacts of future State, or private activities (i.e., excluding federal activities), that are reasonably certain to occur within the action area of the Federal action subject to consultation.

Existing and proposed activities on non-federal lands in the planning area that have the potential to cumulatively affect the species include but are not limited to the following:

- Non-discretionary livestock grazing
- Non-discretionary ORV use
- Non-discretionary development of energy and mineral resources
- Non-discretionary herbicide and insecticide treatments
- Other non-discretionary surface disturbing activities

Habitat loss, fragmentation, and degradation are reasonably certain to occur on non-federal lands. Impacts to habitat would likely result from ground disturbing activities that remove or stabilize dune systems or exacerbate the spread of noxious and invasive weeds into dune areas. These impacts are likely to be attributed to human activities such as urbanization, oil and gas developments, or the lack of prescribed fires. Additionally, the surge of interest in wind energy development on non-federal lands is likely to impact blowout penstemon habitat. Construction and maintenance of access roads, facilities, and turbine pads will result in the direct loss and fragmentation of habitat, and downwind impacts from operant wind developments could alter sand erosion patterns and soil-water evaporation rates.

There is also potential for direct harm, such as tissue damage or uprooting of plants, to occur on non-federal lands. OHV use and livestock grazing and management are likely to occur in areas with occupied or potential habitat. The intensity of direct harm caused by such activities could be severe

on non-federal lands since there are no protections afforded to the species, such as restrictive buffers, to minimize impacts from activities that could result in repeated and intense damage to the plants.

### 7.1.2 Effects Determination

The effects determination only addresses changes in management that would occur from the Amendment. Existing management conditions which are not changed as a result of the Amendment, such as livestock grazing and road developments have already been consulted on using agency approved methods and are not analyzed in this document.

Management actions included in the Amendment are largely supportive in nature and guide or advise other program actions and activities in a manner conducive to maintaining and/or promoting population growth and habitat for the sage-grouse. Management actions included in the Amendment such as increased monitoring, data collection, greater coordination and review, and noise, distance, and timing restrictions, would have no effect on the blowout penstemon. Also, because sage-grouse utilize upland sagebrush dominated habitats, management actions included in the Amendment would not occur in the dunal habitat where blowout penstemon habitat exists. In addition, where Greater-sage-grouse habitats may be located adjacent to dunal blowout penstemon habitats, some of the measures meant to protect sage-grouse may also indirectly protect the blowout penstemon. Protective measures include, surface restricting actions, retentions, reclamations, road closures, reductions of pollutants, reduction of impacts and deferment of livestock grazing. Furthermore, protective conservation measures found in the Amendment and maintained as part of the existing BLM and FS RMPs would further reduce the potential for adverse effects for the species. No actions included in the Amendment are anticipated to negatively affect the blowout penstemon, however, some of the actions may have unintentional beneficial effects. Based on the above analysis of effects, implementation of the Amendment, “**May Affect, but is Not Likely to Adversely Affect**” blowout penstemon within the Rawlins Field Office.

Blowout penstemon are only located in the Rawlins field office. As a result, implementation of the Amendment would have “**No Effect**” on the blowout penstemon within the Bridger Teton NF, Pinedale, Kemmerer, Rock Springs, Medicine-Bow NF, Casper, Thunder Basin Grasslands, Casper and Newcastle Field Offices.

**Table 4-Summary and Determination of Effects for the Blowout penstemon**

<b>Program</b>	<b>Bridger Teton</b>	<b>Pinedale</b>	<b>Kemmerer</b>	<b>Rock Springs</b>	<b>Rawlins</b>	<b>Medicine Bow</b>	<b>Casper</b>	<b>Thunder Basin</b>	<b>Newcastle</b>
<b>Lands and Realty</b>	NE	NE	NE	NE	NLAA	NE	NE	NE	NE
<b>Livestock</b>	NE	NE	NE	NE	NLAA	NE	NE	NE	NE
<b>Mineral Resources</b>	NE	NE	NE	NE	NLAA	NE	NE	NE	NE
<b>Recreation</b>	NE	NE	NE	NE	NLAA	NE	NE	NE	NE
<b>Special Designations</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Special Status Species</b>	NE	NE	NE	NE	NLAA	NE	NE	NE	NE
<b>Transportation and Access</b>	NE	NE	NE	NE	NLAA	NE	NE	NE	NE
<b>Vegetation</b>	NE	NE	NE	NE	NLAA	NE	NE	NE	NE
<b>Watershed and Water Quality</b>	NE	NE	NE	NE	NLAA	NE	NE	NE	NE
<b>Wild Horses</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wildland Fire</b>	NE	NE	NE	NE	NLAA	NE	NE	NE	NE
<b>Wildlife and Fisheries</b>	NE	NE	NE	NE	NLAA	NE	NE	NE	NE

NLAA= May affect, not likely to adversely affect

LAA = May affect, likely to adversely affect

NE = No effect

NJ = No Jeopardy

## **7.2 Colorado Butterfly Plant (*Gaura neomexicana* var. *coloradensis*) - Threatened**

### **7.2.1 Effects of Selected Alternative**

#### **Lands and Realty**

Amendment changes conducted under the lands and realty management program would not affect the Colorado butterfly plant. Activities under the lands and realty program include, manage sage-grouse PHMAs (Action 30), seasonal timing constraints (Action 31), restrictions which protect sage-grouse on new right-of-way corridors in greater sage-grouse habitat (Action 32), designing of powerlines and guy wires to minimize wildlife related impacts and constructed to the latest APLIC standards (Action 34, 35, 38), reclamation of sites (Action 35), prohibition of wind turbines in Greater Sage-Grouse habitat (Action 36), avoidance of MET tower supports in PHMA (Action 38), retention of PHMA (Action 40), identification of sage-grouse habitat in mineral right areas or conservation easement areas (Action 41), acquisition of Greater Sage-Grouse lands (Action 42), and consideration of non-mineral withdrawal actions to protect the species (Action 43).

Wyoming Colorado butterfly plants are located outside of the range for the sage-grouse. No known occurrences of the Colorado butterfly plant in Wyoming are located on BLM or FS public lands. Two occurrences are known on the F.E. Warren Air Force Base, while other occurrences are on private or state lands. As a result, lands and realty management actions would not affect the Colorado butterfly plant or its designated critical habitat.

### **Livestock**

Livestock management actions in the Amendment include habitat improvements for Greater Sage-Grouse through the following: evaluation of opportunities to coordinate management plans and strategies under a single management plan with other agencies and stake holders and include sage-grouse management (Action 22), develop voluntary grazing strategies that improve sage-grouse populations and habitat (Action 45, 139), adjustments to grazing management (Action 46, 139), sage-grouse habitat objectives and management would be incorporated into all grazing permit renewals (Action 48), progress toward achieving land health standards in sage-grouse PHMAs (Action 49), management of voluntarily relinquished permits or preferences (Action 50), coordinate with permittees/lessees to develop drought contingency plans (Action 52), evaluate and modify existing range improvements to improve sage-grouse habitat (Action 53), designate specific routes and timeframes for trailing which includes the avoidance of stopovers in sage-grouse leks (Action 54), promote balanced grazing between upland and riparian areas (Action 55), manage range improvements in a way that promotes sage-grouse and its habitats (Action 56), and evaluate and modify effects on sage-grouse from spring and seep developments such as pipelines and structures (Action 57).

Wyoming Colorado butterfly plant populations are located outside of the range for the sage-grouse. No known occurrences of the Colorado butterfly plant in Wyoming are located on BLM or FS public lands. Two occurrences are known on the F.E. Warren Air Force Base, while other occurrences are on private or state lands. As a result, livestock management actions would not affect the Colorado butterfly plant or its designated critical habitat.

### **Mineral Resources**

Minerals management actions included in the Amendment include the following: designing roads in a way which minimize impacts in sage-grouse priority/PHMAs (Action 20), protective modifications to lease stipulations within sage-grouse habitat (Action 58, 60, 61, 62, 63, 66, 68, 71, 72, 75, 77, 78, 80, 81). Other actions include, proposed withdrawal recommendations of some areas of PHMA from mineral exploration (Action 79, 139), minimization and avoidance of surface disturbances (Action 79), prohibit strip mining near sage-grouse (Action 76), prohibition of geophysical operations near Greater Sage-Grouse, right-of-way and vehicle limitations, timing restrictions during breeding season (Action 60), working with permittees/lessees to apply sage-grouse conservation measures, distance limitations (Action 60, 66) minimization of habitat fragmentation (Action 62, 67), requiring reclamation plans (Action 69a), noise reduction, and minimize impacts to related sensitive resources.

All Wyoming Colorado butterfly plant populations are located outside of the range for the Sage-grouse. No known occurrences of the Colorado butterfly plant in Wyoming are located on BLM or FS public lands. Two occurrences are known on the F.E. Warren Air Force Base, while other occurrences are on private or state lands. As a result, mineral resource management actions would not affect the Colorado butterfly plant or its designated critical habitat.

## **Recreation**

With the implementation of the Amendment, BLM SRPs and Forest Service Recreation SUAs would be continued to be allowed in sage-grouse PHMA habitat, unless negative impacts to sage-grouse cannot be adequately mitigated (Action 82).

Wyoming Colorado butterfly plant populations are located outside of the range for the sage-grouse. No known occurrences of the Colorado butterfly plant in Wyoming are located on BLM or FS public lands. Two occurrences are known on the F.E. Warren Air Force Base, while other occurrences are on private or state lands. As a result, recreation management actions would not affect the Colorado butterfly plant or its designated critical habitat.

## **Special Designations**

No new special designation actions are included in the Amendment (Action 84). As such, special designations management actions would not affect Colorado butterfly plant or its designated critical habitat.

## **Special Status Species**

Special status species management action include the collection of sage-grouse baseline data during project planning (Action 4), the modification of existing notices and plans to minimally impact PHMAs (Action 12), agencies will meet annually to coordinate and review sage-grouse data (Action 16), development of adaptive management strategies in support of the population management objectives for sage-grouse (Action 137), maintain at least 67% of the 2005-2008 Sage-grouse PHMA population within the State of Wyoming (Action 138), and all existing planning decision will be retained unless vacated or modified by decisions in this plan amendment (Action 25).

Wyoming Colorado butterfly plant populations are located outside of the range for the Sage-grouse. No known occurrences of the Colorado butterfly plant in Wyoming are located on BLM or FS public lands. Two occurrences are known on the F.E. Warren Air Force Base, while other occurrences are on private or state lands. As a result, special status species management actions would not affect the Colorado butterfly plant or its designated critical habitat.

## **Travel Management**

Travel management actions included in the Amendment, include restricting motorized travel to existing roads and trails, until route designations are made during subsequent implementation of travel management planning (Action 18), designate routes with priority habitat and assess existing plans for consistency with sage-grouse conservation objectives (Action 19), non-sand dune portions of the Dune Pond Cooperative Management Area within sage-grouse PHMAs would be limited to existing roads and trails (Action 86), avoidance of new road construction within 1.9 miles of habitat (Action 88), restricting upgrades or new road construction within sage-grouse habitat (Action 89), development of new roads would be constructed to the absolute minimum value (Action 90), natural reclamation of roads and trails would be allowed in travel management plans within sage-grouse PHMAs, in appropriate situations where additional resource damage is not foreseeable (Action 91), when reseeding roads and trails within sage-grouse PHMAs, appropriate seed mixtures would be used and the use of transplanted sagebrush would be considered (Action 92).

Wyoming Colorado butterfly plant populations are located outside of the range for the Sage-grouse. No known occurrences of the Colorado butterfly plant in Wyoming are located on BLM or FS public lands. Two occurrences are known on the F.E. Warren Air Force Base, while other occurrences are

on private or state lands. As a result, travel management actions would not affect the Colorado butterfly plant or its designated critical habitat.

### **Vegetation**

Vegetation management actions include, the application of seasonal restrictions for implementing vegetation management treatments and monitoring to benefit sage-grouse (Action 6), design range projects in a manner that minimizes potential for invasive species establishment and to monitor and treat invasive species associated with existing range improvements (Action 9), vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species (Action 11), work with various agencies and stake holders to coordinate and enhance Greater-sage-grouse population and habitat (Action 22), improvement of vegetation composition and structure to benefit sage-grouse (Action 93, 95, 100, 107), restrict sagebrush activities that reduces sagebrush canopy to less than 15% (Action 94), development of recommended protocols and treatments to protect sage-grouse and sage-grouse habitat (Action 95, 96), deferment of livestock grazing on vegetative treatments to improve habitat (Action 97), recommendations on vegetative treatments (Action 98, 100, 101, 104, 105), reclamation or restoration of surface disturbances in sage-grouse habitats (Action 99, 100, 101, 103, 106), the use of native seeds which are certified weed free for fuels treatments (Action 100, 102, 103, 104), pest treatments to control Wyoming grasshopper and Mormon cricket outbreaks in Greater Sage-Grouse PHMAs (Action 108).

The use of herbicide on noxious and invasive species (Action 11), vegetation treatments (Actions 93, 94, 95, 100, 102, 103, 104, 105, 107) and pest control treatments for Wyoming grass hopper and Mormon crickets (Action 108) have already been consulted on in their respective Land Use plans using agency approved protocols. However, the changes in the amendment would direct managers to use updated sage-grouse information which would benefit the sage-grouse. For example, managers can better control insect outbreaks in PHMAs if the PHMAs are identified.

Wyoming Colorado butterfly plant populations are located outside of the range for the sage-grouse. No known occurrences of the Colorado butterfly plant in Wyoming are located on BLM or FS public lands. Two occurrences are known on the F.E. Warren Air Force Base, while other occurrences are on private or state lands. As a result, vegetation management actions would not affect the Colorado butterfly plant or its designated critical habitat.

### **Wild Horses**

Wild horse management action include incorporating rangeland improvements for wild horses in sage-grouse PHMA (Action 109), consideration of sage-grouse PHMAs when evaluating AML's (Action 110), considering sage-grouse PHMAs when conducting land health assessments (Action 111), addressing direct and indirect effects to sage-grouse populations and habitats when conducting NEPA analysis for wild horse and burro management activities (Action 112), and to coordinate with all other resources to conduct land health assessments within all BLM HMAs (Action 113).

Based on known locations of Colorado butterfly plant as shown on USFWS maps (USFWS 2013), none of the known Colorado butterfly plant populations are located in herd management areas. In addition, Wyoming Colorado butterfly plant populations are located outside of the range for the Sage-grouse. No known occurrences of the Colorado butterfly plant in Wyoming are located on BLM or FS public lands. Two occurrences are known on the F.E. Warren Air Force Base, while other occurrences are on private or state lands. As a result, wild horse management actions would not affect the Colorado butterfly plant or its designated critical habitat.

## **Wildland Fire**

Wildland fire management actions included in the Amendment, fire and fuels management which contributes to the protection and enhancement of sagebrush habitat that supports sage-grouse populations (Action 26), complete and continue to update Greater Sage-Grouse Landscape Wildfire & Invasive necessary to maintain sagebrush habitat to support interconnecting sage-grouse populations which includes identification of annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments (Action 27), implementation of coordinated inter-agency approach to fire restrictions for Sage-grouse (Action 28), utilization of fire management strategies and tactics to achieve sage-grouse resource objectives (Action 29), fuel treatments would be implemented with an emphasis of protecting and enhancing PHMAs (Action 114), restoring burned areas within PHMAs (Action 115), post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants to return to suitable sage-grouse habitat (Action 117), and management actions to benefit sage-grouse during fire suppression activities (Action 124).

Wyoming Colorado butterfly plant populations are located outside of the range for the sage-grouse. No known occurrences of the Colorado butterfly plant in Wyoming are located on BLM or FS public lands. Two occurrences are known on the F.E. Warren Air Force Base, while other occurrences are on private or state lands. As a result, wildland fire management actions would not affect the Colorado butterfly plant or its designated critical habitat.

## **Wildlife and Fisheries**

Wildlife and fisheries management actions described in the Amendment include protocols for sage-grouse monitoring (Actions 1, 3,125), development of landscape level restoration, conservation and maintenance strategies (Actions 8, 14, 15,21) application of required design features (Action 10), addition of new sage-grouse habitat (Action 13), limitation of oil and gas development densities (Action 126), limitation of all surface disturbances to 5% per 640 acres (Action 127), mitigation protocol (Actions 5,7,128), prohibition of surface disturbing activities within 0.6 mile radius of occupied sage-grouse leks within PHMAs (Action 129), prohibition of surface disturbing activities within 0.25 mile radius of occupied sage-grouse leks outside PHMAs (Action 130), timing restrictions in breeding, nesting, and brooding PHMA habitat (Actions 17,131, 132, 133, 134), promote control of predators to sage-grouse or sage-grouse habitat (Action 135), and implementation of noise restrictions (Action 136).

Wyoming Colorado butterfly plant populations are located outside of the range for the Sage-grouse. No known occurrences of the Colorado butterfly plant in Wyoming are located on BLM or FS public lands. Two occurrences are known on the F.E. Warren Air Force Base, while other occurrences are on private or state lands. As a result, wildlife and fisheries management actions would not affect the Colorado butterfly plant or its designated critical habitat.

## **Cumulative Effects**

The following analysis focuses on cumulative impacts according to the ESA, Section 7 Consultation Handbook definition (USFWS 1998a); the incremental impacts of future State, or private activities (i.e., excluding federal activities), that are reasonably certain to occur within the action area of the Federal action subject to consultation.

Existing and proposed activities on non-federal lands in the planning area that have the potential to cumulatively affect the species include but are not limited to the following:

- Non-discretionary livestock grazing

- Non-discretionary ORV use
- Non-discretionary development of energy and mineral resources
- Non-discretionary herbicide and insecticide treatments
- Other non-discretionary surface disturbing activities
- Water depletions from irrigation diversions and dams
- Livestock grazing on private lands
- Sand and gravel operations
- Existing and proposed wind farms
- Hard rock mining (including coal, trona, and phosphates)
- Bentonite mining

The USFWS has designated critical habitat for the Colorado butterfly plant. One unit of designated critical habitat is located within the Casper FO. This area consists of 107 acres long 1.5 stream miles of Tepee Ring Creek in Platte County, Wyoming and is under private land ownership (USFWS 2005). This area surrounds the one known population of Colorado butterfly plant within the Casper FO. This amendment would not contribute to cumulative effects on the area designated as critical habitat for the Colorado butterfly plant.

### 7.2.2 Effects Determination

The effects determination only addresses changes in management that would occur from the Amendment. Existing management conditions which are not changed as a result of the Amendment such as livestock grazing and road developments have already been consulted on using agency approved methods and are not analyzed in this document. In addition, Wyoming Colorado butterfly plant are located outside of the range for the Sage-grouse. No known occurrences of the Colorado butterfly plant in Wyoming are located on BLM or FS public lands within the planning area. Two occurrences are known on the F.E. Warren Air Force Base, while other occurrences are on private or state lands. Because no known occurrences of the Colorado butterfly plant are found within the planning area, implementation of the Amendment, would have “**No Effect**” on the Colorado butterfly plant or its designated critical habitat, within the Bridger Teton, Rawlins, Pinedale, Kemmerer, Rock Springs, Medicine-Bow, Casper, Thunder Basin and Newcastle Field Offices.

**Table 5-Summary and Determination of Effects for the Colorado butterfly plant**

<b>Program</b>	<b>Bridger Teton</b>	<b>Pinedale</b>	<b>Kemmerer</b>	<b>Rock Springs</b>	<b>Rawlins</b>	<b>Rawlins Critical</b>	<b>Medicine Bow</b>	<b>Casper</b>	<b>Casper Critical</b>	<b>Thunder Basin</b>	<b>Newcastle</b>
<b>Lands and Realty</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Livestock</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Mineral Resources</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Recreation</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Special Designations</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

<b>Special Status Species</b>	NE										
<b>Transportation and Access</b>	NE										
<b>Vegetation</b>	NE										
<b>Watershed and Water Quality</b>	NE										
<b>Wild Horses</b>	NE										
<b>Wildland Fire</b>	NE										
<b>Wildlife and Fisheries</b>	NE										

NLAA= May affect, not likely to adversely affect

LAA = May affect, likely to adversely affect

NE = No effect (No Adverse Modification for critical habitat)

NJ = No Jeopardy 7.3 Desert yellowhead (*Yermo xanthocephalus*) – Threatened

### 7.3 Desert yellowhead (*Yermo xanthocephalus*) – Threatened

#### 7.3.1 Effects of Selected Alternative

##### Lands and Realty

Activities under the lands and realty program include, manage sage-grouse PHMAs (Action 30), seasonal timing constraints (Action 31), restrictions which protect sage-grouse on new right-of-way corridors in sage-grouse habitat (Action 32), designing of powerlines and guy wires to minimize wildlife related impacts and constructed to the latest APLIC standards (Action 34, 35, 38), reclamation of sites (Action 35), prohibition of wind turbines in Greater Sage-Grouse habitat (Action 36), avoidance of MET tower supports in PHMA (Action 38), retention of PHMA (Action 40), identification of sage-grouse habitat in mineral right areas or conservation easement areas (Action 41), acquisition of Greater Sage-Grouse lands (Action 42), and consideration of non-mineral withdrawal actions to protect the species (Action 43).

The desert yellowhead is not known to occur in any areas covered by the Amendment. The species known locations occur entirely on land managed by the BLM Lander field office in the Beaver Rim area approximately 10 km (6 mi) north of Sweetwater Station in southern Fremont County, Wyoming. Because the species is not known to occur in the Amendment boundary, lands and realty management actions would not affect the desert yellowhead.

##### Livestock

Many of the livestock management actions in the Amendment include habitat improvements for sage-grouse through the following: evaluation of opportunities to coordinate management plans and strategies under a single management plan with other agencies and stake holders and include sage-grouse management (Action 22), develop voluntary grazing strategies that improve sage-grouse populations and habitat (Action 45), adjustments to grazing management (Action 46, 139), sage-grouse habitat objectives and management would be incorporated into all grazing permit renewals (Action 48), progress toward achieving land health standards in sage-grouse PHMAs (Action 49), management of voluntarily relinquished permits or preferences (Action 50), coordinate with permittees/lessees to develop drought contingency plans (Action 52), evaluate and modify existing

range improvements to improve sage-grouse habitat (Action 53), designate specific routes and timeframes for trailing which includes the avoidance of stopovers in sage-grouse leks (Action 54), promote balanced grazing between upland and riparian areas (Action 55), manage range improvements in a way that promotes sage-grouse and its habitats (Action 56), and evaluate and modify effects on sage-grouse from spring and seep developments such as pipelines and structures (Action 57).

The desert yellowhead is not known to occur in any areas covered by the Amendment. The species known locations occur entirely on land managed by the BLM Lander field office in the Beaver Rim area approximately 10 km (6 mi) north of Sweetwater Station in southern Fremont County, Wyoming. Because the species is not known to occur in the Amendment boundary, livestock management activities would not affect the desert yellowhead.

### **Mineral Resources**

Minerals management actions included in the Amendment include the following: designing roads which minimize impacts in sage-grouse PHMAs (Action 20), protective modifications to lease stipulations within sage-grouse habitat (Action 58, 60, 61, 62, 63, 66, 68, 71, 72, 75, 77, 78, 80, 81). Other actions include, proposed withdrawal recommendations of some areas of PHMA from mineral exploration (Action 79, 139), minimization and avoidance of surface disturbances (Action 79), prohibit strip mining near sage-grouse (Action 76), prohibition of geophysical operations near sage-grouse, right-of-way and vehicle limitations, timing restrictions during breeding season (Action 60), working with permittees/lessees to apply sage-grouse conservation measures, distance limitations (Action 60, 66) minimization of habitat fragmentation (Action 62, 67), requiring reclamation plans (Action 69a), noise reduction, and minimize impacts to related sensitive resources.

The desert yellowhead is not known to occur in any areas covered by the Amendment. The species known locations occur entirely on land managed by the BLM Lander field office in the Beaver Rim area approximately 10 km (6 mi) north of Sweetwater Station in southern Fremont County, Wyoming. Because the species is not known to occur in the Amendment boundary, mineral resource management actions would not affect the desert yellowhead.

### **Recreation**

BLM SRPs and Forest Service Recreation SUAs would be continued to be allowed in sage-grouse PHMA, unless negative impacts to sage-grouse cannot be adequately mitigated (Action 82).

The desert yellowhead is not known to occur in any areas covered by the Amendment. The species known locations occur entirely on land managed by the BLM Lander field office in the Beaver Rim area approximately 10 km (6 mi) north of Sweetwater Station in southern Fremont County, Wyoming. Because the species is not known to occur in the Amendment boundary, recreation management actions would not affect the desert yellowhead.

### **Special Designations**

No new special designation actions are included in Amendment (Action 84). As such, special management actions would not affect desert yellowhead. In addition, desert yellowhead is not known to occur in any areas covered by the Amendment. The species known locations occur entirely on land managed by the BLM Lander field office in the Beaver Rim area approximately 10 km (6 mi) north of Sweetwater Station in southern Fremont County, Wyoming. Because the species is not known to occur in the Amendment boundary, special designations management actions would not affect the desert yellowhead.

### **Special Status Species**

Special status species management actions include the collection of sage-grouse baseline data during project planning (Action 4), the modification of existing notices and plans to minimally impact PHMAs (Action 12), agencies will meet annually to coordinate and review sage-grouse data (Action 16), development of adaptive management strategies in support of the population management objectives for sage-grouse (Action 137), maintain at least 67% of the 2005-2008 sage-grouse PHMA population within the State of Wyoming (Action 138), and all existing planning decisions will be retained unless vacated or modified by decisions in this plan amendment (Action 25).

The desert yellowhead is not known to occur in any areas covered by the Amendment. The species known locations occur entirely on land managed by the BLM Lander field office in the Beaver Rim area approximately 10 km (6 mi) north of Sweetwater Station in southern Fremont County, Wyoming. Because the species is not known to occur in the Amendment boundary, special status species management actions would not affect the desert yellowhead.

### **Travel Management**

Travel management actions included in the Amendment, include restricting motorized travel to existing roads and trails, until route designations are made during subsequent implementation of travel management planning (Action 18), designate routes with priority habitat and assess existing plans for consistency with sage-grouse conservation objectives (Action 19), non-sand dune portions of the Dune Pond Cooperative Management Area within sage-grouse PHMAs would be limited to existing roads and trails (Action 86, 87), avoidance of new road construction within 1.9 miles of habitat (Action 88), restricting upgrades or new road construction within sage-grouse habitat (Action 89), development of new roads would be constructed to the absolute minimum value (Action 90), natural reclamation of roads and trails would be allowed in travel management plans within sage-grouse PHMAs, in appropriate situations where additional resource damage is not foreseeable (Action 91), when reseeding roads and trails within sage-grouse PHMAs, appropriate seed mixtures would be used and the use of transplanted sagebrush would be considered (Action 92).

The desert yellowhead is not known to occur in any areas covered by the Amendment. The species known locations occur entirely on land managed by the BLM Lander field office in the Beaver Rim area approximately 10 km (6 mi) north of Sweetwater Station in southern Fremont County, Wyoming. Because the species is not known to occur in the Amendment boundary, travel management actions would not affect the desert yellowhead.

### **Vegetation**

Vegetation management actions include, the application of seasonal restrictions for implementing vegetation management treatments and monitoring to benefit sage-grouse (Action 6), design range projects in a manner that minimizes potential for invasive species establishment and to monitor and treat invasive species associated with existing range improvements (Action 9), vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species (Action 11), work with various agencies and stakeholders to coordinate and enhance Greater Sage-Grouse population and habitat (Action 22), improvement of vegetation composition and structure to benefit sage-grouse (Action 93, 95, 100, 107), restrict sagebrush activities that reduces sagebrush canopy to less than 15% (Action 94), development of recommended protocols and treatments to protect sage-grouse and sage-grouse habitat (Action 95, 96), deferment of livestock grazing on vegetative treatments to improve habitat (Action 97), recommendations on vegetative treatments (Action 98, 100, 101, 104, 105), reclamation or restoration of surface disturbances in

sage-grouse habitats (Action 99, 100, 101, 103, 106), the use of native seeds which are certified weed free for fuels treatments (Action 100, 102, 103, 104), pest treatments to control Wyoming grasshopper and Mormon cricket outbreaks in Greater Sage-Grouse PHMAs (Action 108).

The desert yellowhead is not known to occur in any areas covered by the Amendment. The species known locations occur entirely on land managed by the BLM Lander field office in the Beaver Rim area approximately 10 km (6 mi) north of Sweetwater Station in southern Fremont County, Wyoming. Because the species is not known to occur in the Amendment boundary, vegetation management actions would not affect the desert yellowhead.

### **Wild Horses**

Wild horse management actions include incorporating rangeland improvements for wild horses in sage-grouse PHMAs (Action 109), consideration of sage-grouse PHMAs when evaluating AML's (Action 110), considering sage-grouse PHMAs when conducting land health assessments (Action 111), addressing direct and indirect effects to sage-grouse populations and habitats when conducting NEPA analysis for wild horse and burro management activities (Action 112), and to coordinate with all other resources to conduct land health assessments within all BLM HMAs (Action 113).

The desert yellowhead is not known to occur in any areas covered by the Amendment. The species known locations occur entirely on land managed by the BLM Lander field office in the Beaver Rim area approximately 10 km (6 mi) north of Sweetwater Station in southern Fremont County, Wyoming. Because the species is not known to occur in the Amendment boundary, wild horse management actions would not affect the desert yellowhead.

### **Wildland Fire**

Wildland fire management actions included in the Amendment, fire and fuels management which contributes to the protection and enhancement of sagebrush habitat that supports sage-grouse populations (Action 26), complete and continue to update sage-grouse Landscape Wildfire & Invasive necessary to maintain sagebrush habitat to support interconnecting sage-grouse populations which includes identification of annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments (Action 27), implementation of coordinated inter-agency approach to fire restrictions for sage-grouse (Action 28), utilization of fire management strategies and tactics to achieve sage-grouse resource objectives (Action 29), fuel treatments would be implemented with an emphasis of protecting and enhancing PHMAs (Action 114), restoring burned areas within PHMAs (Action 115), post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants to return to suitable sage-grouse habitat (Action 117), avoiding treatments in areas containing old trees or persistent woodlands (Action 118), and management actions to benefit sage-grouse during fire suppression activities (Action 124).

The desert yellowhead is not known to occur in any areas covered by the Amendment. The species known locations occur entirely on land managed by the BLM Lander field office in the Beaver Rim area approximately 10 km (6 mi) north of Sweetwater Station in southern Fremont County, Wyoming. Because the species is not known to occur in the Amendment boundary, wildland fire management actions would not affect the desert yellowhead.

### **Wildlife and Fisheries**

Wildlife and fisheries management actions described in the Amendment include protocols for sage-grouse monitoring (Actions 1, 3, 125), development of landscape level restoration, conservation and

maintenance strategies (Actions 8, 14, 15, 21) application of required design features (Action 10), addition of new sage-grouse habitat (Action 13), limitation of oil and gas development densities (Action 126), limitation of all surface disturbances to 5% per 640 acres (Action 127), mitigation protocol (Actions 5,7, 128), prohibition of surface disturbing activities within 0.6 mile radius of occupied sage-grouse leks within PHMAs (Action 129), prohibition of surface disturbing activities within 0.25 mile radius of occupied sage-grouse leks outside PHMAs (Action 130), timing restrictions in breeding, nesting, and brooding PHMA habitat (Actions 17,131, 132, 133, 134), promote control of predators to sage-grouse or sage-grouse habitat (Action 135), and implementation of noise restrictions (Action 136).

The desert yellowhead is not known to occur in any areas covered by the Amendment. The species known locations occur entirely on land managed by the BLM Lander field office in the Beaver Rim area approximately 10 km (6 mi) north of Sweetwater Station in southern Fremont County, Wyoming. Because the species is not known to occur in the Amendment boundary, wildlife and fisheries management actions would not affect the desert yellowhead.

### **Cumulative Effects**

Cumulative impacts according to the ESA, Section 7 Consultation Handbook definition (USFWS 1998a) include the incremental impacts of future State, or private activities (i.e., excluding federal activities), that are reasonably certain to occur within the action area of the Federal action subject to consultation.

Because the desert yellowhead site is only known to occur in the Beaver Rim area and is entirely located on federal surface, there is little or no potential for direct cumulative effects from future state, local, or private actions to affect the species.

### **7.3.2 Effects Determination**

The effects determination only addresses changes in management that will occur from the Amendment. Existing management conditions that would not be changed as a result of the Amendment have already been consulted on using agency approved methods and will not be analyzed in this document.

Activities included in the Amendment are not anticipated to affect the species. The desert yellowhead is not known to occur in any areas covered by the Amendment. The species known locations occur entirely on land managed by the BLM Lander field office in the Beaver Rim area approximately 10 km (6 mi) north of Sweetwater Station in southern Fremont County, Wyoming. Because the species is not known to occur in the Amendment boundary, wildlife and fisheries management actions would not affect the desert yellowhead.

Desert yellowhead are only located in the Lander BLM field office, which is not included in the 9 plan Amendment boundary. As a result, implementation of the Amendment would have “**No Effect**” on the desert yellowhead or its designated critical habitat within the Bridger Teton, Pinedale, Kemmerer, Rawlins, Medicine-Bow, Casper, Rock Springs, Thunder Basin and Newcastle Field Offices.

**Table 6- Summary and Determination of Effects for Desert yellowhead**

<b>Program</b>	<b>Bridger Teton</b>	<b>Bridger Teton Critical</b>	<b>Pinedale</b>	<b>Pinedale Critical</b>	<b>Kemmerer</b>	<b>Kemmerer Critical</b>	<b>Rock Springs</b>	<b>Rock Springs Critical</b>	<b>Rawlins</b>	<b>Rawlins Critical</b>	<b>Medicine Bow</b>	<b>Medicine Bow Critical</b>	<b>Casper</b>	<b>Casper Critical</b>	<b>Thunder Basin</b>	<b>Thunder Basin Critical</b>	<b>Newcastle</b>	<b>Newcastle Critical</b>
<b>Lands and Realty</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Livestock</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Mineral Resources</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Recreation</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Special Designations</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Special Status Species</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Transportation and Access</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Vegetation</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Watershed and Water Quality</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wild Horses</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wildland Fire</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wildlife and Fisheries</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

NLAA= May affect, not likely to adversely affect

LAA = May affect, likely to adversely affect

NE = No effect (No Adverse Modification for critical habitat)

NJ = No Jeopardy

## **7.4 Ute Ladies' -tresses (*Spiranthes diluvialis*) - Threatened**

### **7.4.1 Effects of Selected Alternative**

#### **Lands and Realty**

Activities under the lands and realty program described in the Amendment include, management of sage-grouse PHMAs (Action 30), seasonal timing constraints (Action 31), restrictions which protect sage-grouse on new right-of-way corridors in sage-grouse habitat (Action 32), designing of powerlines and guy wires to minimize wildlife related impacts and constructed to the latest APLIC standards (Action 34, 35, 38), reclamation of sites (Action 35), prohibition of wind turbines in Greater Sage-Grouse habitat (Action 36), avoidance of MET tower supports in PHMA (Action 38), retention of PHMA (Action 40), identification of sage-grouse habitat in mineral right areas or conservation easement areas (Action 41), acquisition of Greater Sage-Grouse lands (Action 42), and consideration of non-mineral withdrawal actions to protect the species (Action 43).

Lands and realty management actions included in the Amendment are not likely to occur in the wetland habitats of the Ute ladies' - tresses because Greater Sage-Grouse occur in lands dominated by large sagebrush stands. However, sagebrush dominated stands may be located adjacent to wetland habitats.

Management actions that would not affect the Ute ladies' - tresses include the management of sage-grouse PHMAs, and the installation of perch deterrents. However, changes in some of the lands and realty management actions included in the Amendment may inadvertently protect the species through land acquisitions, retentions, and reclamations. Restrictions of right-of-way corridors could also benefit the species by reducing or prohibiting ground disturbances in habitat occupied by the Ute ladies'-tresses. Road closures would reduce the number of people within Ute ladies' - tresses habitat and the resulting impacts on the species and habitat.

#### **Livestock**

Livestock management actions described in the Amendment include the following: evaluation of opportunities to coordinate management plans and strategies under a single management plan with other agencies and stake holders and include sage-grouse management (Action 22), develop voluntary grazing strategies that improve sage-grouse populations and habitat (Action 45), adjustments to grazing management (Action 46, 139), sage-grouse habitat objectives and management would be incorporated into all grazing permit renewals (Action 48), progress toward achieving land health standards in sage-grouse PHMAs (Action 49), management of voluntarily relinquished permits or preferences (Action 50), coordinate with permittees/lessees/lessees to develop drought contingency plans (Action 52), evaluate and modify existing range improvements to improve sage-grouse habitat (Action 53), designate specific routes and timeframes for trailing which includes the avoidance of stopovers in sage-grouse leks (Action 54), promote balanced grazing between upland and riparian areas (Action 55), manage range improvements in a way that promotes Sage-grouse and its habitats (Action 56), and evaluate and modify effects on sage-grouse from spring and seep developments such as pipelines and structures (Action 57).

All of the documented occurrences of Ute ladies' -tresses reside within wetland habitats in Wyoming. Because Greater Sage-Grouse occur in lands dominated by large sagebrush stands, livestock management actions meant to benefit sage-grouse would not occur in Ute ladies' -tresses habitat. Actions that would not affect Ute ladies' -tresses include Action 22, 45, 48, 49, 53, 54, 56, 57). However, because the species may occur in the same geographical area as sage-grouse, changes in

some of the Livestock management program may inadvertently protect the species through the development of a drought contingency plan (Action 52), which could reduce grazing pressure near Ute ladies'-tresses habitats; the promotion of balanced grazing (Action 55) could also alleviate heavy grazing impact in wetland areas.

### **Mineral Resources**

Minerals management actions included in the Amendment include the following: designing roads which minimize impacts in sage-grouse PHMAs (Action 20), protective modifications to lease stipulations within sage-grouse habitat (Action 58, 60, 61, 62, 63, 66, 68, 71, 72, 75, 77, 78, 80, 81). Other actions include, proposed withdrawal recommendations of some areas of PHMA from mineral exploration (Action 79, 139), minimization and avoidance of surface disturbances (Action 79), prohibit strip mining near sage-grouse (Action 76), prohibition of geophysical operations near sage-grouse, right-of-way and vehicle limitations, timing restrictions during breeding season (Action 60), working with permittees/lessees/lessees to apply sage-grouse conservation measures, distance limitations (Action 60, 66), requiring reclamation plans (Action 69a), minimization of habitat fragmentation (Action 62, 67), noise reduction, and minimize impacts to related sensitive resources.

Planning measures which do not cause surface disturbing actions such as the consideration of a master plan for development or leasing when impacts to sage-grouse could occur (Action 66), noise, timing and distance restrictions (Action 60), implementing a reclamation bond in sage-grouse areas (Action 66) and requiring reclamation plans (Action 69a) would not affect Ute ladies'-tresses.

Because sage-grouse do not reside in the same habitat required by Ute ladies'-tresses, management actions intended to protect sage-grouse would not directly affect Ute ladies'-tresses. However, because the species may occur in the same geographical area, some management actions may inadvertently benefit the species. Beneficial actions may include limitations of road developments and implementing measures to reduce pollutants. These actions could limit road access within Ute ladies'-tresses habitat which would benefit the species. It is not anticipated that the management actions would negatively affect the species.

No surface disturbing mineral resource actions would occur without proper analysis and implementation of all appropriate conservation measures in order to ensure the protection of the Ute ladies'-tresses. It is anticipated that new proposals of mineral management actions would result in the development of additional protection measures, and coordination with the USFWS.

### **Recreation**

Recreation management actions include BLM SRPs and Forest Service Recreation SUAs would be allowed in sage-grouse PHMA habitat, unless negative impacts to sage-grouse cannot be adequately mitigated (Action 82).

The issuance of BLM SRP's and Forest Service recreation SUA's has already been consulted on during the planning process of their respective land use plans. However, the change in the Amendment and the area which needs to be consulted on would be the closing of SRP's and SUA's in PHMAs when negative impacts cannot be mitigated. The closing of any BLM SRP or Forest Service Recreation SUA in PHMAs would not directly affect the Ute ladies'-tresses. In fact, the closing of SRP's and SUA's may benefit the species and protect it from potentially negative impacts from recreation.

### **Special Designations**

No new special designation actions are included in the Amendment (Action 84). As such, special management actions would not affect the Ute ladies'-tresses.

### **Special Status Species**

Special status species management actions include the collection of sage-grouse baseline data during project planning (Action 4), the modification of existing notices and plans to minimally impact PHMAs (Action 12), agencies will meet annually to coordinate and review sage-grouse data (Action 16), development of adaptive management strategies in support of the population management objectives for sage-grouse (Action 137), maintain at least 67% of the 2005-2008 Sage-grouse PHMA population within the State of Wyoming (Action 138), and all existing planning decisions will be retained unless vacated or modified by decisions in this plan amendment (Action 25).

Actions included in the special species management program such as the collection of data (Action 4), agencies meeting annually to coordinate sage-grouse data (Action 16), and the development of adaptive management strategies (Action 137), retention of existing plans unless modified in the Amendment (Action 25), would not have any effect on the Ute ladies'-tresses because no surface disturbing actions would take place. However, Action 12 which includes the modification of existing notices and plans to minimally impact PHMAs may indirectly benefit the species by reducing impacts to PHMAs. The reduction of impacts in PHMAs may also indirectly benefit Ute ladies'-tresses which may occur in adjacent habitats.

### **Travel Management**

Travel management actions described in the Amendment, include restricting motorized travel to existing roads and trails, until route designations are made during subsequent implementation of travel management planning (Action 18), designate routes with priority habitat and assess existing plans for consistency with sage-grouse conservation objectives (Action 19), non-sand dune portions of the Dune Pond Cooperative Management Area within sage-grouse PHMAs would be limited to existing roads and trails (Action 86, 87), avoidance of new road construction within 1.9 miles of habitat (Action 88), restricting upgrades or new road construction within sage-grouse habitat (Action 89), development of new roads would be constructed to the absolute minimum value (Action 90), natural reclamation of roads and trails would be allowed in travel management plans within sage-grouse PHMAs, in appropriate situations where additional resource damage is not foreseeable (Action 91), when reseeding roads and trails within sage-grouse PHMAs, appropriate seed mixtures would be used and the use of transplanted sagebrush would be considered (Action 92).

Travel management actions such as the minimization, reclamation, avoidance, restriction and closure of various roads may inadvertently benefit the species even though sage-grouse do not occur in the same habitat as the Ute ladies'-tresses (Action 18, 86, 88, 89). For example, Ute ladies'-tresses may be protected if a road restriction or closure in sage-grouse habitat blocks access to a road which leads to wetland habitat. The use of approved seed mixtures (Action 92) and implementation of travel management plans (Action 18) would likely have no effect on the Ute ladies'-tresses.

### **Vegetation**

Vegetation management actions include, the application of seasonal restrictions for implementing vegetation management treatments and monitoring to benefit sage-grouse (Action 6), design range projects in a manner that minimizes potential for invasive species establishment and to monitor and treat invasive species associated with existing range improvements (Action 9), vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive

species (Action 11), work with various agencies and stake holders to coordinate and enhance Greater Sage-Grouse population and habitat (Action 22), improvement of vegetation composition and structure to benefit sage-grouse (Action 93, 95, 100, 107), restrict sagebrush activities that reduces sagebrush canopy to less than 15% (Action 94), development of recommended protocols and treatments to protect sage-grouse and sage-grouse habitat (Action 95, 96), deferment of livestock grazing on vegetative treatments to improve habitat (Action 97), recommendations on vegetative treatments (Action 98, 100, 101, 104, 105), reclamation or restoration of surface disturbances in sage-grouse habitats (Action 99, 100, 101, 103, 106), the use of native seeds which are certified weed free for fuels treatments (Action 100, 102, 103, 104), pest treatments to control Wyoming grasshopper and Mormon cricket outbreaks in Greater Sage-Grouse PHMAs (Action 108).

The use of herbicide on noxious and invasive species (Action 11), vegetation treatments (Actions 93, 94, 95, 100, 102, 103, 104, 105, 107) and pest control treatments for Wyoming grass hopper and Mormon crickets (Action 108) have already been consulted on in their respective Land Use plans using agency approved protocols. However, the actions in the Amendment would direct managers to use updated sage-grouse information which would benefit the sage-grouse.

Vegetation management actions are not expected to directly impact occupied or potential Ute ladies' - tresses habitat. Because sage-grouse do not reside in the same habitat required by Ute ladies' - tresses. Vegetation management actions intended to protect sage-grouse would occur in upland sage-grouse habitat areas. Vegetation management actions such as season restrictions (Action 6), monitoring efforts (Action 9), and working collaboratively with various agencies (Action 22) are not expected to directly or indirectly impact occupied or potential Ute ladies' -tresses habitat because no surface disturbing management action would result. However, actions that minimize the potential for the spread of noxious and invasive weeds (Action 9), deferment of livestock (Action 97), and the improvement of vegetative composition (Action 93, 95, 100, 107) may inadvertently benefit the species through improved habitat conditions.

### **Wild Horses**

Wild horse management action include incorporating rangeland improvements for wild horses in sage-grouse PHMAs (Action 109), consideration of sage-grouse PHMAs when evaluating AML's (Action 110), considering sage-grouse PHMAs when conducting land health assessments (Action 111), addressing direct and indirect effects to sage-grouse populations and habitats when conducting NEPA analysis for wild horse and burro management activities (Action 112), and to coordinate with all other resources to conduct land health assessments within all BLM HMAs (Action 113).

Based on known locations of Ute ladies' - tresses as shown on USFWS maps (USFWS 2013), none of the known Ute ladies' - tresses sites are located in herd management areas. In addition, all the wild horse management actions discussed in the Amendment only include protective measures such as Herd management plan amendments which protect sage-grouse and the requirement of NEPA analysis when water or range improvements are necessary. None of these actions would occur within or near Ute ladies' - tresses habitat. The management actions are also not expected to inadvertently affect nearby habitat.

### **Wildland Fire**

Wildland fire management actions outlined in the Amendment include, fire and fuels management which contributes to the protection and enhancement of sagebrush habitat that supports sage-grouse populations (Action 26), complete and continue to update Greater Sage-Grouse Landscape Wildfire & Invasive necessary to maintain sagebrush habitat to support interconnecting sage-grouse

populations which includes identification of annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments (Action 27), implementation of coordinated inter-agency approach to fire restrictions for Sage-grouse (Action 28), utilization of fire management strategies and tactics to achieve sage-grouse resource objectives (Action 29), fuel treatments would be implemented with an emphasis of protecting and enhancing PHMAs (Action 114), restoring burned areas within PHMAs (Action 115), post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants to return to suitable sage-grouse habitat (Action 117), avoiding treatments in areas containing old trees or persistent woodlands (Action 118), and management actions which benefit sage-grouse during fire suppression activities (Action 124).

Changes to existing wildland fire management are not expected to directly impact occupied or potential Ute ladies'-tresses habitat. Preferred habitat for the plant is wetland habitats comprised of sub-irrigated, alluvial soils, which generally do not burn and it is not likely that fires associated with sage-grouse wildland fire management would be prescribed in such areas. Also, because sage-grouse do not reside in the same habitat required by Ute ladies'-tresses, most of the wildland fire management actions intended to protect sage-grouse would not affect Ute ladies'-tresses. Beneficial effects to the species may inadvertently result through avoidance and protective measures for the sage-grouse.

No surface disturbing wildland fire management actions would occur without proper analysis and implementation of all appropriate conservation measures in order to ensure the protection of the Ute ladies'-tresses. It is anticipated that new proposals of fire management actions would result.

### **Wildlife and Fisheries**

Wildlife and fisheries management actions described in the Amendment include protocols for sage-grouse monitoring (Actions 1, 3,125), development of landscape level restoration, conservation and maintenance strategies (Actions 8, 14, 15,21) application of required design features (Action 10), addition of new sage-grouse habitat (Action 13), limitation of oil and gas development densities (Action 126), limitation of all surface disturbances to 5% per 640 acres (Action 127), mitigation protocol (Actions 5,7,128), prohibition of surface disturbing activities within 0.6 mile radius of occupied sage-grouse leks within PHMAs (Action 129), prohibition of surface disturbing activities within 0.25 mile radius of occupied sage-grouse leks outside PHMAs (Action 130), timing restrictions in breeding, nesting, and brooding PHMA (Actions 17,131, 132, 133, 134), promote control of predators to sage-grouse or sage-grouse habitat (Action 135), and implementation of noise restrictions (Action 136).

Because sage-grouse do not reside in the same habitat required by Ute ladies'-tresses, management actions intended to protect sage-grouse would not directly affect Ute ladies'-tresses. However, because the species may occur in the same geographical area, some management actions may inadvertently benefit the species. Beneficial actions may include limitation of oil and gas development densities, restrictions of surface disturbing activities, and increased mitigation protocol. Other management actions such as the implementation of noise restrictions (Action 135) and timing restrictions (Actions 17, 131, 132, 133 and 134) would have no effect on Ute ladies'-tresses because no surface disturbing actions would occur.

### **Cumulative Effects**

Cumulative impacts according to the ESA, Section 7 Consultation Handbook definition (USFWS 1998a) include the incremental impacts of future State, or private activities (i.e., excluding federal

activities), that are reasonably certain to occur within the action area of the Federal action subject to consultation.

Existing and proposed activities on non-federal lands in the planning area that have the potential to cumulatively affect the species include but are not limited to the following:

- Non-Federal oil and gas and related energy development
- Water depletions from irrigation diversions and dams
- Livestock grazing on private lands
- Sand and gravel operations along major river corridors
- Existing and proposed wind farms
- Hard rock mining (including coal, trona, and phosphates)
- Bentonite mining
- Subdivision development along rivers
- Recreation along rivers and river corridors (including camping, rafting, hunting, and golf course development)
- Coal mine operations
- Transmission lines
- Seismic exploration
- Trona (soda ash) mining
- Municipal dump expansions

Implementation of the Amendment would not change any potential effects to the Ute ladies'-tresses orchid that may result from current or projected future non-Federal actions.

#### **7.4.2 Effects Determination**

The effects determination only addresses changes in management that would occur from the Amendment. Existing management conditions which are not changed as a result of the Amendment, such as livestock grazing and road developments have already been consulted on using agency approved methods and are not analyzed in this document.

Management actions included in the Amendment are largely supportive in nature and guide or advise other program actions and activities in a manner conducive to maintaining and/or promoting population growth and habitat for the sage-grouse. Management actions included in the Amendment such as increased monitoring, data collection, greater coordination and review, and noise, distance, and timing restrictions, would have no effect on the Ute ladies'-tresses. Also, because sage-grouse utilize upland sagebrush dominated habitats, management actions included in the Amendment may indirectly benefit the Ute ladies'-tresses by avoiding actions that may impact wetlands or riparian through sedimentation or other human interferences. Protective measures include, surface restricting actions, retentions, reclamations, road closures, reductions of pollutants, reduction of impacts and deferment of livestock grazing. Furthermore, protective conservation measures found in the Amendment and maintained as part of the existing BLM and FS RMPs would further reduce the potential for adverse effects for the species. No actions included in the Amendment are anticipated to negatively affect the Ute ladies'-tresses. Based on the above analysis of effects, implementation of the Amendment “**May Affect, but is Not Likely to Adversely Affect**” the Ute ladies'-tresses within the Bridger Teton, Pinedale, Kemmerer, Rawlins, Medicine-Bow, Casper, Rock Springs, Thunder Basin and Newcastle Field Offices.

Table 7- Summary and Determination of Effects for Ute ladies' - tresses

<b>Program</b>	<b>Bridger Teton</b>	<b>Pinedale</b>	<b>Kemmerer</b>	<b>Rock Springs</b>	<b>Rawlins</b>	<b>Medicine Bow</b>	<b>Casper</b>	<b>Thunder Basin</b>	<b>Newcastle</b>
<b>Lands and Realty</b>	NLA A	NLA A	NLA A	NLA A	NLA A	NE	NLA A	NLA A	NLA A
<b>Livestock</b>	NLA A	NLA A	NLA A	NLA A	NLA A	NE	NLA A	NLA A	NLA A
<b>Mineral Resources</b>	NLA A	NLA A	NLA A	NLA A	NLA A	NE	NLA A	NLA A	NLA A
<b>Recreation</b>	NLA A	NLA A	NLA A	NLA A	NLA A	NE	NLA A	NLA A	NLA A
<b>Special Designations</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Special Status Species</b>	NLA A	NLA A	NLA A	NLA A	NLA A	NE	NLA A	NLA A	NLA A
<b>Transportation and Access</b>	NLA A	NLA A	NLA A	NLA A	NLA A	NE	NLA A	NLA A	NLA A
<b>Vegetation</b>	NLA A	NLA A	NLA A	NLA A	NLA A	NE	NLA A	NLA A	NLA A
<b>Watershed and Water Quality</b>	NLA A	NLA A	NLA A	NLA A	NLA A	NE	NLA A	NLA A	NLA A
<b>Wild Horses</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wildland Fire</b>	NLA A	NLA A	NLA A	NLA A	NLA A	NE	NLA A	NLA A	NLA A
<b>Wildlife and Fisheries</b>	NLA A	NLA A	NLA A	NLA A	NLA A	NE	NLA A	NLA A	NLA A

NLAA= May affect, not likely to adversely affect

LAA = May affect, likely to adversely affect

NE = No effect

NJ = No Jeopardy

**7.5 Platte River Species- Western prairie-Fringed Orchid (*Platanthera praeclara*)-Endangered, Pallid Sturgeon (*Scaphirhynchus albus*)-Endangered, Least tern (*Sterna antillarum*)-Endangered, Piping Plover (*Charradrius melodus*) –Endangered, Whooping crane (*Grus americana*) - Endangered**

**7.5.1 Effects of Selected Alternative**

**Lands and Realty**

Activities under the lands and realty program include, manage sage-grouse PHMAs (Action 30), seasonal timing constraints (Action 31), restrictions which protect sage-grouse on new right-of-way corridors in greater sage-grouse habitat (Action 32), designing of powerlines and guy wires to minimize wildlife related impacts and constructed to the latest APLIC standards (Action 34, 35, 38), reclamation of sites (Action 35), prohibition of wind turbines in greater sage-grouse habitat (Action 36), avoidance of MET tower supports in PHMA (Action 38), retention of PHMA (Action 40), identification of sage-grouse habitat in mineral right areas or conservation easement areas (Action 41), acquisition of greater sage-grouse lands (Action 42), and consideration of non-mineral withdrawal actions to protect the species (Action 43).

None of the Platte river species or their designated critical habitat occur within Wyoming. The primary concern with these species is water depletions which occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species or associated downstream designated critical habitats are anticipated.

**Livestock**

Livestock management actions described in the Amendment include habitat improvements for greater sage-grouse through the following: evaluation of opportunities to coordinate management plans and strategies under a single management plan with other agencies and stake holders and include sage-grouse management (Action 22), develop voluntary grazing strategies that improve sage-grouse populations and habitat (Action 45), adjustments to grazing management (Action 46, 139), sage-grouse habitat objectives and management would be incorporated into all grazing permit renewals (Action 48), progress toward achieving land health standards in sage-grouse PHMAs (Action 49), management of voluntarily relinquished permits or preferences (Action 50), coordinate with permittees/lessees/lessees to develop drought contingency plans (Action 52), evaluate and modify existing range improvements to improve sage-grouse habitat (Action 53), designate specific routes and timeframes for trailing which includes the avoidance of stopovers in sage-grouse leks (Action 54), promote balanced grazing between upland and riparian areas (Action 55), manage range improvements in a way that promotes sage-grouse and its habitats (Action 56), and evaluate and modify effects on sage-grouse from spring and seep developments such as pipelines and structures (Action 57).

None of the Platte river species or their designated critical habitat occur within Wyoming. The primary concern with these species is water depletions which occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species or associated downstream designated critical habitats are anticipated.

## **Mineral Resources**

Minerals management actions described in the Amendment include the following: designing roads which minimize impacts in sage-grouse PHMAs (Action 20), protective modifications to lease stipulations within sage-grouse habitat (Action 58, 60, 61, 62, 63, 66, 68, 71, 72, 75, 77, 78, 80, 81). Other actions include, proposed withdrawal recommendations of some areas of PHMA from mineral exploration (Action 79, 139), minimization and avoidance of surface disturbances (Action 79), prohibit strip mining near sage-grouse (Action 76), prohibition of geophysical operations near sage-grouse, right-of-way and vehicle limitations, timing restrictions during breeding season (Action 60), working with permittees/lessees/lessees to apply sage-grouse conservation measures, distance limitations (Action 60, 66), requiring reclamation plans (Action 69a), minimization of habitat fragmentation (Action 62, 67), noise reduction, and minimize impacts to related sensitive resources.

None of the Platte river species or their designated critical habitat occur within Wyoming. The primary concern with these species is water depletions which occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species or associated downstream designated critical habitats are anticipated.

## **Recreation**

BLM SRPs and Forest Service Recreation SUAs would be continued to be allowed in sage-grouse PHMA, unless negative impacts to sage-grouse cannot be adequately mitigated (Action 82).

None of the Platte river species or their designated critical habitat occur within Wyoming. The primary concern with these species is water depletions which occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species or associated downstream designated critical habitats are anticipated.

## **Special Designations**

No new special designation actions are included in the Amendment (Action 84). As such, special management actions would not affect the Platte River Species or associated downstream designated critical habitats.

## **Special Status Species**

Special status species management action include the collection of sage-grouse baseline data during project planning (Action 4), the modification of existing notices and plans to minimally impact PHMAs (Action 12), agencies will meet annually to coordinate and review sage-grouse data (Action 16), development of adaptive management strategies in support of the population management objectives for sage-grouse (Action 137), maintain at least 67% of the 2005-2008 Greater Sage-Grouse PHMA population within the State of Wyoming (Action 138), and all existing planning decision will be retained unless vacated or modified by decisions in this plan amendment (Action 25).

None of the Platte river species or their designated critical habitat occur within Wyoming. The primary concern with these species is water depletions which occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals.

Therefore, no effects to the species or associated downstream designated critical habitats are anticipated.

### **Travel Management**

Travel management actions included in the Amendment, include restricting motorized travel to existing roads and trails, until route designations are made during subsequent implementation of travel management planning (Action 18), designate routes with priority habitat and assess existing plans for consistency with sage-grouse conservation objectives (Action 19), non-sand dune portions of the Dune Pond Cooperative Management Area within sage-grouse PHMAs would be limited to existing roads and trails (Action 86, 87), avoidance of new road construction within 1.9 miles of habitat (Action 88), restricting upgrades or new road construction within greater sage-grouse habitat (Action 89), development of new roads would be constructed to the absolute minimum value (Action 90), natural reclamation of roads and trails would be allowed in travel management plans within sage-grouse PHMAs, in appropriate situations where additional resource damage is not foreseeable (Action 91), when reseeding roads and trails within sage-grouse PHMAs, appropriate seed mixtures would be used and the use of transplanted sagebrush would be considered (Action 92).

None of the Platte river species or their designated critical habitat occur within Wyoming. The primary concern with these species is water depletions which occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species or associated downstream designated critical habitats are anticipated.

### **Vegetation**

Vegetation management actions include, the application of seasonal restrictions for implementing vegetation management treatments and monitoring to benefit sage-grouse (Action 6), design range projects in a manner that minimizes potential for invasive species establishment and to monitor and treat invasive species associated with existing range improvements (Action 9), vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species (Action 11), work with various agencies and stake holders to coordinate and enhance Greater-Sage-Grouse population and habitat (Action 22), improvement of vegetation composition and structure to benefit sage-grouse (Action 93, 95, 100, 107), restrict sagebrush activities that reduces sagebrush canopy to less than 15% (Action 94), development of recommended protocols and treatments to protect sage-grouse and sage-grouse habitat (Action 95, 96), deferment of livestock grazing on vegetative treatments to improve habitat (Action 97), recommendations on vegetative treatments (Action 98, 100, 101, 104, 105), reclamation or restoration of surface disturbances in sage-grouse habitats (Action 99, 100, 101, 103, 106), the use of native seeds which are certified weed free for fuels treatments (Action 100, 102, 103, 104), pest treatments to control Wyoming grasshopper and Mormon cricket outbreaks in Greater Sage-Grouse PHMAs (Action 108).

None of the Platte river species or their designated critical habitat occur within Wyoming. The primary concern with these species is water depletions which occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species or associated downstream designated critical habitats are anticipated.

### **Wild Horses**

Wild horse management actions include incorporating rangeland improvements for wild horses in Greater Sage-Grouse PHMAs (Action 109), consideration of sage-grouse PHMAs when evaluating AML's (Action 110), considering sage-grouse PHMAs when conducting land health assessments (Action 111), addressing direct and indirect effects to sage-grouse populations and habitats when conducting NEPA analysis for wild horse and burro management activities (Action 112), and to coordinate with all other resources to conduct land health assessments within all BLM HMAs (Action 113).

None of the Platte river species or their designated critical habitat occur within Wyoming. The primary concern with these species is water depletions which occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species or associated downstream designated critical habitats are anticipated.

### **Wildland Fire**

Wildland fire management actions described in the Amendment include the following, fire and fuels management which contributes to the protection and enhancement of sagebrush habitat that supports sage-grouse populations (Action 26), complete and continue to update Greater Sage-Grouse Landscape Wildfire & Invasive necessary to maintain sagebrush habitat to support interconnecting sage-grouse populations which includes identification of annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments (Action 27), implementation of coordinated inter-agency approach to fire restrictions for sage-grouse (Action 28), utilization of fire management strategies and tactics to achieve sage-grouse resource objectives (Action 29), fuel treatments would be implemented with an emphasis of protecting and enhancing PHMAs (Action 114), restoring burned areas within PHMAs (Action 115), post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants to return to suitable sage-grouse habitat (Action 117), avoiding treatments in areas containing old trees or persistent woodlands (Action 118), and management actions to benefit sage-grouse during fire suppression activities (Action 124).

None of the Platte river species or their designated critical habitat occur within Wyoming. The primary concern with these species is water depletions which occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species or associated downstream designated critical habitats are anticipated.

### **Wildlife and Fisheries**

Wildland fire management actions included in the Amendment include, fire and fuels management which contributes to the protection and enhancement of sagebrush habitat that supports sage-grouse populations (Action 26), complete and continue to update Greater Sage-Grouse Landscape Wildfire & Invasive necessary to maintain sagebrush habitat to support interconnecting sage-grouse populations which includes identification of annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments (Action 27), implementation of coordinated inter-agency approach to fire restrictions for sage-grouse (Action 28), utilization of fire management strategies and tactics to achieve sage-grouse resource

objectives (Action 29), fuel treatments would be implemented with an emphasis of protecting and enhancing PHMAs (Action 114), restoring burned areas within PHMAs (Action 115), post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants to return to suitable sage-grouse habitat (Action 117), and management actions which benefit sage-grouse during fire suppression activities (Action 124).

None of the Platte River species or their designated critical habitat occur within Wyoming. The primary concern with these species is water depletions which occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species or associated downstream designated critical habitats are anticipated.

### **Cumulative Effects**

Cumulative impacts according to the ESA, Section 7 Consultation Handbook definition (USFWS 1998a) include the incremental impacts of future State, or private activities (i.e., excluding federal activities), that are reasonably certain to occur within the action area of the Federal action subject to consultation.

Existing and proposed activities on non-federal lands in the planning area that have the potential to cumulatively affect the Platte River species within the state of Wyoming which contain water depletions include but are not limited to the following:

- Water irrigation diversions
- Construction of Dams
- Consumptive water use
- Introductions of non-aquatic species
- Regulated water flow

Implementation of the Amendment would not change any potential effects to the Platte River species that may result from current or projected future non-Federal actions.

### **7.5.2 Effects Determination**

The effects determination only addresses changes in management that would occur from the Amendment. Existing management conditions which are not changed as a result of the Amendment, such as livestock grazing and road developments have already been consulted on using agency approved methods and are not analyzed in this document.

No critical habitat for the Platte River species is specifically designated in Wyoming. The Platte River species, the least tern, pallid sturgeon, Western prairie fringed orchid, and whooping crane are not known to occur in Wyoming. In addition, the piping plover is considered a rare or accidental visitor to the state of Wyoming.

Implications for the species and their critical habitats are downstream due to effects from water depletions or withdrawals. When water depletions or withdrawals occur, the BLM and FWS notify the Wyoming State Engineers Office (SEO) when depletions are slated to occur to ensure an appropriate accounting of all water depletions and approval of the SEO are obtained in advance of concluding section 7 consultation. Because the management actions included in the Amendment describe nothing about new depletions, notification is not warranted. Based on the above analysis of effects, implementation of the Amendment would have “**No Effect**” on the Platte River species or

their associated downstream designated critical habitats for the Bridger-Teton, Pinedale, Kemmerer, Rawlins, Medicine-Bow, Casper, Rock Springs, Thunder Basin and Newcastle Field Offices.

**Table 8- Summary and Determination of Effects for the Platte River Species**

<b>Program</b>	<b>Bridger Teton</b>	<b>Bridger Teton Critical</b>	<b>Pinedale</b>	<b>Pinedale Critical</b>	<b>Kemmerer</b>	<b>Kemmerer Critical</b>	<b>Rock Springs</b>	<b>Rock Springs Critical</b>	<b>Rawlins</b>	<b>Rawlins Critical</b>	<b>Medicine Bow</b>	<b>Medicine Bow Critical</b>	<b>Casper</b>	<b>Casper Critical</b>	<b>Thunder Basin</b>	<b>Thunder Basin Critical</b>	<b>Newcastle</b>	<b>Newcastle Critical</b>
<b>Lands and Realty</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Livestock</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Mineral Resources</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Recreation</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Special Designations</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Special Status Species</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Transportation and Access</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Vegetation</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Watershed and Water Quality</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wild Horses</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wildland Fire</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wildlife and Fisheries</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

NLAA= May affect, not likely to adversely affect

LAA = May affect, likely to adversely affect

NE = No effect (No Adverse Modification for critical habitat)

NJ = No Jeopardy

## **7.6 Endangered Colorado River Fish Species- Bonytail (*Gila elegans*), Colorado pikeminnow (*Ptychocheilus lucius*), Humpback Chub (*Gila cypha*) Razorback sucker (*Xyrauchen texanus*)-Endangered**

### **7.6.1 Effects of Selected Alternative**

#### **Lands and Realty**

Activities under the lands and realty program include, management of sage-grouse PHMAs (Action 30), seasonal timing constraints (Action 31), restrictions which protect sage-grouse on new right-of-way corridors in greater sage-grouse habitat (Action 32), designing of powerlines and guy wires to minimize wildlife related impacts and constructed to the latest APLIC standards (Action 34, 35, 38), reclamation of sites (Action 35), prohibition of wind turbines in greater sage-grouse habitat (Action 36), avoidance of MET tower supports in PHMA (Action 38), retention of PHMA (Action 40), identification of sage-grouse habitat in mineral right areas or conservation easement areas (Action 41), acquisition of greater sage-grouse lands (Action 42), and consideration of non-mineral withdrawal actions to protect the species (Action 43).

No critical habitat for the endangered Colorado River fish species is specifically designated in Wyoming. The primary concern with the Colorado River fish species is water depletions, which occur in Wyoming, which may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species are anticipated.

#### **Livestock**

Livestock management actions described in the Amendment include habitat improvements for greater sage-grouse through the following: evaluation of opportunities to coordinate management plans and strategies under a single management plan with other agencies and stake holders and include sage-grouse management (Action 22), develop voluntary grazing strategies that improve sage-grouse populations and habitat (Action 45), adjustments to grazing management (Action 46, 139), sage-grouse habitat objectives and management would be incorporated into all grazing permit renewals (Action 48), progress toward achieving land health standards in sage-grouse PHMAs (Action 49), management of voluntarily relinquished permits or preferences (Action 50), coordinate with permittees/lessees/lessees to develop drought contingency plans (Action 52), evaluate and modify existing range improvements to improve sage-grouse habitat (Action 53), designate specific routes and timeframes for trailing which includes the avoidance of stopovers in sage-grouse leks (Action 54), promote balanced grazing between upland and riparian areas (Action 55), manage range improvements in a way that promotes sage-grouse and its habitats (Action 56), and evaluate and modify effects on sage-grouse from spring and seep developments such as pipelines and structures (Action 57).

No critical habitat for the endangered Colorado River fish species is specifically designated in Wyoming. The primary concern with the Colorado River fish species is water depletions which occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species are anticipated.

#### **Mineral Resources**

Minerals management actions described in the Amendment include the following: designing roads which minimize impacts in sage-grouse priority/PHMAs (Action 20), protective modifications to

lease stipulations within sage-grouse habitat (Action 58, 60, 61, 62, 63, 66, 68, 71, 72, 75, 77, 78, 80, 81). Other actions include, proposed withdrawal recommendations of some areas of PHMA from mineral exploration (Action 79, 139), minimization and avoidance of surface disturbances (Action 79), prohibit strip mining near sage-grouse (Action 76), prohibition of geophysical operations near sage-grouse, right-of-way and vehicle limitations, timing restrictions during breeding season (Action 60), working with permittees/lessees/lessees to apply sage-grouse conservation measures, distance limitations (Action 60, 66), requiring reclamation plans (Action 69a), minimization of habitat fragmentation (Action 62, 67), noise reduction, and minimize impacts to related sensitive resources.

No critical habitat for the endangered Colorado River fish species is specifically designated in Wyoming. The primary concern with the Colorado River fish species is water depletions which occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species are anticipated.

### **Recreation**

BLM SRPs and Forest Service Recreation SUAs would be continued to be allowed in sage-grouse PHMA, unless negative impacts to sage-grouse cannot be adequately mitigated (Action 82).

No critical habitat for the endangered Colorado River fish species is specifically designated in Wyoming. The primary concern with the Colorado River fish species is water depletions which occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species are anticipated.

### **Special Designations**

No new special designation actions are included in the Amendment (Action 84). As such, special management actions would not affect the endangered Colorado River fish.

### **Special Status Species**

Special status species management action include the collection of sage-grouse baseline data during project planning (Action 4), the modification of existing notices and plans to minimally impact PHMAs (Action 12), agencies will meet annually to coordinate and review sage-grouse data (Action 16), development of adaptive management strategies in support of the population management objectives for sage-grouse (Action 137), maintain at least 67% of the 2005-2008 sage-grouse PHMA population within the State of Wyoming (Action 138), and all existing planning decision will be retained unless vacated or modified by decisions in this plan amendment (Action 25).

No critical habitat for the endangered Colorado River fish species is specifically designated in Wyoming. The primary concern with the Colorado River fish species is water depletions which occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species are anticipated.

### **Travel Management**

Travel management actions included in the Amendment include, restricting motorized travel to existing roads and trails, until route designations are made during subsequent implementation of travel management planning (Action 18), designate routes with priority habitat and assess existing plans for consistency with sage-grouse conservation objectives (Action 19), non-sand dune portions of the Dune Pond Cooperative Management Area within sage-grouse PHMAs would be limited to

existing roads and trails (Action 86, 87), avoidance of new road construction within 1.9 miles of habitat (Action 88), restricting upgrades or new road construction within greater sage-grouse habitat (Action 89), development of new roads would be constructed to the absolute minimum value (Action 90), natural reclamation of roads and trails would be allowed in travel management plans within sage-grouse PHMAs, in appropriate situations where additional resource damage is not foreseeable (Action 91), when reseeding roads and trails within sage-grouse PHMAs, and appropriate seed mixtures would be used and the use of transplanted sagebrush would be considered (Action 92).

Changes to existing travel management would not affect the species. No critical habitat for the endangered Colorado River fish species is specifically designated in Wyoming. The primary concern with the Colorado River fish species is water depletions which occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species are anticipated.

### **Vegetation**

Vegetation management actions include, the application of seasonal restrictions for implementing vegetation management treatments and monitoring to benefit sage-grouse (Action 6), design range projects in a manner that minimizes potential for invasive species establishment and to monitor and treat invasive species associated with existing range improvements (Action 9), vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species (Action 11), work with various agencies and stake holders to coordinate and enhance Greater Sage-Grouse population and habitat (Action 22), improvement of vegetation composition and structure to benefit sage-grouse (Action 93, 95, 100, 107), restrict sagebrush activities that reduces sagebrush canopy to less than 15% (Action 94), development of recommended protocols and treatments to protect sage-grouse and sage-grouse habitat (Action 95, 96), deferment of livestock grazing on vegetative treatments to improve habitat (Action 97), recommendations on vegetative treatments (Action 98, 100, 101, 104, 105), reclamation or restoration of surface disturbances in sage-grouse habitats (Action 99, 100, 101, 103, 106), the use of native seeds which are certified weed free for fuels treatments (Action 100, 102, 103, 104), pest treatments to control Wyoming grasshopper and Mormon cricket outbreaks in Greater Sage-Grouse PHMAs (Action 108).

No critical habitat for the endangered Colorado River fish species is specifically designated in Wyoming. The primary concern with the Colorado River fish species is water depletions which occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species are anticipated.

### **Wild Horses**

Wild horse management actions include incorporating rangeland improvements for wild horses in Greater Sage-Grouse PHMAs (Action 109), consideration of sage-grouse PHMAs when evaluating AML's (Action 110), considering sage-grouse PHMAs when conducting land health assessments (Action 111), addressing direct and indirect effects to sage-grouse populations and habitats when conducting NEPA analysis for wild horse and burro management activities (Action 112), and to coordinate with all other resources to conduct land health assessments within all BLM HMAs (Action 113).

No critical habitat for the endangered Colorado River fish species is specifically designated in Wyoming. The primary concern with the Colorado River fish species is water depletions which

occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species are anticipated.

### **Wildland Fire**

Wildland fire management actions described in the Amendment includes, fire and fuels management which contributes to the protection and enhancement of sagebrush habitat that supports sage-grouse populations (Action 26), complete and continue to update Greater Sage-Grouse Landscape Wildfire & Invasive necessary to maintain sagebrush habitat to support interconnecting sage-grouse populations which includes identification of annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments (Action 27), implementation of coordinated inter-agency approach to fire restrictions for sage-grouse (Action 28), utilization of fire management strategies and tactics to achieve sage-grouse resource objectives (Action 29), fuel treatments would be implemented with an emphasis of protecting and enhancing PHMAs (Action 114), restoring burned areas within PHMAs (Action 115), post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants to return to suitable sage-grouse habitat (Action 117), avoiding treatments in areas containing old trees or persistent woodlands (Action 118), and management actions which benefit sage-grouse during fire suppression activities (Action 124).

No critical habitat for the endangered Colorado River fish species is specifically designated in Wyoming. The primary concern with the Colorado River fish species is water depletions which occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species are anticipated.

### **Wildlife and Fisheries**

Wildlife and fisheries management actions described in the Amendment include protocols for sage-grouse monitoring (Actions 1, 3, 125), development of landscape level restoration, conservation and maintenance strategies (Actions 8, 14, 15, 21) application of required design features (Action 10), addition of new sage-grouse habitat (Action 13), limitation of oil and gas development densities (Action 126), limitation of all surface disturbances to 5% per 640 acres (Action 127), mitigation protocol (Actions 5, 7, 128), prohibition of surface disturbing activities within 0.6 mile radius of occupied sage-grouse leks within PHMAs (Action 129), prohibition of surface disturbing activities within 0.25 mile radius of occupied sage-grouse leks outside PHMAs (Action 130), timing restrictions in breeding, nesting, and brooding PHMA (Actions 17, 131, 132, 133, 134), promote control of predators to sage-grouse or sage-grouse habitat (Action 135), and implementation of noise restrictions (Action 136).

No critical habitat for the endangered Colorado River fish species is specifically designated in Wyoming. The primary concern with the Colorado River fish species is water depletions which occur in Wyoming, may cause effects to the species downstream in their respective habitats. None of the changes in management as a result of actions included in the Amendment would cause water depletions or withdrawals. Therefore, no effects to the species are anticipated.

### **Cumulative Effects**

Cumulative impacts according to the ESA, Section 7 Consultation Handbook definition (USFWS 1998a) include the incremental impacts of future State, or private activities (i.e., excluding federal

activities), that are reasonably certain to occur within the action area of the Federal action subject to consultation.

Existing and proposed activities on non-federal lands in the planning area that have the potential to cumulatively affect the four endangered Colorado River fish species within the state of Wyoming which contain water depletions include but are not limited to the following:

- Water irrigation diversions
- Construction of Dams
- Consumptive water use
- Introductions of non-aquatic species
- Regulated water flow

Implementation of the Amendment would not change any potential effects to the four endangered Colorado River fish species that may result from current or projected future non-Federal actions.

### **7.6.2 Effects Determination**

The effects determination only addresses changes in management that will occur from the Amendment. Existing management conditions that would not be changed as a result of the Amendment have already been consulted on using agency approved method and will not be analyzed in this document.

No critical habitat for the four endangered Colorado River fish species is specifically designated in Wyoming. The USFWS, in accordance with the Upper Colorado River Endangered Fish Recovery Program, adopted a *de minimis* policy, which states that water-related activities in the Upper Colorado River Basin that result in less than 0.1 acre-foot per year of depletions in flow have no effect on the Colorado River endangered fish species, and thus do not require consultation for potential effects on those species. None of the management actions included in the Amendment would cause water depletions or withdrawals. Based on the above analysis of effects, implementation of the Amendment would have “**No Effect**” on the Endangered Colorado River fish or their designated critical habitat.

**Table 9- Summary and Determination of Effects for Endangered Colorado River fish**

<b>Program</b>	<b>Bridger Teton</b>	<b>Bridger Teton Critical</b>	<b>Pinedale</b>	<b>Pinedale Critical</b>	<b>Kemmerer</b>	<b>Kemmerer Critical</b>	<b>Rock Springs</b>	<b>Rock Springs Critical</b>	<b>Rawlins</b>	<b>Rawlins Critical</b>	<b>Medicine Bow</b>	<b>Medicine Bow Critical</b>	<b>Casper</b>	<b>Casper Critical</b>	<b>Thunder Basin</b>	<b>Thunder Basin Critical</b>	<b>Newcastle</b>	<b>Newcastle Critical</b>
<b>Lands and Realty</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Livestock</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Mineral Resources</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Recreation</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Special Designations</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Special Status Species</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Transportation and Access</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Vegetation</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Watershed and Water Quality</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wild Horses</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wildland Fire</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wildlife and Fisheries</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

NLAA= May affect, not likely to adversely affect

LAA = May affect, likely to adversely affect

NE = No effect (No Adverse Modification for critical habitat)

NJ = No Jeopardy

## **7.7 Kendall Warm Springs Dace (*Rhinichthys osculus thermalis*) - Endangered**

### **7.7.1 Effects of Selected Alternative**

#### **Lands and Realty**

Activities under the lands and realty program include, manage sage-grouse PHMAs (Action 30), seasonal timing constraints (Action 31), restrictions which protect sage-grouse on new right-of-way corridors in greater sage-grouse habitat (Action 32), designing of powerlines and guy wires to minimize wildlife related impacts and constructed to the latest APLIC standards (Action 34, 35, 38), reclamation of sites (Action 35), prohibition of wind turbines in Greater Sage-Grouse habitat (Action 36), avoidance of MET tower supports in PHMA (Action 38), retention of PHMA (Action 40), identification of sage-grouse habitat in mineral right areas or conservation easement areas (Action 41), acquisition of Greater Sage-Grouse lands (Action 42), and consideration of non-mineral withdrawal actions to protect the species (Action 43).

A Kendall Warm Springs Biological Unit Management Plan was approved by USFS in 1978. The area designated by the Biological Unit Management Plan encompasses 160 acres (64.75 ha). In 1969, the 160 acres were fenced to provide habitat protections. Then in 1977, the fenced area was identified as “essential habitat” for the dace. Boundaries include most of the small watershed and adjacent terrestrial communities which surrounds and directly affect the spring and stream section. The Bridger-Teton National Forest which covers the known population of dace maintains the fence (USFS 1990). Because the fence has been erected and protections for the species are already set in place, lands and realty management actions could not affect the species.

#### **Livestock**

Livestock management actions described in the Amendment include the following: evaluation of opportunities to coordinate management plans and strategies under a single management plan with other agencies and stake holders and include sage-grouse management (Action 22), develop voluntary grazing strategies that improve sage-grouse populations and habitat (Action 45), adjustments to grazing management (Action 46, 139), sage-grouse habitat objectives and management would be incorporated into all grazing permit renewals (Action 48), progress toward achieving land health standards in sage-grouse PHMAs (Action 49), management of voluntarily relinquished permits or preferences (Action 50), coordinate with permittees/lessees/lessees to develop drought contingency plans (Action 52), evaluate and modify existing range improvements to improve sage-grouse habitat (Action 53), designate specific routes and timeframes for trailing which includes the avoidance of stopovers in sage-grouse leks (Action 54), promote balanced grazing between upland and riparian areas (Action 55), manage range improvements in a way that promotes sage-grouse and its habitats (Action 56), and evaluate and modify effects on sage-grouse from spring and seep developments such as pipelines and structures (Action 57).

A Kendall Warm Springs Biological Unit Management Plan was approved by USFS in 1978. The area designated by the Biological Unit Management Plan encompasses 160 acres (64.75 ha). In 1969, the 160 acres were fenced to provide habitat protections. Then in 1977, the fenced area was identified as “essential habitat” for the dace. Boundaries include most of the small watershed and adjacent terrestrial communities which surrounds and directly affect the spring and stream section. The Bridger-Teton National Forest which covers the known population of dace maintains the fence (USFS 1990). Because the fence has been erected and protections for the species are already set in place, livestock management actions could not affect the species.

## **Mineral Resources**

Minerals management actions included in the Amendment include the following: designing roads which minimize impacts in sage-grouse PHMAs (Action 20), protective modifications to lease stipulations within sage-grouse habitat (Action 58, 60, 61, 62, 63, 66, 68, 71, 72, 75, 77, 78, 80, 81). Other actions include, proposed withdrawal recommendations of some areas of PHMA from mineral exploration (Action 79, 139), minimization and avoidance of surface disturbances (Action 79), prohibit strip mining near sage-grouse (Action 76), prohibition of geophysical operations near sage-grouse, right-of-way and vehicle limitations, timing restrictions during breeding season (Action 60), working with permittees/lessees/lessees to apply sage-grouse conservation measures, distance limitations (Action 60, 66), requiring reclamation plans (Action 69a), minimization of habitat fragmentation (Action 62, 67), noise reduction, and minimize impacts to related sensitive resources.

A Kendall Warm Springs Biological Unit Management Plan was approved by USFS in 1978. The area designated by the Biological Unit Management Plan encompasses 160 acres (64.75 ha). In 1969, the 160 acres were fenced to provide habitat protections. Then in 1977, the fenced area was identified as “essential habitat” for the dace. Boundaries include most of the small watershed and adjacent terrestrial communities which surrounds and directly affect the spring and stream section. The Bridger-Teton National Forest which covers the known population of dace maintains the fence (USFS 1990). Because the fence has been erected and protections for the species are already set in place, mineral resource management actions could not affect the species. In addition, in 1962, Kendall Warm Springs was withdrawn from locatable mineral entry (27 FR 8830, August 28, 1962).

## **Recreation**

Recreation management actions include BLM SRPs and Forest Service Recreation SUAs would be allowed in sage-grouse PHMA, unless negative impacts to sage-grouse cannot be adequately mitigated (Action 82).

The issuance of BLM SRP’s and Forest Service recreation SUA’s has already been consulted on during the planning process of their respective land use plans. However, the change in the Amendment and the area which needs to be consulted on, would be the closing of SRP’s and SUA’s in PHMAs sage-grouse habitats when negative impacts cannot be mitigated. A Kendall Warm Springs Biological Unit Management Plan was approved by USFS in 1978. The area designated by the Biological Unit Management Plan encompasses 160 acres (64.75 ha). In 1969, the 160 acres were fenced to provide habitat protections. Then in 1977, the fenced area was identified as “essential habitat” for the dace. Boundaries include most of the small watershed and adjacent terrestrial communities which surrounds and directly affect the spring and stream section. The Bridger-Teton National Forest which covers the known population of dace maintains the fence (USFS 1990). Recreationists are not allowed in the Kendall warm springs. Finally, because the fence has been erected and protections for the species are already set in place, recreation management actions could not affect the species.

## **Special Designations**

No new special designation actions are included in the Amendment (Action 84). As such, special management actions would not affect the Kendall warm springs dace.

## **Special Status Species**

Special status species management action include the collection of sage-grouse baseline data during project planning (Action 4), the modification of existing notices and plans to minimally impact PHMAs (Action 12), agencies will meet annually to coordinate and review sage-grouse data (Action

16), development of adaptive management strategies in support of the population management objectives for sage-grouse (Action 137), maintain at least 67% of the 2005-2008 sage-grouse PHMA population within the State of Wyoming (Action 138), and all existing planning decision will be retained unless vacated or modified by decisions in this plan amendment (Action 25).

A Kendall Warm Springs Biological Unit Management Plan was approved by USFS in 1978. The area designated by the Biological Unit Management Plan encompasses 160 acres (64.75 ha). In 1969, the 160 acres were fenced to provide habitat protections. Then in 1977, the fenced area was identified as “essential habitat” for the dace. Boundaries include most of the small watershed and adjacent terrestrial communities which surrounds and directly affect the spring and stream section. The Bridger-Teton National Forest which covers the known population of dace maintains the fence (USFS 1990). Because the fence has been erected and protections for the species are already set in place, special status species management actions could not affect the species.

### **Travel Management**

Travel management actions included in the Amendment, include restricting motorized travel to existing roads and trails, until route designations are made during subsequent implementation of travel management planning (Action 18), designate routes with priority habitat and assess existing plans for consistency with sage-grouse conservation objectives (Action 19), non-sand dune portions of the Dune Pond Cooperative Management Area within sage-grouse PHMAs would be limited to existing roads and trails (Action 86, 87), avoidance of new road construction within 1.9 miles of habitat (Action 88), restricting upgrades or new road construction within Greater Sage-Grouse habitat (Action 89), development of new roads would be constructed to the absolute minimum value (Action 90), natural reclamation of roads and trails would be allowed in travel management plans within sage-grouse PHMAs, in appropriate situations where additional resource damage is not foreseeable (Action 91), when reseeding roads and trails within sage-grouse PHMAs, appropriate seed mixtures would be used and the use of transplanted sagebrush would be considered (Action 92).

A Kendall Warm Springs Biological Unit Management Plan was approved by USFS in 1978. The area designated by the Biological Unit Management Plan encompasses 160 acres (64.75 ha). In 1969, the 160 acres were fenced to provide habitat protections. Then in 1977, the fenced area was identified as “essential habitat” for the dace. Boundaries include most of the small watershed and adjacent terrestrial communities which surrounds and directly affect the spring and stream section. The Bridger-Teton National Forest which covers the known population of dace maintains the fence (USFS 1990). Because the fence has been erected and protections for the species are already set in place, travel management actions could not affect the species.

### **Vegetation**

Vegetation management actions include, the application of seasonal restrictions for implementing vegetation management treatments and monitoring to benefit sage-grouse (Action 6), design range projects in a manner that minimizes potential for invasive species establishment and to monitor and treat invasive species associated with existing range improvements (Action 9), vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species (Action 11), work with various agencies and stake holders to coordinate and enhance Greater Sage-Grouse population and habitat (Action 22), improvement of vegetation composition and structure to benefit sage-grouse (Action 93, 95, 100, 107), restrict sagebrush activities that reduces sagebrush canopy to less than 15% (Action 94), development of recommended protocols and treatments to protect sage-grouse and sage-grouse habitat (Action 95, 96), deferment of livestock

grazing on vegetative treatments to improve habitat (Action 97), recommendations on vegetative treatments (Action 98, 100, 101, 104, 105), reclamation or restoration of surface disturbances in sage-grouse habitats (Action 99, 100, 101, 103, 106), the use of native seeds which are certified weed free for fuels treatments (Action 100, 102, 103, 104), pest treatments to control Wyoming grasshopper and Mormon cricket outbreaks in Greater Sage-Grouse PHMAs (Action 108).

The use of herbicide on noxious and invasive species (Action 11), vegetation treatments (Actions 93, 94, 95, 100, 102, 103, 104, 105, 107) and pest control treatments for Wyoming grass hopper and Mormon crickets (Action 108) have already been consulted on in their respective Land Use plans using agency approved protocols. However, the changes in the Amendment would direct managers to use updated sage-grouse information which would benefit the sage-grouse. For example, managers can better control insect outbreaks in PHMAs if the PHMAs are identified.

Vegetation management actions are not expected to directly impact Kendall warm spring's dace. A Kendall Warm Springs Biological Unit Management Plan was approved by USFS in 1978. The area designated by the Biological Unit Management Plan encompasses 160 acres (64.75 ha). In 1969, the 160 acres were fenced to provide habitat protections. Then in 1977, the fenced area was identified as "essential habitat" for the dace. Boundaries include most of the small watershed and adjacent terrestrial communities which surrounds and directly affect the spring and stream section. The Bridger-Teton National Forest which covers the known population of dace maintains the fence (USFS 1990). Because the fence has been erected and protections for the species are already set in place, vegetation management actions could not affect the species.

### **Wild Horses**

Wild horse management action include incorporating rangeland improvements for wild horses in greater sage-grouse PHMAs (Action 109), consideration of sage-grouse PHMAs when evaluating AML's (Action 110), considering sage-grouse PHMAs when conducting land health assessments (Action 111), addressing direct and indirect effects to sage-grouse populations and habitats when conducting NEPA analysis for wild horse and burro management activities (Action 112), and to coordinate with all other resources to conduct land health assessments within all BLM HMAs (Action 113).

Kendall warm spring's dace have not been identified within herd management areas within the planning area. Also, the Kendall Warm Springs Biological Unit Management Plan was approved by USFS in 1978. The area designated by the Biological Unit Management Plan encompasses 160 acres (64.75 ha). In 1969, the 160 acres were fenced to provide habitat protections. Then in 1977, the fenced area was identified as "essential habitat" for the dace. Boundaries include most of the small watershed and adjacent terrestrial communities which surrounds and directly affect the spring and stream section. The Bridger-Teton National Forest which covers the known population of dace maintains the fence (USFS 1990). Because the fence has been erected and protections for the species are already set in place, wild horse management actions could not affect the species.

### **Wildland Fire**

Wildland fire management actions described in the Amendment include, fire and fuels management which contributes to the protection and enhancement of sagebrush habitat that supports sage-grouse populations (Action 26), complete and continue to update Greater Sage-Grouse Landscape Wildfire & Invasive necessary to maintain sagebrush habitat to support interconnecting sage-grouse populations which includes identification of annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments

(Action 27), implementation of coordinated inter-agency approach to fire restrictions for sage-grouse (Action 28), utilization of fire management strategies and tactics to achieve sage-grouse resource objectives (Action 29), fuel treatments would be implemented with an emphasis of protecting and enhancing PHMAs (Action 114), restoring burned areas within PHMAs (Action 115), post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants to return to suitable sage-grouse habitat (Action 117), avoiding treatments in areas containing old trees or persistent woodlands (Action 118), and management actions which benefit sage-grouse during fire suppression activities (Action 124).

A Kendall Warm Springs Biological Unit Management Plan was approved by USFS in 1978. The area designated by the Biological Unit Management Plan encompasses 160 acres (64.75 ha). In 1969, the 160 acres were fenced to provide habitat protections. Then in 1977, the fenced area was identified as “essential habitat” for the dace. Boundaries include most of the small watershed and adjacent terrestrial communities which surrounds and directly affect the spring and stream section. The Bridger-Teton National Forest which covers the known population of dace maintains the fence (USFS 1990). Because the fence has been erected and protections for the species are already set in place, wild fire management actions could not affect the species.

### **Wildlife and Fisheries**

Wildlife and fisheries management actions described in the Amendment include protocols for sage-grouse monitoring (Actions 1, 3, 125), development of landscape level restoration, conservation and maintenance strategies (Actions 8, 14, 15, 21) application of required design features (Action 10), addition of new sage-grouse habitat (Action 13), limitation of oil and gas development densities (Action 126), limitation of all surface disturbances to 5% per 640 acres (Action 127), mitigation protocol (Actions 5, 7, 128), prohibition of surface disturbing activities within 0.6 mile radius of occupied sage-grouse leks within PHMAs (Action 129), prohibition of surface disturbing activities within 0.25 mile radius of occupied sage-grouse leks outside PHMAs (Action 130), timing restrictions in breeding, nesting, and brooding PHMA (Actions 17, 131, 132, 133, 134), promote control of predators to sage-grouse or sage-grouse habitat (Action 135), and implementation of noise restrictions (Action 136).

A Kendall Warm Springs Biological Unit Management Plan was approved by USFS in 1978. The area designated by the Biological Unit Management Plan encompasses 160 acres (64.75 ha). In 1969, the 160 acres were fenced to provide habitat protections. Then in 1977, the fenced area was identified as “essential habitat” for the dace. Boundaries include most of the small watershed and adjacent terrestrial communities which surrounds and directly affect the spring and stream section. The Bridger-Teton National Forest which covers the known population of dace maintains the fence (USFS 1990). Because the fence has been erected and protections for the species are already set in place, wildlife and fisheries management actions could not affect the species.

### **Cumulative Effects**

Cumulative impacts according to the ESA, Section 7 Consultation Handbook definition (USFWS 1998a) include the incremental impacts of future State, or private activities (i.e., excluding federal activities), that are reasonably certain to occur within the action area of the Federal action subject to consultation.

Because the entire known population of the Kendall Warm Springs dace is located entirely on federal surface lands, there is little or no potential for direct cumulative effects from future state, local, or private actions to affect the species.

### 7.7.2 Effects Determination

A Kendall Warm Springs Biological Unit Management Plan was approved by USFS in 1978. The area designated by the Biological Unit Management Plan encompasses 160 acres (64.75 ha). In 1969, the 160 acres were fenced to provide habitat protections. Then in 1977, the fenced area was identified as “essential habitat” for the dace. Boundaries include most of the small watershed and adjacent terrestrial communities which surrounds and directly affect the spring and stream section. The Bridger-Teton National Forest which covers the known population of dace maintains the fence (USFS 1990). Because the fence has been erected and protections for the species are already set in place, implementation of the Amendment would have “**No Effect**” on the Kendall warm springs dace, within the Bridger Teton, Kemmerer, Rawlins, Medicine-Bow, Pinedale, Casper, Thunder Basin and Newcastle Field Offices.

**Table 10- Summary and Determination of Effects for Kendall Warm Springs Dace**

<b>Program</b>	<b>Bridger Teton</b>	<b>Pinedale</b>	<b>Kemmerer</b>	<b>Rock Springs</b>	<b>Rawlins</b>	<b>Medicine Bow</b>	<b>Casper</b>	<b>Thunder Basin</b>	<b>Newcastle</b>
<b>Lands and Realty</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Livestock</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Mineral Resources</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Recreation</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Special Designations</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Special Status Species</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Transportation and Access</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Vegetation</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Watershed and Water Quality</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wild Horses</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wildland Fire</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wildlife and Fisheries</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE

NLAA= May affect, not likely to adversely affect

LAA = May affect, likely to adversely affect

NE = No effect

NJ = No Jeopardy

## **7.8 Wyoming Toad (*Bufo baxteri*) - Endangered**

### **7.8.1 Effects of Selected Alternative**

#### **Lands and Realty**

Activities under the lands and realty program described in the Amendment include, management of sage-grouse PHMAs (Action 30), seasonal timing constraints (Action 31), restrictions which protect sage-grouse on new right-of-way corridors in greater sage-grouse habitat (Action 32), designing of powerlines and guy wires to minimize wildlife related impacts and constructed to the latest APLIC standards (Action 34, 35, 38), reclamation of sites (Action 35), prohibition of wind turbines in Greater Sage-Grouse habitat (Action 36), avoidance of MET tower supports in PHMA (Action 38), retention of PHMA (Action 40), identification of sage-grouse habitat in mineral right areas or conservation easement areas (Action 41), acquisition of Greater Sage-Grouse lands (Action 42), and consideration of non-mineral withdrawal actions to protect the species (Action 43).

Because habitat for the Wyoming toad and the sage-grouse do not overlap, actions included in the Amendment would not affect the Wyoming toad. The Wyoming toad is found in the floodplains of the Big and Little Laramie rivers where sage-grouse and habitat and populations have not been observed.

### **Livestock**

Livestock management actions described in the Amendment include the following: evaluation of opportunities to coordinate management plans and strategies under a single management plan with other agencies and stake holders and include sage-grouse management (Action 22), develop voluntary grazing strategies that improve sage-grouse populations and habitat (Action 45), adjustments to grazing management (Action 46, 139), sage-grouse habitat objectives and management would be incorporated into all grazing permit renewals (Action 48), progress toward achieving land health standards in sage-grouse PHMAs (Action 49), management of voluntarily relinquished permits or preferences (Action 50), coordinate with permittees/lessees/lessees to develop drought contingency plans (Action 52), evaluate and modify existing range improvements to improve sage-grouse habitat (Action 53), designate specific routes and timeframes for trailing which includes the avoidance of stopovers in sage-grouse leks (Action 54), promote balanced grazing between upland and riparian areas (Action 55), manage range improvements in a way that promotes sage-grouse and its habitats (Action 56), and evaluate and modify effects on sage-grouse from spring and seep developments such as pipelines and structures (Action 57).

Because habitat for the Wyoming toad and the sage-grouse do not overlap, actions included in the Amendment would not affect the Wyoming toad. The Wyoming toad is found in the floodplains of the Big and Little Laramie rivers where sage-grouse and habitat and populations have not been observed.

### **Mineral Resources**

Minerals management actions described in the Amendment include the following: designing roads which minimize impacts in sage-grouse PHMAs (Action 20), protective modifications to lease stipulations within sage-grouse habitat (Action 58, 60, 61, 62, 63, 66, 68, 71, 72, 75, 77, 78, 80, 81). Other actions include, proposed withdrawal recommendations of some areas of PHMA from mineral exploration (Action 79, 139), minimization and avoidance of surface disturbances (Action 79), prohibit strip mining near sage-grouse (Action 76), prohibition of geophysical operations near sage-grouse, right-of-way and vehicle limitations, timing restrictions during breeding season (Action 60), working with permittees/lessees/lessees to apply sage-grouse conservation measures, distance limitations (Action 60, 66), requiring reclamation plans (Action 69a), minimization of habitat fragmentation (Action 62, 67), noise reduction, and minimize impacts to related sensitive resources.

Because habitat for the Wyoming toad and the sage-grouse do not overlap, actions included in the Amendment would not affect the Wyoming toad. The Wyoming toad is found in the floodplains of the Big and Little Laramie rivers where sage-grouse populations and habitat have not been observed.

### **Recreation**

BLM SRPs and Forest Service Recreation SUAs would be continued to be allowed in sage-grouse PHMA, unless negative impacts to sage-grouse cannot be adequately mitigated (Action 82).

Because habitat for the Wyoming toad and the sage-grouse do not overlap, actions included in the Amendment would not affect the Wyoming toad. The Wyoming toad is found in the floodplains of the Big and Little Laramie rivers where sage-grouse populations and habitat have not been observed.

### **Special Designations**

No new special designation actions are included in the Amendment (Action 84). As such, special management actions would not affect the Wyoming toad.

Because habitat for the Wyoming toad and the sage-grouse do not overlap, actions included in the Amendment would not affect the Wyoming toad. The Wyoming toad is found in the floodplains of the Big and Little Laramie rivers where sage-grouse populations and habitat have not been observed.

### **Special Status Species**

No new special designation actions are included in RMP (Action 84). As such, special management actions would not affect Wyoming toad. In addition, because habitat for the Wyoming toad and the sage-grouse do not overlap, actions included in the Amendment would not affect the Wyoming toad. The Wyoming toad is found in the floodplains of the Big and Little Laramie rivers where sage-grouse populations and habitat have not been observed.

### **Travel Management**

Travel management actions included in the RMP, include restricting motorized travel to existing roads and trails, until route designations are made during subsequent implementation of travel management planning (Action 18), designate routes with priority habitat and assess existing plans for consistency with sage-grouse conservation objectives (Action 19), non-sand dune portions of the Dune Pond Cooperative Management Area within sage-grouse PHMAs would be limited to existing roads and trails (Action 86, 87), avoidance of new road construction within 1.9 miles of habitat (Action 88), restricting upgrades or new road construction within greater sage-grouse habitat (Action 89), development of new roads would be constructed to the absolute minimum value (Action 90), natural reclamation of roads and trails would be allowed in travel management plans within sage-grouse PHMAs, in appropriate situations where additional resource damage is not foreseeable (Action 91), when reseeding roads and trails within sage-grouse PHMAs, appropriate seed mixtures would be used and the use of transplanted sagebrush would be considered (Action 92).

Because habitat for the Wyoming toad and the sage-grouse do not overlap, actions included in the Amendment would not affect the Wyoming toad. The Wyoming toad is found in the floodplains of the Big and Little Laramie rivers where sage-grouse populations and habitat have not been observed.

### **Vegetation**

Vegetation management actions include, the application of seasonal restrictions for implementing vegetation management treatments and monitoring to benefit sage-grouse (Action 6), design range projects in a manner that minimizes potential for invasive species establishment and to monitor and treat invasive species associated with existing range improvements (Action 9), vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species (Action 11), work with various agencies and stake holders to coordinate and enhance Greater Sage-Grouse population and habitat (Action 22), improvement of vegetation composition and structure to benefit sage-grouse (Action 93, 95, 100, 107), restrict sagebrush activities that reduces sagebrush canopy to less than 15% (Action 94), development of recommended protocols and treatments to protect sage-grouse and sage-grouse habitat (Action 95, 96), deferment of livestock grazing on vegetative treatments to improve habitat (Action 97), recommendations on vegetative treatments (Action 98, 100, 101, 104, 105), reclamation or restoration of surface disturbances in sage-grouse habitats (Action 99, 100, 101, 103, 106), the use of native seeds which are certified weed free for fuels treatments (Action 100, 102, 103, 104), pest treatments to control Wyoming grasshopper and Mormon cricket outbreaks in Greater Sage-Grouse PHMAs (Action 108).

Because habitat for the Wyoming toad and the sage-grouse do not overlap, actions included in the Amendment would not affect the Wyoming toad. The Wyoming toad is found in the floodplains of the Big and Little Laramie rivers where sage-grouse populations and habitat have not been observed.

### **Wild Horses**

Wild horse management actions include incorporating rangeland improvements for wild horses in Greater Sage-Grouse PHMAs (Action 109), consideration of sage-grouse PHMAs when evaluating AML's (Action 110), considering sage-grouse PHMAs when conducting land health assessments (Action 111), addressing direct and indirect effects to sage-grouse populations and habitats when conducting NEPA analysis for wild horse and burro management activities (Action 112), and to coordinate with all other resources to conduct land health assessments within all BLM HMAs (Action 113).

Because habitat for the Wyoming toad and the sage-grouse do not overlap, actions included in the Amendment would not affect the Wyoming toad. The Wyoming toad is found in the floodplains of the Big and Little Laramie rivers where sage-grouse populations and habitat have not been observed.

### **Wildland Fire**

Wildland fire management actions described in the Amendment include, fire and fuels management which contributes to the protection and enhancement of sagebrush habitat that supports sage-grouse populations (Action 26), complete and continue to update sage-grouse Landscape Wildfire & Invasive necessary to maintain sagebrush habitat to support interconnecting sage-grouse populations which includes identification of annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments (Action 27), implementation of coordinated inter-agency approach to fire restrictions for sage-grouse (Action 28), utilization of fire management strategies and tactics to achieve sage-grouse resource objectives (Action 29), fuel treatments would be implemented with an emphasis of protecting and enhancing PHMAs (Action 114), restoring burned areas within PHMAs (Action 115), post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants to return to suitable sage-grouse habitat (Action 117), avoiding treatments in areas containing old trees or persistent woodlands (Action 118), and management actions to benefit sage-grouse during fire suppression activities (Action 124).

Because habitat for the Wyoming toad and the sage-grouse do not overlap, actions included in the Amendment would not affect the Wyoming toad. The Wyoming toad is found in the floodplains of the Big and Little Laramie rivers where sage-grouse populations and habitat have not been observed.

### **Wildlife and Fisheries**

Wildlife and fisheries management actions described in the Amendment include protocols for sage-grouse monitoring (Actions 1, 3, 125), development of landscape level restoration, conservation and maintenance strategies (Actions 8, 14, 15, 21) application of required design features (Action 10), addition of new sage-grouse habitat (Action 13), limitation of oil and gas development densities (Action 126), limitation of all surface disturbances to 5% per 640 acres (Action 127), mitigation protocol (Actions 5, 7, 128), prohibition of surface disturbing activities within 0.6 mile radius of occupied sage-grouse leks within PHMAs (Action 129), prohibition of surface disturbing activities within 0.25 mile radius of occupied sage-grouse leks outside PHMAs (Action 130), timing restrictions in breeding, nesting, and brooding PHMA (Actions 17, 131, 132, 133, 134), promote control of predators to sage-grouse or sage-grouse habitat (Action 135), and implementation of noise restrictions (Action 136).

Because habitat for the Wyoming toad and the sage-grouse do not overlap, actions included in the Amendment would not affect the Wyoming toad. The Wyoming toad is found in the floodplains of the Big and Little Laramie rivers where sage-grouse populations and habitat have not been observed.

### **Cumulative Effects**

Cumulative impacts according to the ESA, Section 7 Consultation Handbook definition (USFWS 1998a) include the incremental impacts of future State, or private activities (i.e., excluding federal activities), that are reasonably certain to occur within the action area of the Federal action subject to consultation.

Existing and proposed activities on non-federal lands in the planning area that have the potential to cumulatively affect the species include but are not limited to the following:

- Non-Federal oil and gas and related energy development
- Water depletions from irrigation diversions and dams
- Livestock grazing on private lands
- Subdivision development along rivers
- Recreation along rivers and river corridors (including camping, rafting, and hunting)
- Transmission lines

Implementation of the Amendment would not change any potential effects to the Wyoming toad that may result from current or projected future non-Federal actions.

### **7.8.2 Effects Determination**

The effects determination only addresses changes in management that would occur from the Amendment. Existing management conditions that would not be changed as a result of the Amendment have already been consulted on using agency approved methods and will not be analyzed in this document.

Because habitat for the Wyoming toad and the sage-grouse do not overlap, actions included in the Amendment would not affect the Wyoming toad. The Wyoming toad is found in the floodplains of the Big and Little Laramie rivers where sage-grouse and habitat have not been observed. As a result, implementation of the Amendment would have “**No Effect**” on the Wyoming toad within the Bridger Teton, Pinedale, Kemmerer, Rawlins, Medicine-Bow, Casper, Rock Springs, Thunder Basin and Newcastle Field Offices.

**Table 11- Summary and Determination of Effects for the Wyoming Toad**

<b>Program</b>	<b>Bridger Teton</b>	<b>Pinedale</b>	<b>Kemmerer</b>	<b>Rock Springs</b>	<b>Rawlins</b>	<b>Medicine Bow</b>	<b>Casper</b>	<b>Thunder Basin</b>	<b>Newcastle</b>
<b>Lands and Realty</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Livestock</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Mineral Resources</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Recreation</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Special Designations</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Special Status Species</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Transportation and Access</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Vegetation</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Watershed and Water Quality</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wild Horses</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wildland Fire</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wildlife and Fisheries</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE

NLAA= May affect, not likely to adversely affect

LAA = May affect, likely to adversely affect

NE = No effect

NJ = No Jeopardy

## **7.9 Black-Footed Ferret (*Mustela nigripes*) – Endangered, Experimental**

### **7.9.1 Effects of Selected Alternative**

#### **Lands and Realty**

Activities under the lands and realty program include, management sage-grouse PHMAs (Action 30), seasonal timing constraints (Action 31), restrictions which protect sage-grouse on new right-of-way corridors in Greater Sage-Grouse habitat (Action 32), designing of powerlines and guy wires to minimize wildlife related impacts and constructed to the latest APLIC standards (Action 34, 35, 38), reclamation of sites (Action 35), prohibition of wind turbines in Greater Sage-Grouse habitat (Action 36), avoidance of MET tower supports in PHMA (Action 38), retention of PHMA (Action 40), identification of sage-grouse habitat in mineral right areas or conservation easement areas (Action 41), acquisition of Greater Sage-Grouse lands (Action 42), and consideration of non-mineral withdrawal actions to protect the species (Action 43).

Because only experimental populations of black footed ferret exist in the state of Wyoming, lands and realty management actions would not affect extirpated endangered black footed ferret (USFWS 2013). However, changes in some lands and realty management actions included in the Amendment may inadvertently protect the experimental populations located in the Rawlins field office through land acquisitions, retentions, and reclamations.

### **Livestock**

Livestock management actions described in the Amendment include habitat improvements for Greater Sage-Grouse through the following: evaluation of opportunities to coordinate management plans and strategies under a single management plan with other agencies and stake holders and include sage-grouse management (Action 22), develop voluntary grazing strategies that improve sage-grouse populations and habitat (Action 45), adjustments to grazing management (Action 46, 139), sage-grouse habitat objectives and management would be incorporated into all grazing permit renewals (Action 48), progress toward achieving land health standards in sage-grouse PHMAs (Action 49), management of voluntarily relinquished permits or preferences (Action 50), coordinate with permittees/lessees/lessees to develop drought contingency plans (Action 52), evaluate and modify existing range improvements to improve sage-grouse habitat (Action 53), designate specific routes and timeframes for trailing which includes the avoidance of stopovers in sage-grouse leks (Action 54), promote balanced grazing between upland and riparian areas (Action 55), manage range improvements in a way that promotes sage-grouse and its habitats (Action 56), and evaluate and modify effects on sage-grouse from spring and seep developments such as pipelines and structures (Action 57).

Because only experimental populations of black footed ferret exist in the state of Wyoming, livestock grazing management actions would not affect extirpated endangered black footed ferret (USFWS 2013). However, changes in some livestock management actions included in the Amendment may inadvertently protect the experimental populations located in the Rawlins field office through the development of a drought contingency plan (Action 52), which could reduce grazing pressure in black footed ferret habitats and the promotion of balanced grazing (Action 55) which could also alleviate heavy grazing impact in ferret habitat.

### **Mineral Resources**

Minerals management actions described in the Amendment include the following: designing roads which minimize impacts in sage-grouse PHMAs (Action 20), protective modifications to lease stipulations within sage-grouse habitat (Action 58, 60, 61, 62, 63, 66, 71, 72, 75, 77, 78, 80, 81). Other actions include, proposed withdrawal recommendations of some areas of PHMA from mineral exploration (Action 79, 139), minimization and avoidance of surface disturbances (Action 79), prohibit strip mining near sage-grouse (Action 76), prohibition of geophysical operations near sage-grouse, right-of-way and vehicle limitations, timing restrictions during breeding season (Action 60), working with permittees/lessees/lessees to apply sage-grouse conservation measures, distance limitations (Action 60, 66) minimization of habitat fragmentation (Action 62, 67), noise reduction, and minimize impacts to related sensitive resources.

Because only experimental populations of black footed ferret exist in the state of Wyoming, minerals resource management actions would not affect extirpated endangered black footed ferret (USFWS 2013). However, some management actions may indirectly benefit the experimental populations. Beneficial actions may include limitations or exclusion of road developments, minimization and avoidance of surface disturbances, minimization of habitat fragmentation, and implementing

measures to reduce pollutants. These actions could reduce overall impacts and limit road access within or leading to black footed ferret habitat which would benefit the species.

### **Recreation**

Recreation management actions describe that BLM SRPs and Forest Service Recreation SUAs would be continued to be allowed in sage-grouse PHMA, unless negative impacts to sage-grouse cannot be adequately mitigated (Action 82).

Because only experimental populations of black footed ferret exist in the state of Wyoming, recreation management actions would not affect extirpated endangered black footed ferret (USFWS 2013). The issuance of BLM SRP's and Forest Service recreation SUA's has already been consulted on during the planning process of their respective land use plans. However, the change in this document and the area which needs to be consulted, would be the closing of SRP's and SUA's in PHMAs when negative impacts cannot be mitigated. The closing of any BLM SRP or Forest Service Recreation SUA in PHMAs would only benefit black footed ferret by reducing recreational impacts in experimental populations.

### **Special Designations**

No new special designation actions are included in the Amendment (Action 84). As such, special management actions would not affect the Black footed ferret.

### **Special Status Species**

Special status species management actions include the collection of sage-grouse baseline data during project planning (Action 4), the modification of existing notices and plans to minimally impact PHMAs (Action 12), agencies will meet annually to coordinate and review sage-grouse data (Action 16), development of adaptive management strategies in support of the population management objectives for sage-grouse (Action 137), maintain at least 67% of the 2005-2008 sage-grouse PHMA population within the State of Wyoming (Action 138), and all existing planning decision will be retained unless vacated or modified by decisions in this plan amendment (Action 25).

Because only experimental populations of black footed ferret exist in the state of Wyoming, special status species management actions would not affect extirpated endangered black footed ferret (USFWS 2013). Action 12 which includes the modification of existing notices and plans to minimally impact PHMAs may indirectly benefit the experimental populations where the species habitats overlap. Other actions which only include greater planning and coordination for the sage-grouse would not affect the black footed ferret.

### **Travel Management**

Travel management actions described in the Amendment, include restricting motorized travel to existing roads and trails, until route designations are made during subsequent implementation of travel management planning (Action 18), designate routes with priority habitat and assess existing plans for consistency with sage-grouse conservation objectives (Action 19), non-sand dune portions of the Dune Pond Cooperative Management Area within sage-grouse PHMAs would be limited to existing roads and trails (Action 86, 87), avoidance of new road construction within 1.9 miles of habitat (Action 88), restricting upgrades or new road construction within greater sage-grouse habitat (Action 89), development of new roads would be constructed to the absolute minimum value (Action 90), natural reclamation of roads and trails would be allowed in travel management plans within sage-grouse PHMAs, in appropriate situations where additional resource damage is not foreseeable

(Action 91), when reseeding roads and trails within sage-grouse PHMAs, appropriate seed mixtures would be used and the use of transplanted sagebrush would be considered (Action 92).

Because only experimental populations of black footed ferret exist in the state of Wyoming, travel management actions would not affect extirpated endangered black footed ferret (USFWS 2013). Travel management actions such as the minimization, reclamation, avoidance, restriction and closure of various roads may inadvertently benefit the experimental populations where habitat with black footed ferret and sage-grouse overlap. Restricting road access would protect the experimental populations from negative impacts such damage to burrows, loss of forage, harassment, noise, and direct mortality.

### **Vegetation**

Vegetation management actions include, the application of seasonal restrictions for implementing vegetation management treatments and monitoring to benefit sage-grouse (Action 6), design range projects in a manner that minimizes potential for invasive species establishment and to monitor and treat invasive species associated with existing range improvements (Action 9), vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species (Action 11), work with various agencies and stake holders to coordinate and enhance Greater Sage-Grouse population and habitat (Action 22), improvement of vegetation composition and structure to benefit sage-grouse (Action 93, 95, 100, 107), restrict sagebrush activities that reduces sagebrush canopy to less than 15% (Action 94), development of recommended protocols and treatments to protect sage-grouse and sage-grouse habitat (Action 95, 96), deferment of livestock grazing on vegetative treatments to improve habitat (Action 97), recommendations on vegetative treatments (Action 98, 100, 101, 104, 105), reclamation or restoration of surface disturbances in sage-grouse habitats (Action 99, 100, 101, 103, 106), the use of native seeds which are certified weed free for fuels treatments (Action 100, 102, 103, 104), pest treatments to control Wyoming grasshopper and Mormon cricket outbreaks in Greater Sage-Grouse PHMAs (Action 108).

Because only experimental populations of black footed ferret exist in the state of Wyoming, vegetation management actions would not affect extirpated endangered black footed ferret (USFWS 2013). The use of herbicide on noxious and invasive species (Action 11), vegetation treatments (Actions 93, 94, 95, 100, 102, 103, 104, 105, 107) and pest control treatments for Wyoming grass hopper and Mormon crickets (Action 108) have already been consulted on in their respective Land Use Plans using agency approved protocols. However, the changes in the amendment would direct managers to use updated sage-grouse information which would benefit the sage-grouse. For example, managers can better control insect outbreaks in PHMAs if the PHMAs are identified.

Management actions that minimize the potential for the spread of noxious and invasive weeds (Action 9), deferment of livestock (Action 97), and the improvement of vegetative composition (Action 93, 95, 100, 107) may inadvertently benefit the experimental populations of the black footed ferret through improve habitat conditions. No negative effects are anticipated.

### **Wild Horses**

Wild horse management action include incorporating rangeland improvements for wild horses in greater sage-grouse PHMAs (Action 109), consideration of sage-grouse PHMAs when evaluating AML's (Action 110), considering sage-grouse PHMAs when conducting land health assessments (Action 111), addressing direct and indirect effects to sage-grouse populations and habitats when conducting NEPA analysis for wild horse and burro management activities (Action 112), and to

coordinate with all other resources to conduct land health assessments within all BLM HMAs (Action 113).

Because only experimental populations of black footed ferret exist in the state of Wyoming, wild horse management actions would not affect extirpated endangered black footed ferret (USFWS 2013). Experimental populations of black footed ferret have not been identified in herd management areas within the planning area. Wild horse management actions include measures which are meant to protect and preserve sage-grouse habitat. As a result, wild horse management actions are not likely to affect experimental populations of black footed ferret.

### **Wildland Fire**

Wildland fire management actions described in the Amendment include, fire and fuels management which contributes to the protection and enhancement of sagebrush habitat that supports sage-grouse populations (Action 26), complete and continue to update Greater Sage-Grouse Landscape Wildfire & Invasive necessary to maintain sagebrush habitat to support interconnecting sage-grouse populations which includes identification of annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments (Action 27), implementation of coordinated inter-agency approach to fire restrictions for sage-grouse (Action 28), utilization of fire management strategies and tactics to achieve sage-grouse resource objectives (Action 29), fuel treatments would be implemented with an emphasis of protecting and enhancing PHMAs (Action 114), restoring burned areas within PHMAs (Action 115), post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants to return to suitable sage-grouse habitat (Action 117), avoiding treatments in areas containing old trees or persistent woodlands (Action 118), and management actions to benefit sage-grouse during fire suppression activities (Action 124).

Because only experimental populations of black footed ferret exist in the state of Wyoming, wildland fire management actions would not affect extirpated endangered black footed ferret (USFWS 2013). Wildland fire management actions intended to protect sage-grouse may occur in the same habitats used by the experimental populations of the black footed ferret. As such, activities listed under this management program would likely also benefit black footed ferret because they can be found in similar habitats.

### **Wildlife and Fisheries**

Wildlife and fisheries management actions described in the Amendment include protocols for sage-grouse monitoring (Actions 1, 3, 125), development of landscape level restoration, conservation and maintenance strategies (Actions 8, 14, 15, 21) application of required design features (Action 10), addition of new sage-grouse habitat (Action 13), limitation of oil and gas development densities (Action 126), limitation of all surface disturbances to 5% per 640 acres (Action 127), mitigation protocol (Actions 5,7,128), prohibition of surface disturbing activities within 0.6 mile radius of occupied sage-grouse leks within PHMAs (Action 129), prohibition of surface disturbing activities within 0.25 mile radius of occupied sage-grouse leks outside PHMAs (Action 130), timing restrictions in breeding, nesting, and brooding PHMA (Actions 17,131, 132, 133, 134), promote control of predators to sage-grouse or sage-grouse habitat (Action 135), and implementation of noise restrictions (Action 136).

Because only experimental populations of black footed ferret exist in the state of Wyoming, wildlife and fisheries management actions would not affect extirpated endangered black footed ferret (USFWS 2013). The changes to existing wildlife and fisheries management listed above are meant

to provide additional protective measures for the greater sage-grouse. These management actions may inadvertently benefit the species. Beneficial actions may include restrictions on oil and mineral developments, restrictions of surface disturbing activities, and increased mitigation protocol. These actions could benefit black-footed ferret and prey by protecting habitat and reducing human access, potentially reducing recreational shooting. No negative effects are anticipated.

### **Cumulative Effects**

Cumulative impacts according to the ESA, Section 7 Consultation Handbook definition (USFWS 1998a) include the incremental impacts of future State, or private activities (i.e., excluding federal activities), that are reasonably certain to occur within the action area of the Federal action subject to consultation.

Existing and proposed activities on non-federal lands in the planning area that have the potential to cumulatively affect the species include but are not limited to the following:

- Non-Federal oil and gas and related energy development
- Water depletions from irrigation diversions and dams
- Livestock grazing on private lands
- Existing and proposed wind farms
- Timber harvesting on private lands
- Subdivision development
- Recreation
- Coal mine operations
- Transmission lines
- Seismic exploration
- Municipal dump expansions

Implementation of the Amendment would not change any potential effects to the black footed ferret that may result from current or projected future non-Federal actions.

### **7.9.2 Effects Determination**

The effects determination only addresses changes in management that would occur from the Amendment. Existing management conditions that would not be changed as a result of the Amendment have already been consulted on using agency approved methods and will not be analyzed in this document.

On March 6, 2013, the U.S. Fish and Wildlife Service (Service) issued a letter acknowledging 'block clearance' for the State of Wyoming in response to a request from the Wyoming Game and Fish Department. This letter provides acknowledgement that the likelihood of identifying wild ferrets in Wyoming, outside of those resulting from reintroductions, is distinctly minimal. The reintroductions occurred in the Rawlins field office. The letter, and the analysis provided by the Wyoming Game and Fish Department, notes that despite improvements in knowledge, technology, survey techniques, and use of reward programs, there have been no verified reports of any extant black-footed ferret individuals or populations in any prairie dog complex since the discovery of a wild black-footed ferret population in 1981. It further states that it is unlikely that black-footed ferret populations in Wyoming have persisted through drastic reductions of prairie dog complexes, and that the black-footed ferret populations have not rebounded as prairie dog complexes have begun to expand again. Consequently, the Service no longer recommends surveys for the black-footed ferrets in either black- or white-tailed prairie dog towns in the State of Wyoming.

Because it has been determined by the USFWS (USFWS 2013), the likelihood of identifying wild ferrets in Wyoming, outside of those resulting from reintroductions is minimal, implementation of the Amendment, would have “**No Effect**” on the extirpated, non-experimental populations of black footed ferret within the Bridger Teton, Pinedale, Kemmerer, Rawlins, Medicine-Bow, Casper, Rock Springs, Thunder Basin and Newcastle Field Offices.

Management actions included in the Amendment are largely supportive in nature, and guide or advise other program actions and activities in a manner conducive to maintaining and/or promoting population growth and habitat for the sage-grouse. Management actions included in the Amendment such as increased monitoring, data collection, greater coordination and review, and noise, distance, and timing restrictions, would have no effect on the black footed ferret. In addition, some of the measures meant to protect sage-grouse may also indirectly protect the black footed ferret. Protective measures include, surface restricting actions, retentions, reclamations, road closures, reductions of pollutants, reduction of impacts and deferment of livestock grazing. Furthermore, protective conservation measures found in the Amendment and maintained as part of the existing BLM and FS RMPs would further reduce the potential for adverse effects for the species. No actions included in the Amendment are anticipated to negatively affect the black footed ferret. Based on the above analysis of effects, implementation of the Wyoming 9 plan Amendment would cause, “**No Jeopardy**” for the experimental Black footed ferret populations located within the Rawlins Field Office.

**Table 12-Summary and Determination of Effects for the Black-footed ferret**

<b>Program</b>	<b>Bridger Teton</b>	<b>Pinedale</b>	<b>Kemmerer</b>	<b>Rock Springs</b>	<b>Rawlins Endangered</b>	<b>Rawlins Experimental</b>	<b>Medicine Bow</b>	<b>Casper</b>	<b>Thunder Basin</b>	<b>Newcastle</b>
<b>Lands and Realty</b>	NE	NE	NE	NE	NE	NJ	NE	NE	NE	NE
<b>Livestock</b>	NE	NE	NE	NE	NE	NJ	NE	NE	NE	NE
<b>Mineral Resources</b>	NE	NE	NE	NE	NE	NJ	NE	NE	NE	NE
<b>Recreation</b>	NE	NE	NE	NE	NE	NJ	NE	NE	NE	NE
<b>Special Designations</b>	NE	NE	NE	NE	NE	NJ	NE	NE	NE	NE
<b>Special Status Species</b>	NE	NE	NE	NE	NE	NJ	NE	NE	NE	NE
<b>Transportation and Access</b>	NE	NE	NE	NE	NE	NJ	NE	NE	NE	NE
<b>Vegetation</b>	NE	NE	NE	NE	NE	NJ	NE	NE	NE	NE
<b>Watershed and Water Quality</b>	NE	NE	NE	NE	NE	NJ	NE	NE	NE	NE
<b>Wild Horses</b>	NE	NE	NE	NE	NE	NJ	NE	NE	NE	NE
<b>Wildland Fire</b>	NE	NE	NE	NE	NE	NJ	NE	NE	NE	NE
<b>Wildlife and Fisheries</b>	NE	NE	NE	NE	NE	NJ	NE	NE	NE	NE

NLAA= May affect, not likely to adversely affect

LAA = May affect, likely to adversely affect

NE = No effect

NJ = No Jeopardy

## **7.10 Canada Lynx (*Lynx canadensis*) - Threatened**

### **7.10.1 Effects of Selected Alternative**

#### **Lands and Realty**

Activities under the lands and realty program described in the Amendment include, management of sage-grouse PHMAs (Action 30), seasonal timing constraints (Action 31), restrictions which protect sage-grouse on new right-of-way corridors in greater sage-grouse habitat (Action 32), designing of powerlines and guy wires to minimize wildlife related impacts and constructed to the latest APLIC standards (Action 34, 35, 38), reclamation of sites (Action 35), prohibition of wind turbines in Greater Sage-Grouse habitat (Action 36), avoidance of MET tower supports in PHMA (Action 38), retention of PHMA (Action 40), identification of sage-grouse habitat in mineral right areas or conservation easement areas (Action 41), acquisition of Greater Sage-Grouse lands (Action 42), and consideration of non-mineral withdrawal actions to protect the species (Action 43).

Lands and realty management actions included in the Amendment would not occur in Canada lynx occupied habitat. Canada lynx occupy Montane and subalpine coniferous forests above 4,000 feet. Activities conducted under the lands and realty management program are designed to improve and benefit sage-grouse habitat and populations. The species habitat areas do not overlap. As such, activities listed under this management program would not affect Canada lynx or its designated critical habitat.

### **Livestock**

Livestock management actions described in the Amendment include the following: evaluation of opportunities to coordinate management plans and strategies under a single management plan with other agencies and stake holders and include sage-grouse management (Action 22), develop voluntary grazing strategies that improve sage-grouse populations and habitat (Action 45), adjustments to grazing management (Action 46, 139), sage-grouse habitat objectives and management would be incorporated into all grazing permit renewals (Action 48), progress toward achieving land health standards in sage-grouse PHMAs (Action 49), management of voluntarily relinquished permits or preferences (Action 50), coordinate with permittees/lessees/lessees to develop drought contingency plans (Action 52), evaluate and modify existing range improvements to improve sage-grouse habitat (Action 53), designate specific routes and timeframes for trailing which includes the avoidance of stopovers in sage-grouse leks (Action 54), promote balanced grazing between upland and riparian areas (Action 55), manage range improvements in a way that promotes sage-grouse and its habitats (Action 56), and evaluate and modify effects on sage-grouse from spring and seep developments such as pipelines and structures (Action 57).

Livestock management actions included in the Amendment would not occur in Canada lynx occupied habitat. Canada lynx occupy Montane and subalpine coniferous forests above 4,000 feet. Activities conducted under the livestock management program are designed to improve and benefit sage-grouse habitat and populations. The species habitat areas do not overlap. As such, activities listed under this management program would not affect Canada lynx or its designated critical habitat.

### **Mineral Resources**

Minerals management actions described in the Amendment include the following: designing roads which minimize impacts in sage-grouse PHMAs (Action 20), protective modifications to lease stipulations within sage-grouse habitat (Action 58, 60, 61, 62, 63, 66, 68, 71, 72, 75, 77, 78, 80, 81). Other actions include, proposed withdrawal recommendations of some areas of PHMA from mineral exploration (Action 79, 139), minimization and avoidance of surface disturbances (Action 79), prohibit strip mining near sage-grouse (Action 76), prohibition of geophysical operations near sage-grouse, right-of-way and vehicle limitations, timing restrictions during breeding season (Action 60), working with permittees/lessees/lessees to apply sage-grouse conservation measures, distance limitations (Action 60, 66), requiring reclamation plans (Action 69a), minimization of habitat fragmentation (Action 62, 67), noise reduction, and minimize impacts to related sensitive resources.

Minerals resource management actions included in the Amendment would not occur in Canada lynx occupied habitat. Canada lynx occupy Montane and subalpine coniferous forests above 4,000 feet. Activities conducted under the mineral resource management program are designed to improve and benefit sage-grouse habitat and populations. The species habitat areas do not overlap. As such, activities listed under this management program would not affect Canada lynx or its designated critical habitat.

## **Recreation**

Recreation management actions describe that BLM SRPs and Forest Service Recreation SUAs would be allowed in sage-grouse PHMA habitat, unless negative impacts to sage-grouse cannot be adequately mitigated (Action 82).

Recreation management actions included in the Amendment would not occur in Canada lynx occupied habitat. Canada lynx occupy Montane and subalpine coniferous forests above 4,000 feet. Activities conducted under the recreation management program are designed to improve and benefit sage-grouse habitat and populations. The species habitat areas do not overlap. As such, activities listed under this management program would not affect Canada lynx or its designated critical habitat.

## **Special Designations**

No new special designation actions are included in the Amendment (Action 84). As such, special management actions would not affect the Canada lynx or its designated critical habitat.

## **Special Status Species**

Special status species management action include the collection of sage-grouse baseline data during project planning (Action 4), the modification of existing notices and plans to minimally impact PHMAs (Action 12), agencies will meet annually to coordinate and review sage-grouse data (Action 16), development of adaptive management strategies in support of the population management objectives for sage-grouse (Action 137), maintain at least 67% of the 2005-2008 sage-grouse PHMA population within the State of Wyoming (Action 138), and all existing planning decision will be retained unless vacated or modified by decisions in this plan amendment (Action 25).

Special status species management actions included in the Amendment would not occur in Canada lynx occupied habitat. Canada lynx occupy Montane and subalpine coniferous forests above 4,000 feet. Activities conducted under the special status species management program are designed to improve and benefit sage-grouse habitat and populations. The species habitat areas do not overlap. As such, activities listed under this management program would not affect Canada lynx or its designated critical habitat.

## **Travel Management**

Travel management actions included in the Amendment, include restricting motorized travel to existing roads and trails, until route designations are made during subsequent implementation of travel management planning (Action 18), designate routes with priority habitat and assess existing plans for consistency with sage-grouse conservation objectives (Action 19), non-sand dune portions of the Dune Pond Cooperative Management Area within sage-grouse PHMAs would be limited to existing roads and trails (Action 86, 87), avoidance of new road construction within 1.9 miles of habitat (Action 88), restricting upgrades or new road construction within greater sage-grouse habitat (Action 89), development of new roads would be constructed to the absolute minimum value (Action 90), natural reclamation of roads and trails would be allowed in travel management plans within sage-grouse PHMAs, in appropriate situations where additional resource damage is not foreseeable (Action 91), when reseeding roads and trails within sage-grouse PHMAs, appropriate seed mixtures would be used and the use of transplanted sagebrush would be considered (Action 92).

Travel management actions included in the Amendment would not occur in Canada lynx occupied habitat. Canada lynx occupy Montane and subalpine coniferous forests above 4,000 feet. Activities conducted under the travel management program are designed to improve and benefit sage-grouse

habitat and populations. The species habitat areas do not overlap. As such, activities listed under this management program would not affect Canada lynx or its designated critical habitat.

### **Vegetation**

Vegetation management actions include, the application of seasonal restrictions for implementing vegetation management treatments and monitoring to benefit sage-grouse (Action 6), design range projects in a manner that minimizes potential for invasive species establishment and to monitor and treat invasive species associated with existing range improvements (Action 9), vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species (Action 11), work with various agencies and stake holders to coordinate and enhance Greater Sage-Grouse population and habitat (Action 22), improvement of vegetation composition and structure to benefit sage-grouse (Action 93, 95, 100, 107), restrict sagebrush activities that reduces sagebrush canopy to less than 15% (Action 94), development of recommended protocols and treatments to protect sage-grouse and sage-grouse habitat (Action 95, 96), deferment of livestock grazing on vegetative treatments to improve habitat (Action 97), recommendations on vegetative treatments (Action 98, 100, 101, 104, 105), reclamation or restoration of surface disturbances in sage-grouse habitats (Action 99, 100, 101, 103, 106), the use of native seeds which are certified weed free for fuels treatments (Action 100, 102, 103, 104), pest treatments to control Wyoming grasshopper and Mormon cricket outbreaks in Greater Sage-Grouse PHMAs (Action 108).

Vegetation management actions included in the Amendment would not occur in Canada lynx occupied habitat. Canada lynx occupy Montane and subalpine coniferous forests above 4,000 feet. Activities conducted under the vegetation management program are designed to improve and benefit sage-grouse habitat and populations. The species habitat areas do not overlap. As such, activities listed under this management program would not affect Canada lynx or its designated critical habitat.

### **Wild Horses**

Wild horse management action include incorporating rangeland improvements for wild horses in Greater Sage-Grouse PHMAs (Action 109), consideration of sage-grouse PHMAs when evaluating AML's (Action 110), considering sage-grouse PHMAs when conducting land health assessments (Action 111), addressing direct and indirect effects to sage-grouse populations and habitats when conducting NEPA analysis for wild horse and burro management activities (Action 112), and to coordinate with all other resources to conduct land health assessments within all BLM HMAs (Action 113).

Canada lynx have not been identified within herd management areas within the planning area; however, designated critical habitat for the species does exist within herd management areas. Changes to wild horse management include measures which are meant to protect and preserve sage-grouse habitat. As such, vegetation management actions included in Amendment would not occur in Canada lynx occupied habitat. Canada lynx occupy Montane and subalpine coniferous forests above 4,000 feet. None of these actions would affect Canada lynx or its designated critical habitat.

### **Wildland Fire**

Wildland fire management actions described in the Amendment include, fire and fuels management which contributes to the protection and enhancement of sagebrush habitat that supports sage-grouse populations (Action 26), complete and continue to update Greater Sage-Grouse Landscape Wildfire & Invasive necessary to maintain sagebrush habitat to support interconnecting sage-grouse populations which includes identification of annual treatment needs for wildfire and invasive

species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments (Action 27), implementation of coordinated inter-agency approach to fire restrictions for sage-grouse (Action 28), utilization of fire management strategies and tactics to achieve sage-grouse resource objectives (Action 29), fuel treatments would be implemented with an emphasis of protecting and enhancing PHMAs (Action 114), restoring burned areas within PHMAs (Action 115), post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants to return to suitable sage-grouse habitat (Action 117), avoiding treatments in areas containing old trees or persistent woodlands (Action 118), and management actions which benefit sage-grouse during fire suppression activities (Action 124).

The changes to existing wildland fire management listed are meant to provide additional protective measures for the Greater Sage-Grouse. As such, management actions included in the Amendment would not occur in Canada lynx occupied habitat. Canada lynx occupy Montane and subalpine coniferous forests above 4,000 feet. Activities conducted under the wildland fire management program are designed to improve and benefit sage-grouse habitat and populations. The species habitat areas do not overlap. Therefore, activities listed under this management program would not affect Canada lynx or its designated critical habitat.

### **Wildlife and Fisheries**

Wildlife and fisheries management actions described in the Amendment include protocols for sage-grouse monitoring (Actions 1, 3, 125), development of landscape level restoration, conservation and maintenance strategies (Actions 8, 14, 15, 21) application of required design features (Action 10), addition of new sage-grouse habitat (Action 13), limitation of oil and gas development densities (Action 126), limitation of all surface disturbances to 5% per 640 acres (Action 127), mitigation protocol (Actions 5,7,128), prohibition of surface disturbing activities within 0.6 mile radius of occupied sage-grouse leks within PHMAs (Action 129), prohibition of surface disturbing activities within 0.25 mile radius of occupied sage-grouse leks outside PHMAs (Action 130), timing restrictions in breeding, nesting, and brooding PHMA (Actions 17, 131, 132, 133, 134), promote control of predators to sage-grouse or sage-grouse habitat (Action 135), and implementation of noise restrictions (Action 136).

The changes to existing wildlife and fisheries management listed are meant to provide additional protective measures for the Greater Sage-Grouse. As such, management actions included in the Amendment would not occur in Canada lynx occupied habitat. Canada lynx occupy Montane and subalpine coniferous forests above 4,000 feet. Activities conducted under the wildlife and fisheries management program are designed to improve and benefit sage-grouse habitat and populations. The species habitat areas do not overlap. Therefore, activities listed under this management program would not affect Canada lynx or its designated critical habitat.

### **Cumulative Effects**

Cumulative impacts according to the ESA, Section 7 Consultation Handbook definition (USFWS 1998a) include the incremental impacts of future State, or private activities (i.e., excluding federal activities), that are reasonably certain to occur within the action area of the Federal action subject to consultation.

Existing and proposed activities on non-federal lands in the planning area that have the potential to cumulatively affect the species include but are not limited to the following:

- Non-Federal oil and gas and related energy development
- Livestock grazing on private lands

- Timber harvesting on private lands
- Subdivision development
- Recreation
- Coal mine operations
- Transmission lines
- Seismic exploration

Implementation of the Amendment would not change any potential effects to the Canada lynx, or its designated critical habitat, that may result from current or projected future non-Federal actions.

### **7.10.2 Effects Determination**

The effects determination only addresses changes in management that would occur from the Amendment. Existing management conditions that would not be changed as a result of the Amendment have already been consulted on using agency approved methods and will not be analyzed in this document.

Management actions included in the Amendment are largely supportive in nature and guide or advise other program actions and activities in a manner conducive to maintaining and/or promoting population growth and habitat for the sage-grouse. Management actions included in the Amendment such as increased monitoring, data collection, greater coordination and review, and noise, distance, and timing restrictions, would have no effect on the Canada lynx because no surface disturbing actions would occur. Although unlikely, some of the measures meant to protect sage-grouse may indirectly benefit the Canada lynx. The Montane and subalpine coniferous forests habitats where Canada lynx habitat exists are not used by sage-grouse. Activities conducted under the Amendment are designed to improve and benefit Greater Sage-Grouse habitat and populations. The species habitat areas do not overlap. Because no negative affects to the Canada lynx would occur and any actions which may benefit the species are unlikely, implementation of the Amendment, would have “**No Effect**” on the Canada lynx or its designated critical habitat within the Bridger Teton, Pinedale, Kemmerer, Rawlins, Medicine-Bow, Casper, Rock Springs, Thunder Basin and Newcastle Field Offices.

**Table 13-Summary and Determination of Effects for the Canada lynx and Critical Habitat**

<b>Program</b>	<b>Bridger Teton</b>	<b>Bridger Teton Critical</b>	<b>Pinedale</b>	<b>Pinedale Critical</b>	<b>Kemmerer</b>	<b>Kemmerer Critical</b>	<b>Rock Springs</b>	<b>Rock Springs Critical</b>	<b>Rawlins</b>	<b>Rawlins Critical</b>	<b>Medicine Bow</b>	<b>Medicine Bow Critical</b>	<b>Casper</b>	<b>Casper Critical</b>	<b>Thunder Basin</b>	<b>Thunder Basin Critical</b>	<b>Newcastle</b>	<b>Newcastle Critical</b>
<b>Lands and Realty</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Livestock</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Mineral Resources</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Recreation</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Special Designations</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Special Status Species</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Transportation and Access</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Vegetation</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Watershed and Water Quality</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wild Horses</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wildland Fire</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wildlife and Fisheries</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

NLAA= May affect, not likely to adversely affect

LAA = May affect, likely to adversely affect

NE = No effect (No Adverse Modification for critical habitat)

NJ = No Jeopardy

## 7.11 Grizzly Bear (*Ursus arctos*) - Threatened

### 7.11.1 Effects of Selected Alternative

#### Lands and Realty

Activities under the lands and realty program include, managing sage-grouse PHMAs (Action 30), seasonal timing constraints (Action 31), restrictions which protect sage-grouse on new right-of-way corridors in Greater Sage-Grouse habitat (Action 32), designing of powerlines and guy wires to minimize wildlife related impacts and constructed to the latest APLIC standards (Action 34, 35, 38), reclamation of sites (Action 35), prohibition of wind turbines in Greater Sage-Grouse habitat (Action 36), avoidance of MET tower supports in PHMA (Action 38), retention of PHMA (Action 40), identification of sage-grouse habitat in mineral right areas or conservation easement areas (Action 41), acquisition of greater sage-grouse lands (Action 42), and consideration of non-mineral withdrawal actions to protect the species (Action 43).

The changes to existing lands and realty management listed are meant to provide additional protective measures for the greater sage-grouse. Management actions included in the Amendment would not directly occur in grizzly bear occupied habitat. Grizzly bear are highly adaptable and utilize a variety of habitats but within Wyoming, they prefer extensive forest cover often interspersed with grasslands and meadows. In Wyoming these habitats are generally above 1,500 m (Schwartz et al. 2002).

Some sagebrush dominated stands may be located adjacent to grizzly bear habitats. Although unlikely, changes in some of the lands and realty management actions may inadvertently protect the species through land acquisitions, retentions, and reclamations. Restrictions of right-of-way corridors could also benefit the species by reducing ground disturbances in habitat occupied by grizzly bear. Road closures would reduce the number of people within grizzly bear habitat and the resulting impacts on the species, prey and habitat.

#### Livestock

Many of the livestock management actions in the Amendment include habitat improvements for Greater Sage-Grouse through the following: evaluation of opportunities to coordinate management plans and strategies under a single management plan with other agencies and stake holders and include sage-grouse management (Action 22), develop voluntary grazing strategies that improve sage-grouse populations and habitat (Action 45), adjustments to grazing management (Action 46, 139), sage-grouse habitat objectives and management would be incorporated into all grazing permit renewals (Action 48), progress toward achieving land health standards in sage-grouse PHMAs (Action 49), management of voluntarily relinquished permits or preferences (Action 50), coordinate with permittees/lessees/lessees to develop drought contingency plans (Action 52), evaluate and modify existing range improvements to improve sage-grouse habitat (Action 53), designate specific routes and timeframes for trailing which includes the avoidance of stopovers in sage-grouse leks (Action 54), promote balanced grazing between upland and riparian areas (Action 55), manage range improvements in a way that promotes sage-grouse and its habitats (Action 56), and evaluate and modify effects on sage-grouse from spring and seep developments such as pipelines and structures (Action 57).

The changes to existing livestock management are meant to provide additional protective measures for the Greater Sage-Grouse. Management actions included in the Amendment would not directly occur in Grizzly bear occupied habitat. Grizzly bear are highly adaptable and utilize a variety of habitats but within Wyoming, they prefer extensive forest cover often interspersed with grasslands and meadows. In Wyoming these habitats are generally above 1,500 m Schwartz et al. 2002). Actions such as better coordination and planning with other agencies and stakeholders including Actions 22, 45, 48, 49, 53, 54, 56, 57) would not affect the species because no on the ground action would take place. Although unlikely, other changes such as the development

of a drought contingency plan (Action 52), and the promotion of balanced grazing (Action 55) could benefit grizzly bear as well as sage-grouse.

### **Mineral Resources**

Minerals management actions described in the Amendment include the following: designing roads which minimize impacts in sage-grouse PHMAs (Action 20), protective modifications to lease stipulations within sage-grouse habitat (Action 58, 60, 61, 62, 63, 66, 68, 71, 72, 75, 77, 78, 80, 81). Other actions include, proposed withdrawal recommendations of some areas of PHMA from mineral exploration (Action 79, 139), minimization and avoidance of surface disturbances (Action 79), prohibit strip mining near sage-grouse (Action 76), prohibition of geophysical operations near sage-grouse, right-of-way and vehicle limitations, timing restrictions during breeding season (Action 60), working with permittees/lessees to apply sage-grouse conservation measures, distance limitations (Action 60, 66), requiring reclamation plans (Action 69a), minimization of habitat fragmentation (Action 62, 67), noise reduction, and minimize impacts to related sensitive resources.

Planning measures which consider the construction of a master plan for development or leasing when impacts to sage-grouse could occur (Action 66), noise, timing and distance restrictions (Action 60) and implementing a reclamation bond in sage-grouse areas (Action 66) would not affect grizzly bear because no on the ground actions would take place.

Although unlikely, because the species may occur in the same geographical area, some management actions may indirectly benefit the species. Beneficial actions may include limitations or exclusion of road developments, minimization and avoidance of surface disturbances, minimization of habitat fragmentation, and implementing measures to reduce pollutants. These actions could reduce overall impacts and limit road access within or leading to grizzly bear habitat which would benefit the species.

### **Recreation**

Changes to existing recreation management include BLM SRPs and Forest Service Recreation SUAs would be allowed in sage-grouse PHMA, unless negative impacts to sage-grouse cannot be adequately mitigated (Action 82).

The issuance of BLM SRP's and Forest Service recreation SUA's has already been consulted on during the planning process of their respective land use plans. However, the change in this document and the area which needs to be consulted, would be the closing of SRP's and SUA's in PHMAs when negative impacts cannot be mitigated. The closing of any BLM SRP or Forest Service Recreation SUA in PHMAs would not directly affect the grizzly bear because their habitat requirements differ. Any negative affects to grizzly bear resulting from recreation management are unlikely.

### **Special Designations**

No new special designation actions are included in the Amendment (Action 84). As such, special management actions would not affect grizzly bear.

### **Special Status Species**

Special status species management actions include the collection of sage-grouse baseline data during project planning (Action 4), the modification of existing notices and plans to minimally impact PHMAs (Action 12), agencies will meet annually to coordinate and review sage-grouse data (Action 16), development of adaptive management strategies in support of the population management objectives for sage-grouse (Action 137), maintain at least 67% of the 2005-2008 sage-grouse PHMA population within the State of Wyoming (Action 138), and all existing planning decision will be retained unless vacated or modified by decisions in this plan amendment (Action 25).

Actions included in the special species management program such as the collection of data (Action 4), agencies meeting annually to coordinate sage-grouse data (Action 16), and the development of adaptive management strategies (Action 137), retainment of existing plans unless modified in the Amendment (Action 25), would not have any effect on grizzly bear because no surface disturbing action would occur.

Action 12 which includes the modification of existing notices and plans to minimally impact PHMAs may indirectly benefit the species by reducing impacts to PHMAs. However, because grizzly bear utilize a variety of habitat throughout the year and are so highly adaptable, any negative affects to the species are unlikely.

### **Travel Management**

Travel management actions described in the Amendment include restricting motorized travel to existing roads and trails, until route designations are made during subsequent implementation of travel management planning (Action 18), designate routes with priority habitat and assess existing plans for consistency with sage-grouse conservation objectives (Action 19), non-sand dune portions of the Dune Pond Cooperative Management Area within sage-grouse PHMAs would be limited to existing roads and trails (Action 86, 87), avoidance of new road construction within 1.9 miles of habitat (Action 88), restricting upgrades or new road construction within Greater Sage-Grouse habitat (Action 89), development of new roads would be constructed to the absolute minimum value (Action 90), natural reclamation of roads and trails would be allowed in travel management plans within sage-grouse PHMAs, in appropriate situations where additional resource damage is not foreseeable (Action 91), when reseeding roads and trails within sage-grouse PHMAs, appropriate seed mixtures would be used and the use of transplanted sagebrush would be considered (Action 92).

Travel management actions such as the minimization, reclamation, avoidance, restriction and closure of various roads may inadvertently benefit the species even though Greater Sage-Grouse do not occur in the same habitat as grizzly bear (Action 18, 86, 88, 89). For example, grizzly bear may be protected if a road restriction or closure in sage-grouse habitat blocks access to a road which leads to grizzly bear habitat. However, because grizzly bear utilize a variety of habitat throughout the year and are so highly adaptable, any negative affects to the species are unlikely.

### **Vegetation**

Vegetation management actions include, the application of seasonal restrictions for implementing vegetation management treatments and monitoring to benefit sage-grouse (Action 6), design range projects in a manner that minimizes potential for invasive species establishment and to monitor and treat invasive species associated with existing range improvements (Action 9), vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species (Action 11), work with various agencies and stake holders to coordinate and enhance Greater Sage-Grouse population and habitat (Action 22), improvement of vegetation composition and structure to benefit sage-grouse (Action 93, 95, 100, 107), restrict sagebrush activities that reduces sagebrush canopy to less than 15% (Action 94), development of recommended protocols and treatments to protect sage-grouse and sage-grouse habitat (Action 95, 96), deferment of livestock grazing on vegetative treatments to improve habitat (Action 97), recommendations on vegetative treatments (Action 98, 100, 101, 104, 105), reclamation or restoration of surface disturbances in sage-grouse habitats (Action 99, 100, 101, 103, 106), the use of native seeds which are certified weed free for fuels treatments (Action 100, 102, 103, 104), pest treatments to control Wyoming grasshopper and Mormon cricket outbreaks in Greater Sage-Grouse PHMAs (Action 108).

The use of herbicide on noxious and invasive species (Action 11), vegetation treatments (Actions 93, 94, 95, 100, 102, 103, 104, 105, 107) and pest control treatments for Wyoming grass hopper and Mormon crickets (Action 108) have already been consulted on in their respective Land Use plans using agency approved protocols. However, the changes in the Amendment would direct managers to use updated sage-grouse

information which would benefit the sage-grouse. For example, managers can better control insect outbreaks in PHMAs if the PHMAs are identified.

Vegetation management actions would not directly occur in Grizzly bear occupied habitat. Grizzly bear are highly adaptable and utilize a variety of habitats but within Wyoming, they prefer extensive forest cover often interspersed with grasslands and meadows. In Wyoming these habitats are generally above 1,500 m Schwartz et al. 2002). Vegetation management actions such as season of use restrictions (Action 6), monitoring efforts (Action 9), and working collaboratively with various agencies (Action 22) are not expected to directly or indirectly impact occupied grizzly bear habitat. Although unlikely, actions that minimize the potential for the spread of noxious and invasive weeds (Action 9), deferment of livestock (Action 97), and the improvement of vegetative composition (Action 93, 95, 100, 107) may inadvertently benefit grizzly bear through improved habitat conditions.

### **Wild Horses**

Wild horse management action include incorporating rangeland improvements for wild horses in Greater Sage-Grouse PHMA (Action 109), consideration of sage-grouse PHMAs when evaluating AML's (Action 110), considering sage-grouse PHMAs when conducting land health assessments (Action 111), addressing direct and indirect effects to sage-grouse populations and habitats when conducting NEPA analysis for wild horse and burro management activities (Action 112), and to coordinate with all other resources to conduct land health assessments within all BLM HMAs (Action 113).

Grizzly bear have not been identified in herd management areas within the planning area. Wild horse management actions include measures which are meant to protect and preserve sage-grouse habitat. As a result, changes to existing wild horse management would not affect grizzly bear.

### **Wildland Fire**

Wildland fire management actions described in the Amendment include, fire and fuels management which contributes to the protection and enhancement of sagebrush habitat that supports sage-grouse populations (Action 26), complete and continue to update Greater Sage-Grouse Landscape Wildfire & Invasive necessary to maintain sagebrush habitat to support interconnecting sage-grouse populations which includes identification of annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments (Action 27), implementation of coordinated inter-agency approach to fire restrictions for sage-grouse (Action 28), utilization of fire management strategies and tactics to achieve sage-grouse resource objectives (Action 29), fuel treatments would be implemented with an emphasis of protecting and enhancing PHMAs (Action 114), restoring burned areas within PHMAs (Action 115), post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants to return to suitable sage-grouse habitat (Action 117), avoiding treatments in areas containing old trees or persistent woodlands (Action 118), and management actions to benefit sage-grouse during fire suppression activities (Action 124).

Wildland fire management actions would not directly occur in grizzly bear occupied habitat. Grizzly bear are highly adaptable and utilize a variety of habitats but within Wyoming, they prefer extensive forest cover often interspersed with grasslands and meadows. In Wyoming these habitats are generally above 1,500 m Schwartz et al. 2002). Although unlikely, because the grizzly bear may occur in the same geographical area as sage-grouse, some wildland fire management actions such as habitat restorations and post fuel treatments may inadvertently affect the species.

## **Wildlife and Fisheries**

Wildlife and fisheries management actions described in the Amendment include protocols for sage-grouse monitoring (Actions 1, 3, 125), development of landscape level restoration, conservation and maintenance strategies (Actions 8, 14, 15, 21) application of required design features (Action 10), addition of new sage-grouse habitat (Action 13), limitation of oil and gas development densities (Action 126), limitation of all surface disturbances to 5% per 640 acres (Action 127), mitigation protocol (Actions 5,7,128), prohibition of surface disturbing activities within 0.6 mile radius of occupied sage-grouse leks within PHMAs (Action 129), prohibition of surface disturbing activities within 0.25 mile radius of occupied sage-grouse leks outside PHMAs (Action 130), timing restrictions in breeding, nesting, and brooding PHMA (Actions 17,131, 132, 133, 134), promote control of predators to sage-grouse or sage-grouse habitat (Action 135), and implementation of noise restrictions (Action 136).

Wildlife and fisheries management actions would not directly occur in grizzly bear occupied habitat. Grizzly bear are highly adaptable and utilize a variety of habitats but within Wyoming, they prefer extensive forest cover often interspersed with grasslands and meadows. In Wyoming these habitats are generally above 1,500 m (Schwartz et al. 2002). Because Greater Sage-Grouse generally do not reside in the same habitat required by grizzly bear, management actions intended to protect sage-grouse would not directly affect grizzly bear. Although unlikely, because the species may occur in the same geographical area, some management actions may inadvertently benefit the species. Beneficial actions may include restrictions on oil and mineral developments, restrictions of surface disturbing activities, and increased mitigation protocol. No negative effects from wildlife and fisheries activities are anticipated.

## **Cumulative Effects**

Cumulative impacts according to the ESA, Section 7 Consultation Handbook definition (USFWS 1998a) include the incremental impacts of future State, or private activities (i.e., excluding federal activities), that are reasonably certain to occur within the action area of the Federal action subject to consultation.

Existing and proposed activities on non-federal lands in the planning area that have the potential to cumulatively affect the species include but are not limited to the following:

- Non-Federal oil and gas and related energy development
- Livestock grazing on private lands
- Timber harvesting on private lands
- Subdivision development
- Recreation
- Coal mine operations
- Transmission lines
- Seismic exploration
- Bentonite and gypsum mining

Implementation of the Amendment would not change any potential effects to the grizzly bear that may result from current or projected future non-Federal actions.

### **7.11.2 Effects Determination**

The effects determination only addresses changes in management that would occur from the Amendment. Existing management conditions that would not be changed as a result of the Amendment have already been consulted on using agency approved methods and will not be analyzed in this document.

Management actions included in the Amendment are largely supportive in nature, and guide or advise other program actions and activities in a manner conducive to maintaining and/or promoting population growth and

habitat for the sage-grouse. Management actions included in the Amendment which are specific to sage-grouse such as increased monitoring, data collection, greater coordination and review, and timing restrictions, would have no negative effects on grizzly bear because no surface disturbing actions would occur. Activities included in the Amendment are not anticipated to negatively affect the species, however some beneficial effects, described above, could occur. Most of the habitats where grizzly bear habitat exists are not used by sage-grouse, however there is overlap where both species might be found. Activities conducted under the Amendment are designed to improve and benefit Sage-grouse habitat and populations. Because no negative affects to grizzly bear would occur and some actions may benefit the species, implementation of the Amendment May affect, but is not likely to Adversely Affect the grizzly bear, within the Rock Springs, Bridger Teton, Kemmerer, and Pinedale office areas. Because grizzly bear habitat does not exist in the Casper, Rawlins, Newcastle, Medicine Bow and Thunder Basin offices, management actions from this amendment are expected to have “No Effect” on grizzly bear in those office areas.

**Table 14-Summary and Determination of Effects for Grizzly bear**

<b>Program</b>	<b>Bridger Teton</b>	<b>Pinedale</b>	<b>Kemmerer</b>	<b>Rock Springs</b>	<b>Rawlins</b>	<b>Medicine Bow</b>	<b>Casper</b>	<b>Thunder Basin</b>	<b>Newcastle</b>
<b>Lands and Realty</b>	NLAA	NLAA	NLAA	NLAA	NE	NE	NE	NE	NE
<b>Livestock</b>	NLAA	NLAA	NLAA	NLAA	NE	NE	NE	NE	NE
<b>Mineral Resources</b>	NLAA	NLAA	NLAA	NLAA	NE	NE	NE	NE	NE
<b>Recreation</b>	NLAA	NLAA	NLAA	NLAA	NE	NE	NE	NE	NE
<b>Special Designations</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Special Status Species</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Transportation and Access</b>	NLAA	NLAA	NLAA	NLAA	NE	NE	NE	NE	NE
<b>Vegetation</b>	NLAA	NLAA	NLAA	NLAA	NE	NE	NE	NE	NE
<b>Watershed and Water Quality</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wild Horses</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wildland Fire</b>	NLAA	NLAA	NLAA	NLAA	NE	NE	NE	NE	NE
<b>Wildlife and Fisheries</b>	NLAA	NLAA	NLAA	NLAA	NE	NE	NE	NE	NE

NLAA= May affect, not likely to adversely affect

LAA = May affect, likely to adversely affect

NE = No effect

NJ = No Jeopardy

## **7.12 Preble’s Meadow Jumping Mouse (*Zapus hudsonius preblei*) - Threatened**

### **7.12.1 Effects of Selected Alternative**

#### **Lands and Realty**

Activities under the lands and realty program include, manage sage-grouse PHMAs (Action 30), seasonal timing constraints (Action 31), restrictions which protect sage-grouse on new right-of-way corridors in Greater Sage-Grouse habitat (Action 32), designing of powerlines and guy wires to minimize wildlife related impacts and constructed to the latest APLIC standards (Action 34, 35, 38), reclamation of sites (Action 35), prohibition of wind turbines in greater sage-grouse habitat (Action 36), avoidance of MET tower supports in PHMA (Action 38), retention of PHMA (Action 40), identification of sage-grouse habitat in mineral right areas or conservation easement areas (Action 41), acquisition of greater sage-grouse lands (Action 42), and consideration of non-mineral withdrawal actions to protect the species (Action 43).

Lands and realty management actions included in the Amendment are not likely to occur in the wetland habitats of the Preble's meadow jumping mouse because Greater Sage-Grouse occur in lands dominated by large sagebrush stands. However, sagebrush dominated stands may be located adjacent to wetland habitats. Although unlikely because overlapping habitat between Preble's meadow jumping mouse and sage-grouse is so minimal, changes in some of the lands and realty management actions included in the Amendment may inadvertently protect the species through land acquisitions, retentions, and reclamations. Restrictions of right-of-way corridors could also benefit the species by reducing ground disturbances in habitat occupied by the Preble's meadow jumping mouse. Road closures would reduce the number of people within Preble's meadow jumping mouse habitat and the resulting impacts on the species and habitat.

#### **Livestock**

Many of the livestock management actions in the amendment include habitat improvements for Greater Sage-Grouse through the following: evaluation of opportunities to coordinate management plans and strategies under a single management plan with other agencies and stake holders and include sage-grouse management (Action 22), develop voluntary grazing strategies that improve sage-grouse populations and habitat (Action 45), adjustments to grazing management (Action 46, 139), sage-grouse habitat objectives and management would be incorporated into all grazing permit renewals (Action 48), progress toward achieving land health standards in sage-grouse PHMAs (Action 49), management of voluntarily relinquished permits or preferences (Action 50), coordinate with permittees/lessees to develop drought contingency plans (Action 52), evaluate and modify existing range improvements to improve sage-grouse habitat (Action 53), designate specific routes and timeframes for trailing which includes the avoidance of stopovers in sage-grouse leks (Action 54), promote balanced grazing between upland and riparian areas (Action 55), manage range improvements in a way that promotes sage-grouse and its habitats (Action 56), and evaluate and modify effects on sage-grouse from spring and seep developments such as pipelines and structures (Action 57).

All of the documented occurrences of Preble's meadow jumping mouse reside within riparian habitats in Wyoming. Many of the livestock management actions require no surface disturbing activities (Actions 22, 45, 48, 49, 53, 54, 56 and 57) and would therefore, not affect Preble's meadow jumping mouse. Although unlikely because overlapping habitat between Preble's meadow jumping mouse and sage-grouse is so minimal, other livestock management actions may indirectly protect the species through the development of a drought contingency plan (Action 52), which could reduce grazing pressure in nearby Preble's meadow jumping mouse habitats and the promotion of balanced grazing (Action 55) which could also alleviate heavy grazing impact in one specific area.

#### **Mineral Resources**

Minerals management actions described in the Amendment include the following: designing roads which minimize impacts in sage-grouse PHMAs (Action 20), protective modifications to lease stipulations within

sage-grouse habitat (Action 58, 60, 61, 62, 63, 66, 68, 71, 72, 75, 77, 78, 80, 81). Other actions include, proposed withdrawal recommendations of some areas of PHMA from mineral exploration (Action 79, 139), minimization and avoidance of surface disturbances (Action 79), prohibit strip mining near sage-grouse (Action 76), prohibition of geophysical operations near sage-grouse, right-of-way and vehicle limitations, timing restrictions during breeding season (Action 60), working with permittees/lessees to apply sage-grouse conservation measures, distance limitations (Action 60, 66), requiring reclamation plans (Action 69a), minimization of habitat fragmentation (Action 62, 67), noise reduction, and minimize impacts to related sensitive resources.

Planning measures which consider the construction of a master plan for development or leasing when impacts to sage-grouse could occur (Action 66), noise, timing and distance restrictions (Action 60) and implementing a reclamation bond in sage-grouse areas (Action 66) would not affect the Preble's meadow jumping mouse because no surface disturbing actions would occur.

Although unlikely, because the species may occur in the same geographical area, some management actions may indirectly benefit the species. Beneficial actions may include limitations or exclusion of road developments, minimization and avoidance of surface disturbances, minimization of habitat fragmentation, and implementing measures to reduce pollutants. These actions could reduce overall impacts and limit road access within or leading to Preble's meadow jumping mouse habitat which would benefit the species.

### **Recreation**

BLM SRPs and Forest Service Recreation SUAs would be continued to be allowed in sage-grouse PHMA habitat, unless negative impacts to sage-grouse cannot be adequately mitigated (Action 82).

The issuance of BLM SRP's and Forest Service recreation SUA's has already been consulted on during the planning process of their respective land use plans. However, the change in this document and the area which needs to be consulted on would be the closing of SRP's and SUA's in PHMA's sage-grouse habitats when negative impacts cannot be mitigated. The closing of any BLM SRP or Forest Service Recreation SUA in PHMA's would not directly affect Preble's meadow jumping mouse. Any indirect negative effects are unlikely because habitat overlap is minimal.

### **Special Designations**

No new special designation actions are included in the Amendment (Action 84). As such, special management actions would not affect the Preble's meadow jumping mouse.

### **Special Status Species**

Special status species management action include the collection of sage-grouse baseline data during project planning (Action 4), the modification of existing notices and plans to minimally impact PHMA's (Action 12), agencies will meet annually to coordinate and review sage-grouse data (Action 16), development of adaptive management strategies in support of the population management objectives for sage-grouse (Action 137), maintain at least 67% of the 2005-2008 sage-grouse PHMA population within the State of Wyoming (Action 138), and all existing planning decision will be retained unless vacated or modified by decisions in this plan amendment (Action 25).

Actions included in the special species management program such as the collection of data (Action 4), agencies meeting annually to coordinate sage-grouse data (Action 16), and the development of adaptive management strategies (Action 137), retainment of existing plans unless modified in the Amendment (Action 25), would not have any effect on the Preble's meadow jumping mouse because surface disturbing actions would not result from these activities. However, although unlikely, Action 12 which includes the modification of existing notices and plans to minimally impact PHMA's may indirectly benefit the species by reducing impacts to

PHMAs. The reduction of impacts in PHMAs may also indirectly benefit Preble's meadow jumping mouse which may occur in nearby habitats.

### **Travel Management**

Travel management actions described in the Amendment, include restricting motorized travel to existing roads and trails, until route designations are made during subsequent implementation of travel management planning (Action 18), designate routes with priority habitat and assess existing plans for consistency with sage-grouse conservation objectives (Action 19), non-sand dune portions of the Dune Pond Cooperative Management Area within sage-grouse PHMAs would be limited to existing roads and trails (Action 86, 87), avoidance of new road construction within 1.9 miles of habitat (Action 88), restricting upgrades or new road construction within greater sage-grouse habitat (Action 89), development of new roads would be constructed to the absolute minimum value (Action 90), natural reclamation of roads and trails would be allowed in travel management plans within sage-grouse PHMAs, in appropriate situations where additional resource damage is not foreseeable (Action 91), when reseeding roads and trails within sage-grouse PHMAs, appropriate seed mixtures would be used and the use of transplanted sagebrush would be considered (Action 92).

Travel management actions such as the minimization, reclamation, avoidance, restriction and closure of various roads may inadvertently benefit the species even though Greater Sage-Grouse do not occur in the same habitat as Preble's meadow jumping mouse (Action 18, 86, 88, 89). For this reason any indirect effects to the Preble's meadow jumping mouse resulting from Amendment actions is not likely to occur. Preble's meadow jumping mouse may be protected if a road restriction or closure in sage-grouse habitat blocks access to a road which leads to occupied habitat. No negative effects resulting from travel management are anticipated to occur.

### **Vegetation**

Vegetation management actions include the application of seasonal restrictions for implementing vegetation management treatments and monitoring to benefit sage-grouse (Action 6), design range projects in a manner that minimizes potential for invasive species establishment and to monitor and treat invasive species associated with existing range improvements (Action 9), vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species (Action 11), work with various agencies and stake holders to coordinate and enhance Greater Sage-Grouse population and habitat (Action 22), improvement of vegetation composition and structure to benefit sage-grouse (Action 93, 95, 100, 107), restrict sagebrush activities that reduces sagebrush canopy to less than 15% (Action 94), development of recommended protocols and treatments to protect sage-grouse and sage-grouse habitat (Action 95, 96), deferment of livestock grazing on vegetative treatments to improve habitat (Action 97), recommendations on vegetative treatments (Action 98, 100, 101, 104, 105), reclamation or restoration of surface disturbances in sage-grouse habitats (Action 99, 100, 101, 103, 106), the use of native seeds which are certified weed free for fuels treatments (Action 100, 102, 103, 104), pest treatments to control Wyoming grasshopper and Mormon cricket outbreaks in Greater Sage-Grouse PHMAs (Action 108).

The use of herbicide on noxious and invasive species (Action 11), vegetation treatments (Actions 93, 94, 95, 100, 102, 103, 104, 105, 107) and pest control treatments for Wyoming grass hopper and Mormon crickets (Action 108) have already been consulted on in their respective Land Use plans using agency approved protocols. However, the changes in the Amendment would direct managers to use updated sage-grouse information which would benefit the sage-grouse. For example, managers can better control insect outbreaks in PHMAs if the PHMAs are identified.

Vegetation management actions such as season restrictions (Action 6), monitoring efforts (Action 9), and working collaboratively with various agencies (Action 22) are not expected to directly or indirectly impact

occupied Preble's meadow jumping mouse habitat because no surface disturbing actions would occur. However, actions that minimize the potential for the spread of noxious and invasive weeds (Action 9), deferment of livestock (Action 97), and the improvement of vegetative composition (Action 93, 95, 100, 107) may inadvertently benefit the species through improve habitat conditions.

### **Wild Horses**

Wild horse management actions include incorporating rangeland improvements for wild horses in Greater Sage-Grouse PHMAs (Action 109), consideration of sage-grouse PHMAs when evaluating AML's (Action 110), considering sage-grouse PHMAs when conducting land health assessments (Action 111), addressing direct and indirect effects to sage-grouse populations and habitats when conducting NEPA analysis for wild horse and burro management activities (Action 112), and to coordinate with all other resources to conduct land health assessments within all BLM HMAs (Action 113).

Based on known locations Preble's meadow jumping mouse as shown on USFWS maps (USFWS 2013), none of the known Preble's meadow jumping mouse sites are located in herd management areas. None of these actions would occur within or near Preble's meadow jumping mouse habitat because wild horse HMA's do not occur within Preble's meadow jumping mouse habitat.

### **Wildland Fire**

Wildland fire management actions described in the Amendment include, fire and fuels management which contributes to the protection and enhancement of sagebrush habitat that supports sage-grouse populations (Action 26), complete and continue to update Greater Sage-Grouse Landscape Wildfire & Invasive necessary to maintain sagebrush habitat to support interconnecting sage-grouse populations which includes identification of annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments (Action 27), implementation of coordinated inter-agency approach to fire restrictions for sage-grouse (Action 28), utilization of fire management strategies and tactics to achieve sage-grouse resource objectives (Action 29), fuel treatments would be implemented with an emphasis of protecting and enhancing PHMAs (Action 114), restoring burned areas within PHMAs (Action 115), post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants to return to suitable sage-grouse habitat (Action 117), avoiding treatments in areas containing old trees or persistent woodlands (Action 118), and management actions to benefit sage-grouse during fire suppression activities (Action 124).

Wildland fire management actions are not expected to directly impact occupied or potential Preble's meadow jumping mouse habitat. Preferred habitat for the Preble's meadow jumping mouse is comprised of well-developed riparian habitat with adjacent, relatively undisturbed, grassland communities and a nearby water source, which generally do not burn. Any beneficial effects resulting from wildland fire management actions are not anticipated to negatively affect the Preble's meadow jumping mouse.

### **Wildlife and Fisheries**

Wildlife and fisheries management actions described in the Amendment include protocols for sage-grouse monitoring (Actions 1, 3, 125), development of landscape level restoration, conservation and maintenance strategies (Actions 8, 14, 15, 21) application of required design features (Action 10), addition of new sage-grouse habitat (Action 13), limitation of oil and gas development densities (Action 126), limitation of all surface disturbances to 5% per 640 acres (Action 127), mitigation protocol (Actions 5, 7, 128), prohibition of surface disturbing activities within 0.6 mile radius of occupied sage-grouse leks within PHMAs (Action 129), prohibition of surface disturbing activities within 0.25 mile radius of occupied sage-grouse leks outside PHMAs (Action 130), timing restrictions in breeding, nesting, and brooding PHMA (Actions 17, 131, 132, 133,

134), promote control of predators to sage-grouse or sage-grouse habitat (Action 135), and implementation of noise restrictions (Action 136).

Because Greater Sage-Grouse do not reside in the same habitat required by Preble's meadow jumping mouse, management actions intended to protect sage-grouse would not directly affect Preble's meadow jumping mouse. However, although unlikely, because the species may occur in the same geographical area, some management actions may indirectly benefit the species. Beneficial actions may include restrictions on oil and mineral developments, restrictions of surface disturbing activities, and increased mitigation protocol. Other management non-surface disturbing management actions such as the implementation of timing restrictions (Actions 17, 131, 132, 133 and 134) would have no effect on Preble's meadow jumping mouse.

### **Cumulative Effects**

Cumulative impacts according to the ESA, Section 7 Consultation Handbook definition (USFWS 1998a) include the incremental impacts of future State, or private activities (i.e., excluding federal activities), that are reasonably certain to occur within the action area of the Federal action subject to consultation.

Existing and proposed activities on non-federal lands in the planning area that have the potential to cumulatively affect the species include but are not limited to the following:

- Non-Federal oil and gas and related energy development
- Water depletions from irrigation diversions and dams
- Livestock grazing on private lands
- Subdivision development along rivers
- Recreation along rivers and river corridors (including camping, rafting, and hunting)
- Transmission lines

Implementation of the Amendment would not change any potential effects to the Preble's meadow jumping mouse that may result from current or projected future non-Federal actions.

### **7.12.2 Effects Determination**

The effects determination only addresses changes in management that would occur from the Amendment. Existing management conditions that would not be changed as a result of the Amendment have already been consulted on using agency approved methods and will not be analyzed in this document.

Management actions included in the Amendment are largely supportive in nature, and guide or advise other program actions and activities in a manner conducive to maintaining and/or promoting population growth and habitat for the sage-grouse. Management actions included in the Amendment such as increased monitoring, data collection, greater coordination and review, and noise, distance, and timing restrictions, would have no effect on Preble's meadow jumping mouse because no surface disturbing actions would occur. Activities included in the Amendment are not anticipated to affect the species. The wetland habitats where Preble's meadow jumping mouse exists are not typically used by sage-grouse. Activities conducted under the Amendment are designed to improve and benefit Sage-grouse habitat and populations. Because no effects to Preble's meadow jumping mouse would occur and any actions which may directly or indirectly benefit the species are unlikely, implementation of the Amendment would have "**No Effect**" on the Preble's meadow jumping mouse, within the Bridger Teton, Pinedale, Kemmerer, Casper, Rock Springs, Thunder Basin and Newcastle Field Offices. Due to the possibility of beneficial effects to the Preble's mouse, implementation of the Amendment would lead to a determination of "May Affect, Not Likely to Adversely Affect for the Preble's mouse in the Rawlins and Medicine Bow field office areas.

**Table 15-Summary and Determination of Effects for the Preble’s Meadow Jumping Mouse**

<b>Program</b>	<b>Bridger Teton</b>	<b>Pinedale</b>	<b>Kemmerer</b>	<b>Rock Springs</b>	<b>Rawlins</b>	<b>Medicine Bow</b>	<b>Casper</b>	<b>Thunder Basin</b>	<b>Newcastle</b>
<b>Lands and Realty</b>	NE	NE	NE	NE	NLAA	NLAA	NE	NE	NE
<b>Livestock</b>	NE	NE	NE	NE	NLAA	NLAA	NE	NE	NE
<b>Mineral Resources</b>	NE	NE	NE	NE	NLAA	NLAA	NE	NE	NE
<b>Recreation</b>	NE	NE	NE	NE	NLAA	NLAA	NE	NE	NE
<b>Special Designations</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Special Status Species</b>	NE	NE	NE	NE	NLAA	NLAA	NE	NE	NE
<b>Transportation and Access</b>	NE	NE	NE	NE	NLAA	NLAA	NE	NE	NE
<b>Vegetation</b>	NE	NE	NE	NE	NLAA	NLAA	NE	NE	NE
<b>Watershed and Water Quality</b>	NE	NE	NE	NE	NLAA	NLAA	NE	NE	NE
<b>Wild Horses</b>	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>Wildland Fire</b>	NE	NE	NE	NE	NLAA	NLAA	NE	NE	NE
<b>Wildlife and Fisheries</b>	NE	NE	NE	NE	NLAA	NLAA	NE	NE	NE

NLAA= May affect, not likely to adversely affect

LAA = May affect, likely to adversely affect

NE = No effect

NJ = No Jeopardy

### **7.13 Western yellow-billed cuckoo (*Coccyzus americanus*) - Threatened**

#### **7.13.1 Effects of Selected Alternative**

##### **Lands and Realty**

Activities under the lands and realty program described in the Amendment include, management of sage-grouse PHMAs (Action 30), seasonal timing constraints (Action 31), restrictions which protect sage-grouse on new right-of-way corridors in greater sage-grouse habitat (Action 32), designing of powerlines and guy wires to minimize wildlife related impacts and constructed to the latest APLIC standards (Action 34, 35, 38), reclamation of sites (Action 35), prohibition of wind turbines in Greater Sage-Grouse habitat (Action 36), avoidance of MET tower supports in PHMA (Action 38), retention of PHMA (Action 40), identification of sage-grouse habitat in mineral right areas or conservation easement areas (Action 41), acquisition of Greater Sage-Grouse lands (Action 42), and consideration of non-mineral withdrawal actions to protect the species (Action 43).

Lands and realty management actions included in the Amendment are not likely to occur in the wetland habitats of the Western yellow-billed cuckoo. Greater Sage-Grouse occur in lands dominated by large sagebrush stands and two hectares of dense riparian vegetation is considered the absolute minimum size for cuckoo occupancy, as no cuckoos have been detected successfully nesting in patches smaller than two hectares."(Corman and Magill 2000, Halterman et al 2001).

However, sagebrush dominated stands may be located adjacent to wetland habitats. Although unlikely, changes in some of the lands and realty management actions included in the Amendment may indirectly protect Western yellow-billed cuckoo through land acquisitions, retentions, and reclamations. Restrictions of right-of-way corridors could also benefit the species by reducing ground disturbances in habitat occupied by Western yellow-billed cuckoo. Road closures would reduce the number of people within Western yellow-billed cuckoo habitat and the resulting behavioral disruption impacts on the species and its proposed critical habitat.

### **Livestock**

Livestock management actions described in the Amendment include the following: evaluation of opportunities to coordinate management plans and strategies under a single management plan with other agencies and stake holders and include sage-grouse management (Action 22), develop voluntary grazing strategies that improve sage-grouse populations and habitat(Action 45), adjustments to grazing management (Action 46, 139), sage-grouse habitat objectives and management would be incorporated into all grazing permit renewals (Action 48), progress toward achieving land health standards in sage-grouse PHMAs (Action 49), management of voluntarily relinquished permits or preferences (Action 50), coordinate with permittees/lessees to develop drought contingency plans (Action 52), evaluate and modify existing range improvements to improve sage-grouse habitat (Action 53), designate specific routes and timeframes for trailing which includes the avoidance of stopovers in sage-grouse leks (Action 54), promote balanced grazing between upland and riparian areas (Action 55), manage range improvements in a way that promotes sage-grouse and its habitats (Action 56), and evaluate and modify effects on sage-grouse from spring and seep developments such as pipelines and structures (Action 57).

Two hectares of dense riparian vegetation is considered the absolute minimum size for cuckoo occupancy, as no cuckoos have been detected successfully nesting in patches smaller than two hectares."(Corman and Magill 2000, Halterman et al 2001). Because Greater Sage-Grouse occur in lands dominated by large sagebrush stands, livestock management actions meant to benefit sage-grouse would not occur in Western yellow-billed cuckoo habitat. Actions that would not affect Western yellow-billed cuckoo include Action 22, 45, 48, 49, 53, 54, 56, 57. Although unlikely, changes in some of the Livestock management program may indirectly protect the species through the development of a drought contingency plan (Action 52), which could reduce grazing pressure near Western yellow-billed cuckoo habitats; the promotion of balanced grazing (Action 55) could also alleviate heavy grazing impact in wetland areas.

### **Mineral Resources**

Minerals management actions included in the Amendment include the following: designing roads which minimize impacts in sage-grouse PHMAs (Action 20), protective modifications to lease stipulations within sage-grouse habitat (Action 58, 60, 61, 62, 63, 66, 68, 71, 72, 75, 77, 78, 80, 81). Other actions include, proposed withdrawal recommendations of some areas of PHMA from mineral exploration (Action 79, 139), minimization and avoidance of surface disturbances (Action 79), prohibit strip mining near sage-grouse (Action 76), prohibition of geophysical operations near sage-grouse, right-of-way and vehicle limitations, timing restrictions during breeding season (Action 60), working with permittees/lessees to apply sage-grouse conservation measures, distance limitations (Action 60, 66), requiring reclamation plans (Action 69a),

minimization of habitat fragmentation (Action 62, 67), noise reduction, and minimize impacts to related sensitive resources.

Planning measures which consider the construction of a master plan for development or leasing when impacts to sage-grouse could occur (Action 66), requiring reclamation plans (Action 69a), noise, timing and distance restrictions (Action 60) and implementing a reclamation bond in sage-grouse areas (Action 66) would not affect Western yellow-billed cuckoo or its proposed critical habitat because no surface disturbing actions would occur.

Two hectares of dense riparian vegetation is considered the absolute minimum size for cuckoo occupancy, as no cuckoos have been detected successfully nesting in patches smaller than two hectares."(Corman and Magill 2000, Halterman et al 2001). Because greater sage-grouse do not reside in the same habitat required by Western yellow-billed cuckoo, management actions intended to protect sage-grouse would not directly affect Western yellow-billed cuckoo. Although unlikely, because the species may occur in the same geographical area, some management actions may inadvertently benefit the species. Beneficial actions may include limitations of road developments and implementing measures to reduce pollutants. These actions could limit road access within Western yellow-billed cuckoo habitat which would benefit the species. It is not anticipated that the management actions would negatively affect the species or its proposed critical habitat.

### **Recreation**

Recreation management actions include BLM SRPs and Forest Service Recreation SUAs would be allowed in sage-grouse PHMA, unless negative impacts to sage-grouse cannot be adequately mitigated (Action 82).

The issuance of BLM SRP's and Forest Service recreation SUA's has already been consulted on during the planning process of their respective land use plans. However, the change in the Amendment and the area which needs to be consulted, would be the closing of SRP's and SUA's in PHMAs sage-grouse habitats when negative impacts cannot be mitigated. The closing of any BLM SRP or Forest Service Recreation SUA in PHMAs would not directly affect the Western yellow-billed cuckoo. Although unlikely, the closing of SRP's and SUA's may benefit the species and protect it and its proposed critical habitat from negative recreation impacts.

### **Special Designations**

No new special designation actions are included in the Amendment (Action 84). As such, special management actions would not affect the Western yellow-billed cuckoo or its proposed critical habitat.

### **Special Status Species**

Special status species management action include the collection of sage-grouse baseline data during project planning (Action 4), the modification of existing notices and plans to minimally impact PHMAs (Action 12), agencies will meet annually to coordinate and review sage-grouse data (Action 16), development of adaptive management strategies in support of the population management objectives for sage-grouse (Action 137), maintain at least 67% of the 2005-2008 sage-grouse PHMA population within the State of Wyoming (Action 138), and all existing planning decision will be retained unless vacated or modified by decisions in this plan amendment (Action 25).

Actions included in the special species management program such as the collection of data (Action 4), agencies meeting annually to coordinate sage-grouse data (Action 16), and the development of adaptive management strategies (Action 137), retainment of existing plans unless modified in the Amendment (Action 25), would not have any effect on the Western yellow-billed cuckoo or its proposed critical habitat because no surface disturbing actions would occur as a result of these management actions.

However, Action 12 which includes the modification of existing notices and plans to minimally impact PHMAs may indirectly benefit the species by reducing impacts to PHMAs. Although unlikely, the reduction of impacts in PHMAs may also indirectly benefit Western yellow-billed cuckoo which may occur in adjacent habitats.

### **Travel Management**

Travel management actions included in the Amendment, include restricting motorized travel to existing roads and trails, until route designations are made during subsequent implementation of travel management planning (Action 18), designate routes with priority habitat and assess existing plans for consistency with sage-grouse conservation objectives (Action 19), non-sand dune portions of the Dune Pond Cooperative Management Area within sage-grouse PHMAs would be limited to existing roads and trails (Action 86, 87), avoidance of new road construction within 1.9 miles of habitat (Action 88), restricting upgrades or new road construction within Greater Sage-Grouse habitat (Action 89), development of new roads would be constructed to the absolute minimum value (Action 90), natural reclamation of roads and trails would be allowed in travel management plans within sage-grouse PHMAs, in appropriate situations where additional resource damage is not foreseeable (Action 91), when reseeding roads and trails within sage-grouse PHMAs, appropriate seed mixtures would be used and the use of transplanted sagebrush would be considered (Action 92).

Although unlikely, travel management actions such as the minimization, reclamation, avoidance, restriction and closure of various roads may inadvertently benefit the species even though Greater Sage-Grouse do not occur in the same habitat as Western yellow-billed cuckoo (Action 18, 86, 88, 89). For example, Western yellow-billed cuckoo may be protected if a road restriction or closure in sage-grouse habitat blocks access to a road which leads to wetland habitat. The use of approved seed mixtures (Action 92) and implementation of travel management plans (Action 18) would likely have no effect on the Western yellow-billed cuckoo or its proposed critical habitat.

### **Vegetation**

Vegetation management actions include, the application of seasonal restrictions for implementing vegetation management treatments and monitoring to benefit sage-grouse (Action 6), design range projects in a manner that minimizes potential for invasive species establishment and to monitor and treat invasive species associated with existing range improvements (Action 9), vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species (Action 11), work with various agencies and stake holders to coordinate and enhance Greater Sage-Grouse population and habitat (Action 22), improvement of vegetation composition and structure to benefit sage-grouse (Action 93, 95, 100, 107), restrict sagebrush activities that reduces sagebrush canopy to less than 15% (Action 94), development of recommended protocols and treatments to protect sage-grouse and sage-grouse habitat (Action 95, 96), deferment of livestock grazing on vegetative treatments to improve habitat (Action 97), recommendations on vegetative treatments (Action 98, 100, 101, 104, 105), reclamation or restoration of surface disturbances in sage-grouse habitats (Action 99, 100, 101, 103, 106), the use of native seeds which are certified weed free for fuels treatments (Action 100, 102, 103, 104), pest treatments to control Wyoming grasshopper and Mormon cricket outbreaks in Greater Sage-Grouse PHMAs (Action 108).

The use of herbicide on noxious and invasive species (Action 11), vegetation treatments (Actions 93, 94, 95, 100, 102, 103, 104, 105, 107) and pest control treatments for Wyoming grass hopper and Mormon crickets (Action 108) have already been consulted on in their respective Land Use plans using agency approved protocols. However, the changes in the Amendment would direct managers to use updated sage-grouse information which would benefit the sage-grouse. For example, managers can better control insect outbreaks in PHMAs if the PHMAs are identified.

Vegetation management actions are not expected to directly impact occupied or potential Western yellow-billed cuckoo habitat. Two hectares of dense riparian vegetation is considered the absolute minimum size for cuckoo occupancy, as no cuckoos have been detected successfully nesting in patches smaller than two hectares."(Corman and Magill 2000, Halterman et al 2001). Vegetation management actions such as season restrictions (Action 6), monitoring efforts (Action 9), and working collaboratively with various agencies (Action 22) are not expected to directly or indirectly impact occupied or potential Western yellow-billed cuckoo habitat or its proposed critical habitat because no surface disturbing actions would occur. However, although unlikely, actions that minimize the potential for the spread of noxious and invasive weeds (Action 9), deferment of livestock (Action 97), and the improvement of vegetative composition (Action 93, 95, 100, 107) may inadvertently and indirectly benefit the species through improved habitat conditions.

### **Wild Horses**

Wild horse management action include incorporating rangeland improvements for wild horses in Greater Sage-Grouse PHMAs (Action 109), consideration of sage-grouse PHMAs when evaluating AML's (Action 110), considering sage-grouse PHMAs when conducting land health assessments (Action 111), addressing direct and indirect effects to sage-grouse populations and habitats when conducting NEPA analysis for wild horse and burro management activities (Action 112), and to coordinate with all other resources to conduct land health assessments within all BLM HMAs (Action 113).

Based on known locations of Western yellow-billed cuckoo as shown on USFWS maps (USFWS 2013), none of the known Western yellow-billed cuckoo sites are located in herd management areas. As a result, no impacts from wild horse management are anticipated to occur to the species or its proposed critical habitat.

### **Wildland Fire**

Wildland fire management actions included in the Amendment include, fire and fuels management which contributes to the protection and enhancement of sagebrush habitat that supports sage-grouse populations (Action 26), complete and continue to update Greater Sage-Grouse Landscape Wildfire & Invasive necessary to maintain sagebrush habitat to support interconnecting sage-grouse populations which includes identification of annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments (Action 27), implementation of coordinated inter-agency approach to fire restrictions for sage-grouse (Action 28), utilization of fire management strategies and tactics to achieve sage-grouse resource objectives (Action 29), fuel treatments would be implemented with an emphasis of protecting and enhancing PHMAs (Action 114), restoring burned areas within PHMAs (Action 115), post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants to return to suitable sage-grouse habitat (Action 117), avoiding treatments in areas containing old trees or persistent woodlands (Action 118), and management actions which benefit sage-grouse during fire suppression activities (Action 124).

Changes to existing wildland fire management are not expected to directly impact occupied or potential Western yellow-billed cuckoo habitat. Two hectares of dense riparian vegetation is considered the absolute minimum size for cuckoo occupancy, as no cuckoos have been detected successfully nesting in patches smaller than two hectares (Corman and Magill 2000, Halterman et al 2001). Because greater sage-grouse do not reside in the same habitat required by Western yellow-billed cuckoo, most of the wildland fire management actions intended to protect sage-grouse would not affect Western yellow-billed cuckoo or its proposed critical habitat. No planned surface disturbing wildland fire management actions (i.e. prescribed fire) would occur without proper analysis and implementation of all appropriate conservation measures in order to ensure the protection of the Western yellow-billed cuckoo. It is anticipated that new proposals of fire management actions would result.

## **Wildlife and Fisheries**

Wildlife and fisheries management actions described in the Amendment include protocols for sage-grouse monitoring (Actions 1, 3, 125), development of landscape level restoration, conservation and maintenance strategies (Actions 8, 14, 15, 21) application of required design features (Action 10), addition of new sage-grouse habitat (Action 13), limitation of oil and gas development densities (Action 126), limitation of all surface disturbances to 5% per 640 acres (Action 127), mitigation protocol (Actions 5, 7, 128), prohibition of surface disturbing activities within 0.6 mile radius of occupied sage-grouse leks within PHMAs (Action 129), prohibition of surface disturbing activities within 0.25 mile radius of occupied sage-grouse leks outside PHMAs (Action 130), timing restrictions in breeding, nesting, and brooding PHMA (Actions 17, 131, 132, 133, 134), promote control of predators to sage-grouse or sage-grouse habitat (Action 135), and implementation of noise restrictions (Action 136).

Because Greater Sage-Grouse do not reside in the same habitat required by Western yellow-billed cuckoo, management actions intended to protect sage-grouse would not directly affect Western yellow-billed cuckoo. However, because the species may occur in the same geographical area, some management actions may inadvertently benefit Western yellow-billed cuckoo. Beneficial actions may include, limitation of oil and gas development densities, restrictions of surface disturbing activities, and increased mitigation protocol. Other management actions such as the implementation of noise restrictions (Action 135) and timing restrictions (Actions 17, 131, 132, 133 and 134) would have no effect on Western yellow-billed cuckoo or its proposed critical habitat.

## **Cumulative Effects**

Cumulative impacts according to the ESA, Section 7 Consultation Handbook definition (USFWS 1998a) include the incremental impacts of future State, or private activities (i.e., excluding federal activities), that are reasonably certain to occur within the action area of the Federal action subject to consultation.

Existing and proposed activities on non-federal lands in the planning area that have the potential to cumulatively affect the species include but are not limited to the following:

- Non-Federal oil and gas and related energy development
- Water depletions from irrigation diversions and dams
- Livestock grazing on private lands
- Subdivision development along rivers
- Recreation along rivers and river corridors (including camping, rafting, and hunting)
- Transmission lines

Implementation of the Amendment would not change any potential effects to Western yellow-billed cuckoo or its proposed critical habitat that may result from current or projected future non-Federal actions.

### **7.13.2 Effects Determination**

The effects determination only addresses changes in management that would occur from the Amendment. Existing management conditions that would not be changed as a result of the Amendment have already been consulted on using agency approved methods and would not be analyzed in this document.

Management actions included in the Amendment are largely supportive in nature, and guide or advise other program actions and activities in a manner conducive to maintaining and/or promoting population growth and habitat for the sage-grouse. Management actions included in the Amendment such as increased monitoring, data collection, greater coordination and review, and noise, distance, and timing restrictions, would have no effect on Western yellow-billed cuckoo because no surface disturbing actions would occur. Western yellow-billed cuckoo occur in dense riparian vegetation. As such, Greater Sage-Grouse actions would not occur in

Western yellow-billed cuckoo habitat. Although unlikely, some of the measures meant to protect sage-grouse may indirectly benefit Western yellow-billed cuckoo. Activities included in the Amendment are not anticipated to negatively affect the species. Activities conducted under the Amendment are designed to improve and benefit sage-grouse habitat and populations. Because no negative affects to Western yellow-billed cuckoo would occur and any actions which may directly benefit the species are unlikely, implementation of the Amendment would lead to a determination of **“May Affect, Not Likely to Adversely Affect”** to Western yellow-billed cuckoo, within the Bridger Teton, Pinedale, Kemmerer and Rock Springs Field office portions planning area, as well as a **“No destruction or adverse Modification”** to proposed critical habitat in the Rock Springs Field Office area. Because no habitat for the western yellow-billed cuckoo has been identified, and they are not expected to occur in the Rawlins, Medicine Bow, Casper, Thunder Basin and Newcastle portions of the planning area, implementation of the Amendment would have **“No effect”** on the species in those areas.

**Table 16-Summary and Determination of Effects for the Western yellow-billed cuckoo**

<b>Program</b>	<b>Bridger Teton</b>	<b>Pinedale</b>	<b>Kemmerer</b>	<b>Rock Springs</b>	<b>Rock Springs Proposed Critical habitat</b>	<b>Rawlins</b>	<b>Medicine B.</b>	<b>Casper</b>	<b>Thunder Basin</b>	<b>Newcastle</b>
<b>Lands and Realty</b>	NLAA	NLA A	NLA A	NLA A	NE	NE	NE	NE	NE	NE
<b>Livestock</b>	NLAA	NLA A	NLA A	NLA A	NE	NE	NE	NE	NE	NE
<b>Mineral Resources</b>	NLAA	NLA A	NLA A	NLA A	NE	NE	NE	NE	NE	NE
<b>Recreation</b>	NLAA	NLA A	NLA A	NLA A	NE	NE	NE	NE	NE	NE
<b>Special Designations</b>	NLAA	NLA A	NLA A	NLA A	NE	NE	NE	NE	NE	NE
<b>Special Status Species</b>	NLAA	NLA A	NLA A	NLA A	NE	NE	NE	NE	NE	NE
<b>Transportation and Access</b>	NLAA	NLA A	NLA A	NLA A	NE	NE	NE	NE	NE	NE
<b>Vegetation</b>	NLAA	NLA A	NLA A	NLA A	NE	NE	NE	NE	NE	NE
<b>Watershed and Water Quality</b>	NLAA	NLA A	NLA A	NLA A	NE	NE	NE	NE	NE	NE
<b>Wild Horses</b>	NLAA	NLA A	NLA A	NLA A	NE	NE	NE	NE	NE	NE
<b>Wildland Fire</b>	NLAA	NLA A	NLA A	NLA A	NE	NE	NE	NE	NE	NE
<b>Wildlife and Fisheries</b>	NLAA	NLA A	NLA A	NLA A	NE	NE	NE	NE	NE	NE

NLAA= May affect, not likely to adversely affect

LAA = May affect, likely to adversely affect

NE = No effect (No Adverse Modification for critical habitat)

## **7.14 Northern Long Eared Bat (*Myotis septentrionalis*) - Proposed**

The Northern long-eared bat is currently proposed for listing (78 FR 61046) with a proposed 4(d) rule (80 FR 2371). The US Fish and Wildlife Service is accepting comments on the proposed rule through March 17, 2015. Because it is possible that listing of this species, with or without a proposed 4(d) rule could occur within the timeframe for consideration of a final record of decision (ROD) for the Amendment, this BA provides analysis and determinations consistent with a fully listed species. This BA then documents consideration of any potential for effect and determines that the Amendment would have no effect on the northern long-eared bat. Pertinent analysis and details of rationale for no effect determinations are offered below for informational purposes. Because there are no anticipated effects to the northern long-eared bat from the Amendment, the determination as a proposed species is that the Amendment will also not jeopardize the species if it were to remain proposed during the decision-making process.

### **7.14.1 Effects of Selected Alternative**

#### **Lands and Realty**

Activities under the lands and realty program described in the Amendment include, management of sage-grouse PHMAs (Action 30), seasonal timing constraints (Action 31), restrictions which protect sage-grouse on new right-of-way corridors in Greater Sage-Grouse habitat (Action 32), designing of powerlines and guy wires to minimize wildlife related impacts and constructed to the latest APLIC standards (Action 34, 35, 38), reclamation of sites (Action 35), prohibition of wind turbines in Greater Sage-Grouse habitat (Action 36), avoidance of MET tower supports in PHMA (Action 38), retention of PHMA (Action 40), identification of sage-grouse habitat in mineral right areas or conservation easement areas (Action 41), acquisition of Greater Sage-Grouse lands (Action 42), and consideration of non-mineral withdrawal actions to protect the species (Action 43).

Lands and realty management actions included in the Amendment are not likely to occur in the habitats of the northern long-eared bat. Greater Sage-Grouse occur in lands dominated by large sagebrush stands, while northern long-eared bats utilize forested areas, caves, crevices and other roosting habitat. However, sagebrush dominated stands may be located adjacent to some of these habitats. Although unlikely, changes in some of the lands and realty management actions included in the Amendment may indirectly protect northern long-eared bats through land acquisitions, retentions, and reclamations. Restrictions of right-of-way corridors could also benefit the species by reducing habitat loss and ground disturbances in habitat occupied by northern long-eared bat. Road closures would reduce the number of people within northern long-eared bat habitat and likewise, reduce potential for human disturbance on the species and its habitat. Because these bats are vulnerable to human activity, reducing disturbances maintains the suitability of northern long-eared bat habitat.

#### **Livestock**

Livestock management actions described in the Amendment include the following: evaluation of opportunities to coordinate management plans and strategies under a single management plan with other agencies and stake holders and include sage-grouse management (Action 22), develop voluntary grazing strategies that improve sage-grouse populations and habitat (Action 45), adjustments to grazing management (Action 46, 139), sage-grouse habitat objectives and management would be incorporated into all grazing permit renewals (Action 48), progress toward achieving land health standards in sage-grouse PHMAs (Action 49), management of voluntarily relinquished permits or preferences (Action 50), coordinate with permittees/lessees/lessees to develop drought contingency plans (Action 52), evaluate and modify existing range improvements to improve

sage-grouse habitat (Action 53), designate specific routes and timeframes for trailing which includes the avoidance of stopovers in sage-grouse leks (Action 54), promote balanced grazing between upland and riparian areas (Action 55), manage range improvements in a way that promotes sage-grouse and its habitats (Action 56), and evaluate and modify effects on sage-grouse from spring and seep developments such as pipelines and structures (Action 57).

The changes to existing livestock management are meant to provide additional protective measures for the greater sage-grouse. Management actions included in the Amendment would not directly occur in northern long-eared bat habitat. Northern long-eared bats forage mostly in forested areas, but may also utilize edge habitats for foraging or for commuting along open areas (Henderson and Broders 2008; Jantzen and Fenton 2013). They roost in trees, buildings and crevices and their hibernacula include caves and mines. Actions such as better coordination and planning with other agencies and stakeholders including Actions 22, 45, 48, 49, 53, 54, 56, 57) would not negatively affect or jeopardize the species because no on the ground action would take place. Although unlikely, other changes such as the development of a drought contingency plan (Action 52), and the promotion of balanced grazing (Action 55) could benefit northern long-eared bats as well as sage-grouse. Maintaining healthy conditions in upland and edge habitats will provide northern long-eared bats with suitable areas for foraging and roosting.

### **Mineral Resources**

Minerals management actions included in the Amendment include the following: designing any new roads to minimize impacts in sage-grouse PHMAs (Action 20), protective modifications to lease stipulations within sage-grouse habitat (Action 58, 60, 61, 62, 63, 66, 68, 71, 72, 75, 77, 78, 80, 81). Other actions include, proposed withdrawal recommendations of some areas of PHMA from mineral exploration (Action 79, 139), minimization and avoidance of surface disturbances (Action 79), prohibit strip mining near sage-grouse (Action 76), prohibition of geophysical operations near sage-grouse, right-of-way and vehicle limitations, timing restrictions during breeding season (Action 60), working with permittees/lessees to apply sage-grouse conservation measures, distance limitations (Action 60, 66), requiring reclamation plans (Action 69a), minimization of habitat fragmentation (Action 62, 67), noise reduction, and minimize impacts to related sensitive resources.

Because sage-grouse do not reside in the same habitat required by the northern long-eared bat, management actions intended to protect sage-grouse would not jeopardize the northern long-eared bat. Although unlikely, some management actions may inadvertently benefit the species because they may occur in the same geographical area. Beneficial actions may include limitations of road developments and implementing measures to reduce pollutants. These actions could limit road access within northern long-eared bat habitat which would prevent forest clearing and construction related disturbances, thereby maintaining contiguous tracts of forested habitat. It is not anticipated that the management actions would negatively affect the species.

### **Recreation**

Recreation management actions include BLM SRPs and Forest Service Recreation SUAs would be allowed in sage-grouse PHMA, unless negative impacts to sage-grouse cannot be adequately mitigated (Action 82).

The issuance of BLM SRP's and Forest Service recreation SUA's has already been consulted on during the planning process of their respective land use plans. However, the change in the Amendment and the area which needs to be consulted would be the closing of SRP's and SUA's in PHMAs when negative impacts cannot be mitigated. The closing of any BLM SRP or Forest Service recreation SUA in PHMAs would not directly affect the northern long-eared bat. Although unlikely, the closing of SRP's and SUA's may benefit the species by limiting recreation activities which may adversely affect habitat or cause disturbance, such as hiking and ORV use. This would prevent stressing bats and dispersal of current inhabitants to other areas.

### **Special Designations**

No new special designation actions are included in the Amendment (Action 84). As such, special management actions would not affect the northern long-eared bat.

### **Special Status Species**

Special status species management actions include the collection of sage-grouse baseline data during project planning (Action 4), the modification of existing notices and plans to minimally impact PHMAs (Action 12), agencies will meet annually to coordinate and review sage-grouse data (Action 16), development of adaptive management strategies in support of the population management objectives for sage-grouse (Action 137), maintain at least 67% of the 2005-2008 sage-grouse PHMA population within the State of Wyoming (Action 138), and all existing planning decisions will be retained unless vacated or modified by decisions in this plan amendment (Action 25).

Actions in the special status species management program include the collection of data (Action 4), annual agency meetings to coordinate sage-grouse data (Action 16), and the development of adaptive management strategies (Action 137). Existing plans will be retained unless modified in the Amendment (Action 25). These actions would not have any effect on the northern long-eared bat because no surface disturbing actions would occur as a result of these management actions.

Action 12, which includes the modification of existing notices and plans to minimally impact PHMAs, may indirectly benefit the species by reducing impacts to PHMAs. Although unlikely, the reduction of impacts in PHMAs may also indirectly benefit northern long-eared bat which may occur in adjacent habitats.

### **Travel Management**

Travel management actions included in the Amendment, include restricting motorized travel to existing roads and trails, until route designations are made during subsequent implementation of travel management planning (Action 18), designate routes with priority habitat and assess existing plans for consistency with sage-grouse conservation objectives (Action 19), non-sand dune portions of the Dune Pond Cooperative Management Area within sage-grouse PHMAs would be limited to existing roads and trails (Action 86, 87), avoidance of new road construction within 1.9 miles of habitat (Action 88), restricting upgrades or new road construction within Greater Sage-Grouse habitat (Action 89), development of new roads would be constructed to the absolute minimum value (Action 90), natural reclamation of roads and trails would be allowed in travel management plans within sage-grouse PHMAs, in appropriate situations where additional resource damage is not foreseeable (Action 91), when reseeding roads and trails within sage-grouse PHMAs, appropriate seed mixtures would be used and the use of transplanted sagebrush would be considered (Action 92).

Travel management actions such as the minimization, reclamation, avoidance, restriction and closure of various roads should have no effect on the species because Greater Sage-Grouse do not typically occur in the same habitat as northern long-eared bat (Action 18, 86, 88, 89). The use of approved seed mixtures (Action 92) and implementation of travel management plans (Action 18) would likely have no effect on the northern long-eared bat.

### **Vegetation**

Vegetation management actions include; the application of seasonal restrictions for implementing vegetation management treatments and monitoring to benefit sage-grouse (Action 6); design range projects in a manner that minimizes potential for invasive species establishment and to monitor and treat invasive species associated with existing range improvements (Action 9); vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species (Action 11); work with various agencies and stakeholders to coordinate and enhance Greater Sage-Grouse population and habitat (Action 22); improvement of

vegetation composition and structure to benefit sage-grouse (Action 93, 95, 100, 107); restrict sagebrush activities that reduces sagebrush canopy to less than 15% (Action 94); development of recommended protocols and treatments to protect sage-grouse and sage-grouse habitat (Action 95, 96); deferment of livestock grazing on vegetative treatments to improve habitat (Action 97); recommendations on vegetative treatments (Action 98, 100, 101, 104, 105); reclamation or restoration of surface disturbances in sage-grouse habitats (Action 99, 100, 101, 103, 106); the use of native seeds which are certified weed free for fuels treatments (Action 100, 102, 103, 104); pest treatments to control Wyoming grasshopper and Mormon cricket outbreaks in Greater Sage-Grouse PHMAs (Action 108).

The use of herbicide on noxious and invasive species (Action 11), vegetation treatments (Actions 93, 94, 95, 100, 102, 103, 104, 105, 107) and pest control treatments for Wyoming grass hopper and Mormon crickets (Action 108) have already been consulted on in their respective Land Use plans using agency approved protocols. However, the changes in the Amendment would direct managers to use updated sage-grouse information which would benefit the sage-grouse. For example, managers can better control insect outbreaks in PHMAs if the PHMAs are identified.

The changes to existing vegetation management listed are meant to provide additional protective measures for the Greater Sage-Grouse. As such, management actions included in the Amendment would not occur in northern long-eared bat habitat. Northern long-eared bats typically forage in deciduous and coniferous forests, roost in trees, buildings and crevices, and hibernate in caves and mines. Activities conducted under the vegetation management program are designed to improve and benefit Greater Sage-Grouse habitat and populations. The species habitat areas do not typically overlap. Therefore, activities listed under this management program would not adversely affect the northern long-eared bat because their habitat requirements differ significantly from sage-grouse.

### **Wild Horses**

Wild horse management actions include incorporating rangeland improvements for wild horses in Greater Sage-Grouse PHMAs (Action 109), considering sage-grouse PHMAs when evaluating AML's (Action 110), considering sage-grouse PHMAs when conducting land health assessments (Action 111), addressing direct and indirect effects to sage-grouse populations and habitats when conducting NEPA analysis for wild horse and burro management activities (Action 112), and coordinating with all other resources to conduct land health assessments within all BLM HMAs (Action 113).

There are no wild horse Herd Management Areas that overlap with known northern long-eared bat habitat in Wyoming. As a result, no impacts from wild horse management are anticipated to occur.

### **Wildland Fire**

Wildland fire management actions in the Amendment include fire and fuels management which contributes to the protection and enhancement of sagebrush habitat that supports sage-grouse populations (Action 26); additions and updates to sage-grouse Landscape Wildfire & Invasive Species Assessments, which are necessary to maintain sagebrush habitat to support interconnecting sage-grouse populations which includes identification of annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments (Action 27); implementation of coordinated inter-agency approach to fire restrictions for sage-grouse (Action 28); utilization of fire management strategies and tactics to achieve sage-grouse resource objectives (Action 29); fuel treatment implementation with an emphasis on protecting and enhancing PHMAs (Action 114); restoring burned areas within PHMAs (Action 115); design post fuels management projects to ensure long-term persistence of seeded or pre-treatment native plants to return to suitable sage-grouse habitat (Action 117); avoiding treatments in areas containing old trees

or persistent woodlands (Action 118), and management actions which benefit sage-grouse during fire suppression activities (Action 124).

The changes to existing wildland fire management listed are meant to provide additional protective measures for the Greater Sage-Grouse. As such, management actions included in the Amendment would not occur in northern long-eared bat habitat. Northern long-eared bats typically forage in deciduous and coniferous forests, roost in trees, buildings and crevices, and hibernate in caves and mines. Activities conducted under the wildland fire management program are designed to improve and benefit Greater Sage-Grouse habitat and populations. The species habitat areas do not typically overlap. Therefore, activities listed under this management program would not adversely affect the northern long-eared bat because their habitat requirements differ significantly from sage-grouse.

No surface disturbing wildland fire management actions would occur without proper analysis and implementation of all appropriate conservation measures in order to ensure the protection of the northern long-eared bat. It is anticipated that new proposals of fire management actions would result.

### **Wildlife and Fisheries**

Wildlife and fisheries management actions described in the Amendment include; protocols for sage-grouse monitoring (Actions 1, 3, 125); development of landscape level restoration, conservation and maintenance strategies (Actions 8, 14, 15, 21); application of required design features (Action 10); addition of new sage-grouse habitat (Action 13); limitation of oil and gas development densities (Action 126); limitation of all surface disturbances to 5% per 640 acres (Action 127); mitigation protocol (Actions 5, 7, 128); prohibition of surface disturbing activities within 0.6 mile radius of occupied sage-grouse leks within PHMA (Action 129), prohibition of surface disturbing activities within 0.25 mile radius of occupied sage-grouse leks outside PHMA (Action 130); timing restrictions in breeding, nesting, and brooding PHMA (Actions 17, 131, 132, 133, 134); promote control of predators to sage-grouse or sage-grouse habitat (Action 135); and implementation of noise restrictions (Action 136).

Because Greater Sage-Grouse do not reside in the same habitat required by the northern long-eared bat, management actions intended to protect sage-grouse would not directly affect northern long-eared bat. Other management actions such as the implementation of noise restrictions (Action 135) and timing restrictions (Actions 17, 131, 132, 133 and 134) would have no effect on northern long-eared bat.

### **Cumulative Effects**

Cumulative impacts according to the ESA, Section 7 Consultation Handbook definition (USFWS 1998a) include the incremental impacts of future State, or private activities (i.e., excluding federal activities), that are reasonably certain to occur within the action area of the Federal action subject to consultation.

Existing and proposed activities on non-federal lands in the planning area that have the potential to cumulatively affect the species include but are not limited to the following:

- Non-Federal oil and gas and related energy development
- Water depletions from irrigation diversions and dams
- Livestock grazing on private lands
- Subdivision development along rivers
- Recreation along rivers and river corridors (including camping, rafting, and hunting)
- Transmission lines

Implementation of the Amendment would not change any potential effects to northern long-eared bat that may result from current or projected future non-Federal actions.

### 7.14.2 Effects Determination

The effects determination only addresses changes in management that would occur from the Amendment. Existing management conditions that would not be changed as a result of the Amendment have already been consulted on using agency approved methods and would not be analyzed in this document.

Management actions included in the Amendment are largely supportive in nature, and guide or advise other program actions and activities in a manner conducive to maintaining and/or promoting population growth and habitat for the sage-grouse. Management actions included in the Amendment such as increased monitoring, data collection, greater coordination and review, and noise, distance, and timing restrictions, would have no effect on northern long-eared bat because no surface disturbing actions would occur. Northern long-eared bats forage in deciduous and coniferous forests, and, during the summer, typically roost singly or in colonies underneath bark or in cavities or crevices of both live trees and snags. They predominantly overwinter in hibernacula that include caves and abandoned mines. As such, Greater Sage-Grouse actions would not occur in northern long-eared bat habitat. Although unlikely, some of the measures meant to protect sage-grouse may indirectly benefit the northern long-eared bat. Activities included in the Amendment are not anticipated to negatively affect the species. Activities conducted under the Amendment are designed to improve and benefit Greater Sage-Grouse habitat and populations. Because no negative affects to northern long-eared bats would occur and any actions which may directly benefit the species are unlikely, implementation of the Amendment would cause “No Jeopardy” to the northern long-eared bat, within the planning area.

**Table 17-Summary and Determination of Effects for the Northern Long-Eared Bat**

<b>Program</b>	<b>Bridger Teton</b>	<b>Pinedale</b>	<b>Kemmerer</b>	<b>Rock Springs</b>	<b>Rawlins</b>	<b>Medicine Bow</b>	<b>Casper</b>	<b>Thunder Basin</b>	<b>Newcastle</b>
<b>Lands and Realty</b>	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ
<b>Livestock</b>	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ
<b>Mineral Resources</b>	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ
<b>Recreation</b>	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ
<b>Special Designations</b>	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ
<b>Special Status Species</b>	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ
<b>Transportation and Access</b>	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ
<b>Vegetation</b>	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ
<b>Watershed and Water Quality</b>	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ
<b>Wild Horses</b>	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ
<b>Wildland Fire</b>	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ

NLAA= May affect, not likely to adversely affect

LAA = May affect, likely to adversely affect

NE = No effect

NJ = No Jeopardy

## 7.15 Gray Wolf (*Canis lupus*) – Non-essential experimental

### 7.15.1 Effects of Selected Alternative

#### Lands and Realty

Activities under the lands and realty program include, managing sage-grouse PHMAs (Action 30), seasonal timing constraints (Action 31), restrictions which protect sage-grouse on new right-of-way corridors in greater sage-grouse habitat (Action 32), designing of powerlines and guy wires to minimize wildlife related impacts and constructed to the latest APLIC standards (Action 34, 35, 38), reclamation of sites (Action 35), prohibition of wind turbines in sage-grouse habitat (Action 36), avoidance of MET tower supports in PHMA (Action 38), retention of PHMA (Action 40), identification of sage-grouse habitat in mineral right areas or conservation easement areas (Action 41), acquisition of greater sage-grouse lands (Action 42), and consideration of non-mineral withdrawal actions to protect the species (Action 43).

The changes to existing lands and realty management listed are meant to provide additional protective measures for the Greater Sage-Grouse. Gray wolves are habitat generalists and utilize a variety of habitats but within Wyoming.

Some sagebrush dominated stands may be located within habitat utilized by gray wolves. Although unlikely, changes in some of the lands and realty management actions may inadvertently protect the species through land acquisitions, retentions, and reclamations. Restrictions of right-of-way corridors could also benefit the species by reducing ground disturbances in habitat occupied by gray wolves. Road closures would reduce the number of people within gray wolf habitat and the resulting impacts on the species, prey and habitat.

#### Livestock

Many of the livestock management actions in the Amendment include habitat improvements for greater sage-grouse through the following: evaluation of opportunities to coordinate management plans and strategies under a single management plan with other agencies and stake holders and include sage-grouse management (Action 22), develop voluntary grazing strategies that improve sage-grouse populations and habitat (Action 45), adjustments to grazing management (Action 46, 139), sage-grouse habitat objectives and management would be incorporated into all grazing permit renewals (Action 48), progress toward achieving land health standards in sage-grouse PHMAs (Action 49), management of voluntarily relinquished permits or preferences (Action 50), coordinate with permittees/lessees to develop drought contingency plans (Action 52), evaluate and modify existing range improvements to improve sage-grouse habitat (Action 53), designate specific routes and timeframes for trailing which includes the avoidance of stopovers in sage-grouse leks (Action 54), promote balanced grazing between upland and riparian areas (Action 55), manage range improvements in a way that promotes sage-grouse and its habitats (Action 56), and evaluate and modify effects on sage-grouse from spring and seep developments such as pipelines and structures (Action 57).

The changes to existing livestock management are meant to provide additional protective measures for the Greater Sage-Grouse. Gray wolves are habitat generalists and utilize a variety of habitats but within Wyoming. Actions such as better coordination and planning with other agencies and stakeholders including Actions 22, 45, 48, 49, 53, 54, 56, 57 would not affect the species because no on the ground action would take place.

Although unlikely, other changes such as the development of a drought contingency plan (Action 52), and the promotion of balanced grazing (Action 55) could benefit gray wolves as well as sage-grouse.

### **Mineral Resources**

Minerals management actions described in the Amendment include the following: designing roads which minimize impacts in sage-grouse PHMAs (Action 20), protective modifications to lease stipulations within sage-grouse habitat (Action 58, 60, 61, 62, 63, 66, 68, 71, 72, 75, 77, 78, 80, 81). Other actions include, proposed withdrawal recommendations of some areas of PHMA from mineral exploration (Action 79, 139), minimization and avoidance of surface disturbances (Action 79), prohibit strip mining near sage-grouse (Action 76), prohibition of geophysical operations near sage-grouse, right-of-way and vehicle limitations, timing restrictions during breeding season (Action 60), working with permittees/lessees to apply sage-grouse conservation measures, distance limitations (Action 60, 66), requiring reclamation plans (Action 69a), minimization of habitat fragmentation (Action 62, 67), noise reduction, and minimize impacts to related sensitive resources.

Planning measures which consider the construction of a master a plan for development or leasing when impacts to sage-grouse could occur (Action 66), noise, timing and distance restrictions (Action 60) and implementing a reclamation bond in sage-grouse areas (Action 66) would not affect gray wolves because no on the ground actions would take place.

Although unlikely, because the species may occur in the same geographical area, some management actions may indirectly benefit the species. Beneficial actions may include limitations or exclusion of road developments, minimization and avoidance of surface disturbances, minimization of habitat fragmentation, and implementing measures to reduce pollutants. These actions could reduce overall impacts and limit road access within or leading to gray wolf habitat which would benefit the species.

### **Recreation**

Changes to existing recreation management include BLM SRPs and Forest Service Recreation SUAs would be allowed in sage-grouse PHMA, unless negative impacts to sage-grouse cannot be adequately mitigated (Action 82).

The issuance of BLM SRP's and Forest Service recreation SUA's has already been consulted on during the planning process of their respective land use plans. However, the change in this document and the area which needs to be consulted, would be the closing of SRP's and SUA's in PHMAs when negative impacts cannot be mitigated. The closing of any BLM SRP or Forest Service Recreation SUA in PHMAs would not directly affect the gray wolf. Any affects to gray wolves resulting from recreation management are unlikely.

### **Special Designations**

No new special designation actions are included in the Amendment (Action 84). As such, special management actions would not affect the gray wolf.

### **Special Status Species**

Special status species management actions include the collection of sage-grouse baseline data during project planning (Action 4), the modification of existing notices and plans to minimally impact PHMAs (Action 12), agencies will meet annually to coordinate and review sage-grouse data (Action 16), development of adaptive management strategies in support of the population management objectives for sage-grouse (Action 137), maintain at least 67% of the 2005-2008 sage-grouse PHMA population within the State of Wyoming (Action 138), and all existing planning decision will be retained unless vacated or modified by decisions in this plan amendment (Action 25).

Actions included in the special species management program such as the collection of data (Action 4), agencies meeting annually to coordinate sage-grouse data (Action 16), and the development of adaptive management strategies (Action 137), retainment of existing plans unless modified in the Amendment (Action 25), would not have any effect on gray wolves because no surface disturbing action would occur.

Action 12 which includes the modification of existing notices and plans to minimally impact PHMAs may indirectly benefit the species by reducing impacts to PHMAs. However, because gray wolves utilize a variety of habitat throughout the year and are so highly adaptable, any affects to the species are unlikely.

### **Travel Management**

Travel management actions described in the Amendment include restricting motorized travel to existing roads and trails, until route designations are made during subsequent implementation of travel management planning (Action 18), designate routes with priority habitat and assess existing plans for consistency with sage-grouse conservation objectives (Action 19), non-sand dune portions of the Dune Pond Cooperative Management Area within sage-grouse PHMAs would be limited to existing roads and trails (Action 86, 87), avoidance of new road construction within 1.9 miles of habitat (Action 88), restricting upgrades or new road construction within Greater Sage-Grouse habitat (Action 89), development of new roads would be constructed to the absolute minimum value (Action 90), natural reclamation of roads and trails would be allowed in travel management plans within sage-grouse PHMAs, in appropriate situations where additional resource damage is not foreseeable (Action 91), when reseeding roads and trails within sage-grouse PHMAs, appropriate seed mixtures would be used and the use of transplanted sagebrush would be considered (Action 92).

Travel management actions such as the minimization, reclamation, avoidance, restriction and closure of various roads may inadvertently benefit the species (Action 18, 86, 88, 89). For example, gray wolves may be protected if a road restriction or closure in sage-grouse habitat blocks access to a road which leads to gray wolf habitat. However, because gray wolves utilize a variety of habitat throughout the year and are so highly adaptable, any affects to the species are unlikely.

### **Vegetation**

Vegetation management actions include, the application of seasonal restrictions for implementing vegetation management treatments and monitoring to benefit sage-grouse (Action 6), design range projects in a manner that minimizes potential for invasive species establishment and to monitor and treat invasive species associated with existing range improvements (Action 9), vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species (Action 11), work with various agencies and stake holders to coordinate and enhance Greater Sage-Grouse population and habitat (Action 22), improvement of vegetation composition and structure to benefit sage-grouse (Action 93, 95, 100, 107), restrict sagebrush activities that reduces sagebrush canopy to less than 15% (Action 94), development of recommended protocols and treatments to protect sage-grouse and sage-grouse habitat (Action 95, 96), deferment of livestock grazing on vegetative treatments to improve habitat (Action 97), recommendations on vegetative treatments (Action 98, 100, 101, 104, 105), reclamation or restoration of surface disturbances in sage-grouse habitats (Action 99, 100, 101, 103, 106), the use of native seeds which are certified weed free for fuels treatments (Action 100, 102, 103, 104), pest treatments to control Wyoming grasshopper and Mormon cricket outbreaks in Greater Sage-Grouse PHMAs (Action 108).

The use of herbicide on noxious and invasive species (Action 11), vegetation treatments (Actions 93, 94, 95, 100, 102, 103, 104, 105, 107) and pest control treatments for Wyoming grass hopper and Mormon crickets (Action 108) have already been consulted on in their respective Land Use plans using agency approved protocols. However, the changes in the Amendment would direct managers to use updated sage-grouse

information which would benefit the sage-grouse. For example, managers can better control insect outbreaks in PHMAs if the PHMAs are identified.

Vegetation management actions may occur in gray wolf occupied habitat. Wolves are highly adaptable and utilize a variety of habitats. Vegetation management actions such as season of use restrictions (Action 6), monitoring efforts (Action 9), and working collaboratively with various agencies (Action 22) are not expected to directly or indirectly impact occupied gray wolf habitat. Although unlikely, actions that minimize the potential for the spread of noxious and invasive weeds (Action 9), deferment of livestock (Action 97), and the improvement of vegetative composition (Action 93, 95, 100, 107) may inadvertently benefit gray wolves through improved habitat conditions.

### **Wild Horses**

Wild horse management actions include incorporating rangeland improvements for wild horses in Greater Sage-Grouse PHMAs (Action 109), consideration of sage-grouse PHMAs when evaluating AML's (Action 110), considering sage-grouse PHMAs when conducting land health assessments (Action 111), addressing direct and indirect effects to sage-grouse populations and habitats when conducting NEPA analysis for wild horse and burro management activities (Action 112), and to coordinate with all other resources to conduct land health assessments within all BLM HMAs (Action 113).

Gray wolves may occur within herd management areas in the planning area. Wild horse management actions include measures which are meant to protect and preserve sage-grouse habitat. As a result, changes to existing wild horse management are not likely to affect gray wolves.

### **Wildland Fire**

Wildland fire management actions described in the Amendment include, fire and fuels management which contributes to the protection and enhancement of sagebrush habitat that supports sage-grouse populations (Action 26), complete and continue to update Greater Sage-Grouse Landscape Wildfire & Invasive necessary to maintain sagebrush habitat to support interconnecting sage-grouse populations which includes identification of annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments (Action 27), implementation of coordinated inter-agency approach to fire restrictions for sage-grouse (Action 28), utilization of fire management strategies and tactics to achieve sage-grouse resource objectives (Action 29), fuel treatments would be implemented with an emphasis of protecting and enhancing PHMAs (Action 114), restoring burned areas within PHMAs (Action 115), post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants to return to suitable sage-grouse habitat (Action 117), avoiding treatments in areas containing old trees or persistent woodlands (Action 118), and management actions to benefit sage-grouse during fire suppression activities (Action 124).

Wildland fire management actions may occur in gray wolf occupied habitat. Gray wolves are highly adaptable and utilize a variety of habitats. Although unlikely, because the gray wolf may occur in the same geographical area as sage-grouse, some wildland fire management actions such as habitat restorations and post fuel treatments may inadvertently affect the species by altering prey distribution and associated escape cover, but would not jeopardize them.

### **Wildlife and Fisheries**

Wildlife and fisheries management actions described in the Amendment include protocols for sage-grouse monitoring (Actions 1, 3, 125), development of landscape level restoration, conservation and maintenance strategies (Actions 8, 14, 15, 21) application of required design features (Action 10), addition of new sage-grouse habitat (Action 13), limitation of oil and gas development densities (Action 126), limitation of all

surface disturbances to 5% per 640 acres (Action 127), mitigation protocol (Actions 5, 7, 128), prohibition of surface disturbing activities within 0.6 mile radius of occupied sage-grouse leks within PHMAs (Action 129), prohibition of surface disturbing activities within 0.25 mile radius of occupied sage-grouse leks outside PHMAs (Action 130), timing restrictions in breeding, nesting, and brooding PHMA (Actions 17, 131, 132, 133, 134), promote control of predators to sage-grouse or sage-grouse habitat (Action 135), and implementation of noise restrictions (Action 136).

Wildlife and fisheries management actions may occur in gray wolf occupied habitat. Gray wolves are highly adaptable and utilize a variety of habitats. Although greater sage-grouse may reside in the same habitat required by gray wolves, management actions intended to protect sage-grouse would not affect gray wolves. Although unlikely, because the species may occur in the same geographical area, some management actions may inadvertently benefit the species. Beneficial actions may include restrictions on oil and mineral developments, restrictions of surface disturbing activities, and increased mitigation protocol. No negative effects from wildlife and fisheries activities are anticipated.

### **Cumulative Effects**

Cumulative impacts according to the ESA, Section 7 Consultation Handbook definition (USFWS 1998a) include the incremental impacts of future State, or private activities (i.e., excluding federal activities), that are reasonably certain to occur within the action area of the Federal action subject to consultation.

Existing and proposed activities on non-federal lands in the planning area that have the potential to cumulatively affect the species include but are not limited to the following:

- Non-Federal oil and gas and related energy development
- Livestock grazing on private lands
- Timber harvesting on private lands
- Subdivision development
- Recreation
- Coal mine operations
- Transmission lines
- Seismic exploration
- Bentonite and gypsum mining

Implementation of the Amendment would not change any potential effects to the gray wolf that may result from current or projected future non-Federal actions.

### **7.15.2 Effects Determination**

The effects determination only addresses changes in management that would occur from the Amendment. Existing management conditions that would not be changed as a result of the Amendment have already been consulted on using agency approved methods and will not be analyzed in this document.

Management actions included in the Amendment are largely supportive in nature, and are meant to guide or advise other program actions and activities in a manner conducive to maintaining and/or promoting population growth and habitat for the sage-grouse. Management actions included in the Amendment which are specific to sage-grouse such as increased monitoring, data collection, greater coordination and review, and timing restrictions, would have no effect on the gray wolf because no surface disturbing actions would occur. Activities included in the Amendment are not anticipated to affect the species. Activities conducted under the Amendment are designed to improve and benefit sage-grouse habitat and populations. Because no negative effects gray wolf would occur and any actions which may directly benefit the species are unlikely,

implementation of the Amendment would cause “**No Jeopardy**” to the gray wolf, within the Pinedale, Kemmerer, Rawlins, Rock Springs and Bridger Teton field office areas.

**Table 18-Summary and Determination of Effects for the Gray Wolf**

<b>Program</b>	<b>Bridger Teton</b>	<b>Pinedale</b>	<b>Kemmerer</b>	<b>Rock Springs</b>	<b>Rawlins</b>	<b>Medicine Bow</b>	<b>Casper</b>	<b>Thunder Basin</b>	<b>Newcastle</b>
<b>Lands and Realty</b>	NJ	NJ	NJ	NJ	NJ	NE	NE	NE	NE
<b>Livestock</b>	NJ	NJ	NJ	NJ	NJ	NE	NE	NE	NE
<b>Mineral Resources</b>	NJ	NJ	NJ	NJ	NJ	NE	NE	NE	NE
<b>Recreation</b>	NJ	NJ	NJ	NJ	NJ	NE	NE	NE	NE
<b>Special Designations</b>	NJ	NJ	NJ	NJ	NJ	NE	NE	NE	NE
<b>Special Status Species</b>	NJ	NJ	NJ	NJ	NJ	NE	NE	NE	NE
<b>Transportation and Access</b>	NJ	NJ	NJ	NJ	NJ	NE	NE	NE	NE
<b>Vegetation</b>	NJ	NJ	NJ	NJ	NJ	NE	NE	NE	NE
<b>Watershed and Water Quality</b>	NJ	NJ	NJ	NJ	NJ	NE	NE	NE	NE
<b>Wild Horses</b>	NJ	NJ	NJ	NJ	NJ	NE	NE	NE	NE
<b>Wildland Fire</b>	NJ	NJ	NJ	NJ	NJ	NE	NE	NE	NE
<b>Wildlife and Fisheries</b>	NJ	NJ	NJ	NJ	NJ	NE	NE	NE	NE

NLAA= May affect, not likely to adversely affect

LAA = May affect, likely to adversely affect

NE = No effect

NJ = No Jeopardy

## 8.0 Contacts

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# Concurrence Letter from the U.S. Fish and Wildlife Service



## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Ecological Services  
5353 Yellowstone Road, Suite 308A  
Cheyenne, Wyoming 82009



**JUN 17 2015**

In Reply Refer To:  
06E13000-2010-I-0327

To: Acting State Director, Bureau of Land Management, Wyoming State Office,  
Cheyenne, Wyoming

From: Field Supervisor, U.S. Fish and Wildlife Service, Wyoming Field Office,  
Cheyenne, Wyoming

Subject: Section 7 Consultation for the Wyoming Greater Sage-grouse 9-Plan Land Use  
Plan Amendment and Final Impact Statement (9-Plan Amendment)

This correspondence transmits the U.S. Fish and Wildlife Service (Service) programmatic memorandum of concurrence in response to the U.S. Bureau of Land Management (BLM) and U.S. Forest Service (USFS) request for consultation for the impacts from the Wyoming Greater Sage-grouse Land Use Plan Amendment and Final Impact Statement (9-Plan Amendment) (BLM and USFS 2015b) (Proposed Action) to federally listed species in Wyoming in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Your March 27, 2015, request for informal programmatic consultation was received in our office on April 9, 2015. Your memo requested our concurrence with numerous "not likely to adversely affect" determinations; concurrence with "no jeopardy" determinations for non-essential, experimental populations; and concurrence with a "no destruction or adverse modification" determination for proposed critical habitat.

This correspondence addresses potential effects to the black-footed ferret (*Mustela nigripes*), blowout penstemon (*Penstemon haydenii*), Canada lynx (*Lynx canadensis*) and its designated critical habitat, Colorado butterfly plant (*Gaura neomexicana* var. *coloradensis*) and its designated critical habitat, desert yellowhead (*Yermo xanthocephalus*) and its designated critical habitat, gray wolf (*Canis lupus*), grizzly bear (*Ursus arctos horribilis*), Kendall warm springs dace (*Rhinichthys osculus thermalis*), northern long-eared bat (*Myotis septentrionalis*), Preble's meadow jumping mouse (*Zapus hudsonius preblei*), Ute ladies'-tresses orchid (*Spiranthes diluvialis*), western yellow-billed cuckoo (*Coccyzus americanus*), Wyoming toad (*Bufo* [*Anaxyrus*] *baxteri*) and Colorado River and Platte River downstream listed species and their designated critical habitats from all new actions associated with the 9-Plan Amendment as described in Appendix 1 of the Biological Assessment (BA) (BLM and USFS 2015a).

The 9-Plan Amendment covers the planning areas for the Wyoming BLM Casper, Kemmerer, Newcastle, Pinedale, Rawlins, and Rock Springs Field Offices and the USFS Bridger-Teton National Forest, Medicine Bow National Forest, and the Thunder Basin National Grasslands Planning Units, including all public land and Federal mineral estate managed by the BLM and the USFS within these areas. These planning areas encompass approximately 16 million acres of public surface land administered by the BLM and USFS and approximately 23 million acres of Federal mineral estate in Albany, Campbell, Carbon, Converse, Crook, Fremont, Goshen, Laramie, Lincoln, Natrona, Niobrara, Platte, Sublette, Sweetwater, Teton, Uinta, and Weston Counties in Wyoming. Of the 23 million acres of Federal mineral estate, approximately 7 million acres are split-estate.

Land Use Plans (LUPs) are used by the BLM and the USFS to guide and control future actions and set standards upon which future decisions on site-specific activities are based. A LUP only establishes general management policy and is not used to make decisions that commit resources. A LUP identifies desired outcomes, also known as “desired future conditions.” These outcomes are expressed in LUPs as goals, standards, objectives, and allowable uses and actions needed to achieve desired outcomes, often referred to as LUP decisions or resource allocations. The 9-Plan Amendment modifies some of these decisions and resource allocations of the BLM and USFS in their LUPs in Wyoming; therefore, it is only on the modifications of these decisions or resource allocations upon which our evaluations of the effects determinations are based. Furthermore, the BLM and USFS are still obligated to conduct section 7 consultation at the project-specific level for all BLM- or USFS-authorized activities that “may affect” a listed species.

In the 9-Plan Amendment BA, the BLM and USFS made “not likely to adversely affect (NLAA)” determinations, “no jeopardy” determinations, and a “no destruction or adverse modification” determination for the effect of some modifications of management actions on listed species and critical habitats in the LUP areas of Wyoming. These are displayed in Table 1 by species and LUP. For specific details concerning the effects determinations for each program within each LUP area, please see the 9-Plan Amendment BA (BLM and USFS 2015b). Furthermore, the BLM and USFS also determined that many of the management actions within the BA would have “no effect (NE)” to listed species. These determinations are summarized, by planning area, in Table 1. Summarization involved identifying and presenting the highest level category of potential effects for each species for each planning area. For specific detailed effects determinations made by the BLM or FS for each program, within each planning area, see the BA (BLM and USFS 2015a). The ESA does not require the Service to concur with “no effect” determinations; however, we appreciate receiving the information used to support your conclusions.

**Table 1.** Listed species “no effect (NE)”, “not likely to adversely affect (NLAA)”, “no jeopardy (NJ)”, and “no destruction or adverse modification (ND/AM)” determinations summarized by planning area. For specific detailed effects determinations for each program, within each planning area, see the BA (BLM and USFS 2015b). These determinations only apply to the modifications in management resulting from the 9-Plan Amendment.

Species Land Use Plan	Black-footed Ferret	Blowout Penstemon	Canada Lynx and Critical Habitat	Colorado Butterfly Plant and Critical Habitat	Colorado River Fishes and Critical Habitat	Desert Yellowhead and Critical Habitat	Gray Wolf	Grizzly Bear	Kendall Warm Springs Dace	Northern Long-eared Bat	Plate River Species and Critical Habitat	Preble's Meadow Jumping Mouse	Ute Ladies'-tresses	Wyoming Toad	Yellow-billed Cuckoo	Yellow-billed Cuckoo Proposed Critical Habitat
Bridger-Teton	NE	NE	NE	NE	NE	NE	NJ	NLAA	NE	NE	NE	NE	NLAA	NE	NLAA	-
Casper	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NLAA	NE	NE	-
Kemmerer	NE	NE	NE	NE	NE	NE	NJ	NLAA	NE	NE	NE	NE	NLAA	NE	NLAA	-
Medicine Bow	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NLAA	NE	NE	NE	-
Newcastle	NE	NE	NE	NE	NE	NE	NE	NE	NE	NLAA	NE	NE	NLAA	NE	NE	-
Pinedale	NE	NE	NE	NE	NE	NE	NJ	NLAA	NE	NE	NE	NE	NLAA	NE	NLAA	-
Rawlins	NJ	NLAA	NE	NE	NE	NE	NJ	NE	NE	NE	NE	NLAA	NLAA	NE	NE	-
Rock Springs	NE	NE	NE	NE	NE	NE	NJ	NLAA	NE	NE	NE	NE	NLAA	NE	NLAA	ND/AM
Thunder Basin	NE	NE	NE	NE	NE	NE	NE	NE	NE	NLAA	NE	NE	NLAA	NE	NE	-
NLAA = May affect, not likely to adversely affect LAA = May affect, likely to adversely affect NE = No effect NJ = No jeopardy ND/AM = No Destruction or Adverse Modification - = Designated Critical Habitat not present in planning area																

*Gray Wolf and Black-footed Ferret.* The Service concurs with your determination that activities described in the BLM and USFS's 9-Plan Amendment will not jeopardize the continued existence of the gray wolf in Wyoming or the black-footed ferret in the Shirley Basin area of Wyoming. This determination is based on the fact that the gray wolves and black-footed ferrets located in these areas are designated as non-essential, experimental populations. By definition, any effects to non-essential, experimental populations of any species will not jeopardize the continued existence of the species. Furthermore, the change in management actions in the LUPs as a result of the 9-Plan Amendment are expected to increase protection for the greater sage-grouse (*Centrocercus urophasianus*). This increased protection and reduction in disturbance to sagebrush ecosystems could result in increased protection for gray wolves or black-footed ferrets resulting in situations where the actions could result in beneficial effects to these species.

*Blowout Penstemon, Grizzly Bear, Northern Long-eared Bat, Preble's Meadow Jumping Mouse, Ute ladies'-tresses, and Western population of the Yellow-billed Cuckoo.* The BA evaluated effects of the Proposed Action to the blowout penstemon, grizzly bear, northern long-eared bat, Preble's meadow jumping mouse, Ute ladies'-tresses, and the western distinct population segment (DPS) of the yellow-billed cuckoo and determined that the effects were "not likely to adversely affect" these species. The Service concurs with your determinations that activities described in the Proposed Action will not likely adversely affect these species. The effects of the 9-Plan Amendment are expected to be insignificant, discountable, or wholly beneficial to these species. The change in management actions in the LUPs as a result of the 9-Plan Amendment are expected to increase protection for the greater sage-grouse. This increased protection and reduction in disturbance to sagebrush ecosystems could result in increased protection for the above-listed species resulting in situations where the actions could result in beneficial effects to these species.

*Proposed Critical Habitat for the Western DPS of the Yellow-billed Cuckoo.* Pursuant to the requirements of 7(a)(4) of the ESA and CFR 402.10, the BLM assessed the effects of their Proposed Action and made a no destruction or adverse modification determination for the Proposed Action. Though Director (Service) concurrence is not required by 7(a)(4) or CFR 402.10, the inclusion of the determination in your BA creates a need under CFR 402.12(k) for the Service's concurrence with your determination. After reviewing your BA, we concur with your determination that the Proposed Action will not cause adverse modification or destruction of proposed critical habitat for the western DPS of the yellow-billed cuckoo; pursuant to language at CFR 402.12(k), a conference is not required.

This concludes consultation and provides our concurrence with your determinations for proposed critical habitat and non-essential, experimental populations pursuant to the regulations implementing the ESA. BLM and USFS activities related to the 9-Plan Amendment in Wyoming should be re-analyzed if new information reveals effects of the activities that may affect listed or proposed species or designated or proposed critical habitat in a manner or to an extent not considered in this consultation; if the activities are subsequently modified in a manner that causes an effect to a listed or proposed species or designated or proposed critical habitat that was not considered in this consultation; and/or, if a new species is listed or critical habitat is designated that may be affected by these activities.

Thank you for your assistance in the conservation of endangered, threatened, and candidate species. In future communications concerning this memorandum please refer to consultation number 06E13000-2010-I-0327. If we may be of further assistance, please contact Alex Schubert of my staff at (307) 772-2374, extension 238.

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