
KEMMERER
PROPOSED RESOURCE MANAGEMENT PLAN AND
FINAL ENVIRONMENTAL IMPACT STATEMENT

Appendix A

Conservation Measures for Threatened or Endangered
Species; Conservation Agreements, and BLM-Endorsed
Management Strategies for Special Status Species

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Management of special status species on public lands administered by the Bureau of Land Management (BLM) is directed by a variety of laws, policies, and other requirements. Special status species are those listed as threatened or endangered, are proposed for listing, or are candidates for listing under the provisions of the Endangered Species Act (ESA) or those designated by the BLM State Director as sensitive.

BLM Sensitive Species

The intent of the sensitive species designation is to ensure actions on the BLM-administered lands consider the welfare of these species and do not contribute to the need to list other Special Status Species under the provisions of the ESA. The BLM Wyoming State Office conducts an annual review of its sensitive species list to make additions or deletions based on the most current information on species status.

At the time of this writing, the planning area has 1 threatened plant species, 8 sensitive plant species, 4 endangered and 7 sensitive fish species, 1 threatened and 1 endangered wildlife species, 1 candidate wildlife species, and 24 sensitive wildlife species that may occur in the planning area. Three species of concern in the planning area were recently delisted from the ESA: the grizzly bear, the bald eagle, and the gray wolf. Wyoming BLM Sensitive Species Policy (BLM 2002) states that delisted species are automatically placed on the BLM sensitive species list.

Because management recommendations and status for sensitive species can, and do, change as new information is gathered, conservation recommendations for BLM-designated sensitive species are not presented in this appendix. Instead, interested individuals can find the latest recommendations for conservation as well as any agreements or management strategies for BLM sensitive species on the Wildlife Management Program page of the BLM Wyoming website at <http://www.blm.gov/wy/st/en/programs/Wildlife.html>.

Other websites containing conservation strategies for sensitive trout species include: <http://www.fws.gov/mountain-prairie/species/fish/crct/> and <http://wildlife.utah.gov/pdf/cacs7.pdf>.

Species Listed Under the ESA

Section 7(a)(1) of ESA directs federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities that minimize or avoid adverse effects of a proposed action on listed species or critical habitats, help implement recovery plans, or develop information. The recommendations provided here relate to the proposed action only and do not necessarily represent complete fulfillment of the agency's section 7(a)(1) responsibility for these species.

For the USFWS to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the USFWS requests notification of the implementation of any conservation recommendations.

Appendix A – Conservation Measures, Conservation Agreements, and BLM-Endorsed Management Strategies for Special Status Species

Conservation measures, conservation agreements, and BLM-endorsed management strategies for federally threatened, endangered, and candidate species are identified below.

CONSERVATION MEASURES

Plants

Ute Ladies'-tresses (Threatened)

The following section presents new conservation measures reviewed by all 10 Wyoming BLM field offices and agreed upon by all 10 field managers. These measures are taken from the BLM's *Final Report Statewide Programmatic Biological Assessment: Ute Ladies'-tresses Orchid (Spiranthes diluvialis)* (BLM 2005a) and modified as per the U.S Fish and Wildlife Service (USFWS) *Programmatic Biological Opinion for the Impacts for the Wyoming Bureau of Land Management's Resource Management Plans with Bureau-Committed Conservation Measures and the Effects to the Ute Ladies'-tresses Orchid (Spiranthes diluvialis)* (USFWS 2007). These measures are provided to outline opportunities to benefit populations of the orchid, and to help reduce or eliminate adverse effects from the spectrum of management activities on BLM land. These measures also outline opportunities to benefit the orchid, and to help avoid negative impacts through the thoughtful planning of activities. Implementation of these measures is expected to lead to conservation of the species.

These conservation measures are binding measures that the BLM will implement to facilitate conservation of the orchid. However, because it is impossible to provide measures that will address all possible actions in all locations across the range of the orchid, it is imperative that project-specific analysis and design be completed for all actions that could affect the orchid. Circumstances unique to individual projects or actions and their locations may still result in adverse effects to this plant. In these cases, additional or modified conservation measures may be necessary to avoid or minimize adverse effects; further consultation with the USFWS will be required. The order in which the conservation measures appear below does not imply their relative priorities.

1. Surface disturbance will be prohibited within 500 feet of surface water and/or riparian areas.
2. No Surface Occupancy will be allowed within special management areas (e.g., known threatened or endangered species habitat).
3. Portions of the authorized use area are known or suspected to be essential habitat for threatened or endangered species. Prior to conducting any onsite activities, the lessee/permittee will be required to conduct inventories or studies in accordance with Bureau and U.S. Fish and Wildlife Service guidelines to verify the presence or absence of this species. In the event that an occurrence is identified, the lessee/permittee will be required to modify operational plans to include the protection requirements of this species and its habitat (e.g., seasonal use restrictions, occupancy limitations, facility design modifications).
4. Within the potential of the ecological site (soil type, landform, climate, and geology), the Bureau will ensure that the soils are stable and allow for water infiltration to provide for optimal plant growth and minimal surface runoff.
5. The Bureau will ensure that grazing management practices will restore, maintain, or improve plant communities. Grazing management strategies consider hydrology, physical attributes, and potential for the watershed and the ecological site.

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6. The Bureau will ensure that upland vegetation on each ecological site consists of plant communities appropriate to the site which are resilient, diverse, and able to recover from natural and human disturbance.
7. The Bureau will ensure that rangelands are capable of sustaining viable populations and a diversity of native plant and animal species appropriate to the habitat. Habitats that support or could support threatened species, endangered species, species of special concern, or sensitive species will be maintained or enhanced.
8. The Bureau will ensure that grazing management practices will incorporate the kinds and amounts of use that will restore, maintain, or enhance habitats to assist in the recovery of federally threatened and endangered species or the conservation of federally-listed species of concern and other State-designated special status species. Grazing management practices will maintain existing habitat or facilitate vegetation change toward desired habitats. Grazing management will consider threatened and endangered species and their habitats.
9. The Bureau will maintain biological diversity of plant and animal species; support the Wyoming Game and Fish Department strategic plan population objective levels to the extent practical and to the extent consistent with Bureau multiple use management requirements; maintain, and where possible, improve forage production and quality of rangelands, fisheries, and wildlife habitat; and to the extent possible, provide habitat for threatened and endangered and special status plant and animal species on all public lands in compliance with the Endangered Species Act and approved recovery plans.
10. In any proposed new access, wetland and riparian areas will be avoided where possible.
11. Grazing will be intensively managed within known habitat containing populations from July through September, to allow plants to bloom and go to seed.
12. Recreational site development will not be authorized in known Ute ladies'-tresses habitat.
13. The Bureau will manage stream habitats to retain, re-create, or mimic natural hydrology, water quality, and related vegetation dynamics. Projects that may alter natural hydrology or water quality, change the vegetation of the riparian ecosystem and cause direct ground disturbance will be evaluated and redesigned to ensure that adverse effects to populations of the orchid do not occur.
14. The Bureau will add the following two conservation measures to grazing permit renewals in allotments with known Ute ladies'-tresses populations.
 - A. The Bureau will ensure the placement of mineral supplements, or new water sources (permanent or temporary), for livestock, wild horses, or wildlife at least 1.0 mile from known Ute ladies'-tresses populations. Supplemental feed for livestock, wildlife, or wild horses will not be authorized within 1.0 mile of known Ute ladies'-tresses populations. Straw or other feed must be certified weed-free. These restrictions are intended to keep free-ranging livestock away from Ute ladies'-tresses populations and potential overgrazing of the areas occupied by these orchids. Surveys for Ute ladies'-tresses will be conducted in potential Ute ladies'-tresses prior to livestock operations related construction projects.

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- B. The Bureau will not increase permitted livestock stocking levels in any allotment with pastures containing known Ute ladies'-tresses populations without consulting with the Service.
15. Biological control of noxious plant species will be prohibited within 1.0 mile from known orchid habitat until the impact of the control agent has been fully evaluated and determined not to adversely affect the plant population. The Bureau will monitor biological control vectors.
16. Except in cases of extreme ecological health (insect or weed outbreaks/infestations), herbicide treatment of noxious plants/weeds will be well-regulated within 0.25 miles of known populations of the orchid and insecticide/pesticide treatments will be well regulated within 1.0 mile of known populations of the orchid to protect pollinators.

Where insect or weed outbreaks have the potential to degrade area ecological health inside the buffers listed above the following will apply: where needed and only on a case-by-case basis, a pesticide use proposal or other site specific plan will address concerns of proper timing, methods of use, and chemicals. Pesticides specific to dicots will be preferred where these are adequate to control the noxious weeds present.

Aerial application of herbicides will be carefully planned to prevent drift in areas near known populations of the orchid (outside of the 0.25 mile buffer). The Bureau will work with the Animal and Plant Health Inspection Service (APHIS), the Service, and County Weed and Pest Agencies to select pesticides and methods of application that will most effectively manage the infestation and least affect the orchid.

17. If revegetation projects are conducted within 0.25 miles of known habitat for the orchid, only native species will be selected. This conservation measure will reduce the possibility that non-native species will be introduced and will compete with Ute ladies'-tresses orchids.
18. The Bureau will limit the use of off road vehicles (OHVs) to designated roads and trails within 0.5 mile of known Ute ladies'-tresses populations, with no exceptions for the "performance of necessary tasks" other than fire fighting and hazardous material cleanup allowed using vehicles off of highways. No OHV competitive events will be allowed within 1.0 mile of known Ute ladies'-tresses populations. Roads that have the potential to impact Ute ladies'-tresses orchids and are not required for routine operations or maintenance of developed projects, or lead to abandoned projects will be reclaimed as directed by the Bureau.
19. The Bureau will apply a condition of approval (COA) on all applications for permit to drill (APDs) oil and gas wells for sites within 0.25 miles of any known populations of the orchid. This condition will prohibit all authorized surface disturbance and OHV travel from sites containing populations of the orchid. Operations outside of the 0.25 mile buffer of orchid populations, such as "directional drilling" to reach oil or gas resources underneath the orchid's habitat, would be acceptable.
20. For known Ute ladies'-tresses populations, the Bureau will place a Controlled Surface Use (CSU) stipulation prohibiting all surface disturbances on new oil and gas leases, buffering the area within 0.25 miles of known Ute ladies'-tresses populations. For existing oil and gas leases with known Ute ladies'-tresses populations (these would be for newly discovered populations not currently documented), the Bureau will require the COA in conservation measure 19 above including the same 0.25 mile buffer area around those known Ute ladies'-tresses populations.
21. The disposal (sale and removal) of salable minerals is a discretionary Bureau action and is prohibited within a 0.25 mile buffer area of known populations of Ute ladies'-tresses orchids.
22. To prevent loss of habitat for the orchid, the Bureau "shall retain in Federal ownership all habitats essential for the survival and recovery of any listed species, including habitat that was

used historically, that has retained its potential to sustain listed species, and is deemed to be essential to their survival” (BLM 2001). Prior to any land tenure adjustments in *known* habitat for the orchid, the Bureau will survey to assess the habitat boundary and retain that area in Federal ownership. Bureau-administered public lands that contain identified habitat for the orchid will not be exchanged or sold, unless it benefits the species.

23. All proposed rights-of-way projects (powerlines, pipelines, roads, etc.) will be designed and locations selected at least 0.25 miles from any known orchid habitat to minimize disturbances. If avoidance of adverse effects is not possible, the Bureau will re-initiate consultation with the Service.
24. All proposed projects will be designed and locations selected to minimize disturbances to known Ute ladies'-tresses populations, and if the avoidance of adverse effects is not possible, the Bureau will re-initiate consultation with the Service. Projects will not be authorized closer than 0.25 miles from any known Ute ladies'-tresses populations without concurrence of the Service and the Bureau authorized officer. No ground disturbing construction activities will be authorized within 0.25 miles of any known Ute ladies'-tresses populations during the essential growing season time period (from July to September, the growing, flowering and fruiting stages) to reduce impacts to the species.

Fish

Colorado River Fishes (Endangered)

Endangered fish species evaluated in the planning area include the Colorado pikeminnow (*Ptychocheilus lucius*), humpback chub (*Gila cypha*), razorback sucker (*Xyrauchen texanus*), and bonytail (*Gila elegans*). Conservation measures are set forth by the “Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin” (Recovery Program), as signed on January 21 and 22, 1988, by the Secretary of the Interior; the governors of Wyoming, Colorado, and Utah; and the Administrator of the Western Area Power Administration. An objective of the Recovery Program was to identify reasonable and prudent alternatives that would ensure the survival and recovery of the listed species, while providing for new water development in the Upper Colorado River Basin.

Water depletions to the Colorado River watershed may jeopardize the existence of one or more federally listed threatened or endangered species and adversely modify designated critical habitats. In 1988, the USFWS developed an agreement that federal agency actions resulting in water depletions to the upper Colorado River basin greater than 100 acre-feet annually require section 7 consultation and can be offset by a one-time contribution made by the water project, which goes to Recovery Program efforts (USFWS 2001). There is no charge for existing depletions or for new depletions of less than 100 acre-feet of water. Under this agreement, as long as sufficient progress is being made toward endangered fish recovery, the USFWS will issue favorable biological opinions (BOs) on water depletions of fewer than 3,000 acre-feet of water (USFWS 2001). When reviewing projects that deplete more than 3,000 acre-feet of water per year, the USFWS determines on a case-by-case basis the recovery actions that are needed to warrant a favorable BO.

Four ESA-listed fish species, Colorado pikeminnow, humpback chub, razorback sucker, and bonytail, occurring as residents or migrants in the Colorado River watershed (inclusive of major tributaries), have experienced significant declines in abundance, distribution, and the availability of suitable habitats since the turn of the twentieth century. The primary reasons for these declines are water developments, including dam construction, diversion and consumptive use of water; changes in river flow and channel characteristics; and habitat loss and degradation.

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The BLM historically has authorized several types of actions and associated infrastructure within the planning area that may result in water depletion to the Colorado River watershed. These actions include the development of livestock watering facilities, irrigation projects, wetlands, reservoirs for recreational fisheries, habitat restoration projects, fire suppression, and oil and gas development. Water depletions are considered a long-term adverse effect because implementation of management actions projected to cause water depletion is anticipated to occur over the life of the plan. Water depletion analyses assume all water used for drilling and completion of wells and evaporation from reservoirs in the Green River watershed within the planning area contribute to surface flows of the Colorado River or its tributaries.

For Colorado River watershed species analyzed in this RMP and the accompanying biological assessment (BA), the assessment area includes the portion of the planning area drained by the Green River and its tributaries, as well as areas of the Colorado River watershed downstream of the planning area.

Given the rarity of Colorado River fish species and the potential cumulative effects of water depletions from the Proposed RMP and other projects, the USFWS has expressed concern about these effects, however small, on water level in the Colorado River. Projected development of water impoundments, springs, and wells for livestock, fish, and wildlife are anticipated to deplete water in the Colorado River watershed. Table 1 summarizes the estimated average annual depletion for select actions identified for the Proposed RMP and Final EIS.

Table 1. Projected BLM Actions and Potential Water Depletions in the Colorado River Watershed During Implementation of the Kemmerer Field Office Resource Management Plan

Projected Action*	Projected Number Over 20 years	Average Annual Depletion (acre-feet)
Oil and Gas Drilling	963	96.3
Livestock Water Wells and Springs	41	0.6
Total		96.9

*Note: Due to the programmatic nature of RMP alternatives, key assumptions made for calculating projected water depletion in the Colorado River watershed over the life of the RMP include the following:

- (1) The Green River watershed comprises 58 percent of the planning area.
- (2) All Moxa Arch, CBNG wells, and 58 percent of the Overthrust Belt wells are within the Colorado River watershed.
- (3) Livestock wells and springs are evenly distributed throughout the planning area.
- (4) All wells and springs projected for development over the life of the RMP are constructed and completed in year 1.
- (5) Water depletions associated with conventional oil and gas drilling are calculated using an average depletion of 2 acre-feet per well occurring in the Colorado River watershed by alternative. Oil and gas well numbers were derived from the RFD Scenario for Oil and Gas (BLM 2006; BLM 2008).
- (6) Potential water depletion for fire management is not included in calculations due to the nonpredictive nature of unplanned fire and the negligible water depletion associated with planned fire.

CBNG coalbed natural gas
RFD Reasonable Foreseeable Development
RMP Resource Management Plan

Based on the projected water depletions in Table 1, implementation of the Proposed RMP and Final EIS may affect, and is likely to adversely affect (LAA), the bonytail chub, Colorado pikeminnow, humpback chub, and razorback sucker. All other activities (listed in Section 7 below) not listed in Table 1 are not anticipated to deplete waters from the Colorado River system and will, therefore, result in a no effect (NE) determination for these endangered fish.

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For actions projected to deplete water from the Colorado River watershed, the BLM will initiate formal consultation with the USFWS prior to activity approval. The BLM will continue to participate in the Cooperative Agreement for the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (USFWS 2001).

When developing or improving water sources in the Colorado River watershed, the BLM considers development designs, such as water wells and guzzlers, rather than surface impoundments to minimize impacts to surface water hydrology.

Thus, the USFWS has determined that project depletion impacts, which the USFWS has consistently maintained, are likely to jeopardize the listed fishes, can be offset by (a) the water project proponents one-time contribution to the Recovery Program in the amount of \$10.91 per acre-foot of the project's average annual depletion, and (b) appropriate legal protection of instream flows pursuant to state law. The USFWS believes it is essential that protection of instream flows proceed expeditiously, before significant water depletions occur.

With respect to (a) above (i.e., the depletion charge), the applicant will make a one-time payment that has been calculated by multiplying the project's annual average depletion (82 acre-feet) by the depletion charge in effect at the time payment is made. For fiscal year 1991 (October 1, 1990, to September 30, 1991), the depletion charge is \$10.91 per acre-foot of the depletion, which equals a payment of \$894.62 for this project. This amount will be adjusted annually for inflation on October 1 of each year based on the previous year's Composite Consumer Price Index. The USFWS will notify the applicant of any change in the depletion charge by September 1 of each year. Ten percent of the total contribution or total payment will be provided to the USFWS or its designated agent at the time of issuance of the federal approvals from the BLM. The balance will be due at the time construction commences. Fifty percent of the funds will be used for acquisition of water rights to meet the instream flow needs of the endangered fishes (unless otherwise recommended by the Implementation Committee); the balance will be used to support other recovery activities for the Colorado River endangered fishes. Payment should be made to the National Fish and Wildlife Foundation. If depletion is less than 100 acre-feet, payment is waived (Oles 2007).

Wildlife

Within the Kemmerer planning area the black-footed ferret is listed as threatened and the Canada lynx is listed as endangered under the ESA, and the yellow-billed cuckoo is a candidate for federal listing. The conservation measures for the two listed species identified in each species' respective statewide programmatic BA and BO, and for the candidate species identified in the biological evaluation (BE) are presented below.

Black-footed Ferret (Endangered)

The following conservation measures are taken from the *Final Statewide Programmatic Biological Assessment: Black-footed Ferret (Mustela nigripes)* (BLM 2005b) and modified as per the *Consultation for the Impacts from the Wyoming Bureau of Land Management Resource Management Plans and their Effects to the Black-footed ferret (Mustela nigripes)* (USFWS 2006). These conservation measures aim to reduce potential effects to black-footed ferrets and their habitats and highlight the steps the BLM can take to work toward recovery of the species.

The conservation measures listed below are separated into Species Conservation Measures, which affect the species directly; Habitat and Mapping Measures, which protect habitat and address prairie dog colonies and mapping activities; and Recovery/Reintroduction Measures, which address the BLM's role in and commitment to recovery of the species.

Species Conservation Measures

1. When project proposals are received for areas that still require black-footed ferret surveys and meet potential habitat criteria as defined by the USFWS guidelines, the BLM shall initiate coordination with the USFWS at the earliest possible date so that the USFWS can provide input. This should minimize the need to redesign projects at a later date to include black-footed ferret conservation measures, determined as appropriate by the USFWS.
2. In areas identified in conservation measure number one above (non-block cleared areas), if suitable prairie dog town/complex avoidance is not possible, surveys of towns/complexes for black-footed ferrets shall be conducted in accordance with USFWS guidelines and recommendations. This information shall be provided to the BLM and the USFWS in accordance with Section 7 of the Endangered Species Act, and the Interagency Cooperation Regulations.
3. Observations of black-footed ferrets, their sign, or carcasses on a project area and the location of the suspected observation, however obtained, shall be reported within 24 hours to the appropriate local BLM wildlife biologist and Field Supervisor of the USFWS office in Cheyenne, Wyoming, at (307) 772-2374. Observations should include a description including what was seen, time, date, exact location, suspected cause of death, and the observer's name and telephone number. Carcasses or other "suspected" ferret remains shall be collected by the BLM or USFWS employees and deposited with the USFWS Wyoming Field Office or USFWS law enforcement office. This type of specimen collection is authorized as described in 50 CFR 17.21(c)(3-4). It is imperative that any fresh black-footed ferret carcass be salvaged and immediately transported to the USFWS so pertinent information concerning the cause of death be gathered, including photographs in order to document an accurate depiction of the fatality.
4. If black-footed ferrets or their sign are found on public lands outside of the Non-essential Experimental population areas in Wyoming, all previously authorized project-related activities (or actions on any future application that may directly, indirectly, or cumulatively affect the colony/complex) ongoing in the complex in which black-footed ferrets are found shall temporarily cease until further direction is developed by a task force consisting of the Bureau Field Office Manager, the USFWS Field Office Supervisor, the WGFD Non-game Coordinator, and other potentially affected parties. This task force will be formed within 48 hours of the find to determine appropriate conservation/protection actions. The Bureau shall coordinate with these affected parties to ensure that ferret surveys or appropriate actions are conducted as deemed necessary. The Bureau will reinstate Section 7 consultation with the USFWS. An emergency road closure limiting access to the site will be enacted by the BLM within 48 hours of the find to protect newly discovered black-footed ferrets. This emergency road closure would be for all non-paved roads within at least 1 mile of the find. On a case-by-case basis and with approval of the USFWS, certain surface disturbing activities within the town or complex may be allowed to continue.
5. Information on ferret identification will be provided and posted in common areas and circulated in a memorandum among all employees and service providers. This information shall illustrate the black-footed ferret and its sign; describe morphology, tracks, scat, skull, habitat characteristics, behavior, and current status; and explain the relationship between project development and impacts to black-footed ferrets, especially regarding canine distemper and recreational shooting.
6. Discovery of a live black-footed ferret outside the Non-essential Experimental population areas in Wyoming would have profound importance to the species' recovery. Reporting of such a

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discovery by staff, contractors, permittees, etc., will be fully encouraged by BLM staff and management.

Habitat and Mapping Measures

1. New prairie dog towns can be allowed to become established on public lands in all circumstances where they would not interfere with other previously established activities.

Recovery/Reintroduction Measures

The BLM shall work with the USFWS and the WGFD to identify and establish Management Areas (MAs) for potential reintroduction sites for black-footed ferrets. These areas will be selected based on a number of factors, including BLM's ability to protect and manage them, their size (optimally 5,000 to 10,000 acre sites), and potential utility to black-footed ferrets. Because of the need to manage reintroduction sites (of prairie dog complexes) on a landscape scale, and because plague is a significant but unpredictable event, MAs may be selected that are currently "plagued out," but may recover in time. Complexes can be selected from, but not necessarily restricted to, those shown in Map 3. Protective measures shall be drawn up for these MAs, and may include being withdrawn from leasing and protected from commercial development (i.e., land disposal through Recreation and Public Purpose Act actions, etc.). Examples of protective measures that will be included in these MAs are:

- The BLM shall work with respective WGFD agencies and the USFWS, offices to ensure that enough reintroduction sites are maintained to successfully recover the black-footed ferret. If areas available for reintroduction are removed through BLM's authorized actions below a threshold level, so the black-footed ferret can no longer be recovered, then those actions reducing availability of reintroduction sites will be modified or discontinued until the black-footed ferret has been recovered.
- The BLM shall monitor and post restrictions, if necessary, on recreational opportunities and other uses on BLM-administered lands within 1 mile of formally proposed and active reintroduction sites for black-footed ferrets.
- The BLM and operators shall conduct educational outreach to employees regarding the nature, hosts, and symptoms of canine distemper and its effects on black-footed ferrets, focusing attention on why employees should not have pets on worksites during or after hours. The BLM shall encourage operators to develop policies to prohibit dogs from operation sites or require current distemper vaccinations within black-footed ferret reintroduction areas. It is recommended that vaccinated puppies not be allowed into the black-footed ferret reintroduction areas until 1 month after their final distemper vaccination due to potential effects of the modified live virus vaccine.

Canada Lynx (Threatened)

The following conservation measures are taken directly from the *Final Statewide Programmatic Biological Assessment: Canada Lynx (Lynx canadensis)* (BLM 2005c) and reiterated in the *Consultation for the Impacts from the Wyoming Bureau of Land Management's Resource Management Plans to the Canada Lynx (Lynx canadensis)* (USFWS 2005). These conservation measures are intended to conserve the lynx and to reduce or eliminate adverse effects from the spectrum of management activities on BLM land. These measures are provided to outline opportunities to benefit the lynx and to help avoid negative impacts through thoughtful planning of activities.

These conservation measures are binding measures that the BLM shall implement to facilitate conservation of lynx. Lynx analysis units (LAUs) typically encompass lynx habitats (may or may not be currently in suitable condition for denning or foraging habitat) and other areas (such as lakes, low

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elevation ponderosa pine forest, and alpine tundra). The conservation measures listed below generally apply only to lynx habitats within the LAUs; however, their use in areas of lynx habitats or potential lynx habitats not fitting the criteria of an LAU is encouraged.

On February 28, 2008, the USFWS proposed to revise designated critical habitat for the contiguous United States distinct population segment of the Canada lynx under the ESA (73 FR 10860). Approximately 27.3 million acres fall within the boundaries of the proposed revised critical habitat designation. Only a small portion (596 acres), fall within the Kemmerer BLM RMP planning area. With so few acres proposed for designation in the Kemmerer planning area, the BLM has determined that any action undertaken in the Kemmerer planning area on these acres will have negligible effect to the proposed critical habitat as a whole, and will not lead to adverse modification of the designated critical habitat. In the event that the USFWS includes portions of Kemmerer BLM-administered lands in the final critical habitat designation, the BLM will evaluate potential effects to that habitat and conduct Section 7 consultation with the USFWS as appropriate.

Because it is impossible to provide measures that will address all possible actions in all locations across the broad range of the lynx, it is imperative that project-specific analysis and design be completed for all actions that could affect lynx. Circumstances unique to individual projects or actions and their locations may still result in adverse effects on lynx. In these cases, additional or modified conservation measures may be necessary to avoid or minimize adverse effects.

All Programs

1. Within an LAU, the BLM shall ensure that mapping occurs of lynx habitats and nonhabitats, as well as their denning habitats, foraging habitats, and topographic features important for lynx movement. The BLM or project proponent shall identify whether all lynx habitats within an LAU are in suitable or unsuitable conditions. This will involve interagency coordination when LAUs cross administrative boundaries.
2. The BLM shall limit disturbance within each LAU to 30 percent of the suitable habitats within the LAU. If 30 percent of the habitats within an LAU are currently in unsuitable conditions, no further reduction of suitable conditions shall occur as a result of management activities. The BLM shall map oil and gas production and transmission facilities, mining activities and facilities, dams, forest management, and agricultural lands on public lands and evaluate projects on adjacent private lands to assess cumulative effects. This will involve interagency coordination when LAUs cross administrative boundaries, primarily with the U.S. Forest Service (USFS).
3. BLM management actions shall not change more than 15 percent of lynx habitats within an LAU to an unsuitable condition within a 10-year period. This will involve interagency coordination where LAUs cross administrative boundaries.
4. The BLM shall maintain denning habitats in patches generally larger than 5 acres, comprising at least 10 percent of lynx habitats. When less than 10 percent is currently present within an LAU, management actions that would delay development of denning habitat structures shall be deferred. This will involve interagency coordination when LAUs cross administrative boundaries.
5. The BLM, using best available science, shall ensure that key linkage areas that may be important in providing landscape connectivity within and between geographic areas across all ownerships are identified.
6. The BLM shall ensure that habitat connectivity within and between LAUs is maintained.
7. The BLM shall document lynx observations (tracks, sightings, as well as date, location, and habitat) and provide these to the Wyoming Natural Diversity Database (WYNDD). The BLM

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also shall request an annual update from the WYNDD on all sightings for review in each field office.

Forest Management

1. Following a disturbance (blowdown, fire, insects) that could impact lynx denning habitats, the BLM shall allow no salvage harvest when the affected area is smaller than 5 acres. Some exceptions apply, as specified in the LCAS timber management project planning standards.
2. The BLM shall allow precommercial thinning only when stands no longer provide snowshoe hare habitats.
3. In aspen stands, the BLM shall ensure the application of harvest prescriptions that favor regeneration of aspen.
4. The BLM shall ensure that improvement harvests (commercial thinning, selection, etc.) are designed to retain and improve recruitment of an understory of small diameter conifers and shrubs preferred by hares.

Fire Management

1. In the event of a large wildfire, the BLM shall ensure that a post-disturbance assessment prior to salvage harvest be conducted, particularly for stands that was formerly in late successional stages, to evaluate the potential for lynx denning and foraging habitats.
2. The BLM shall ensure that construction of temporary roads and fire lines are minimized to the extent possible during fire-suppression activities, and shall ensure revegetation of roads and firelines that are necessary. Construction on ridges and saddles should be avoided, if possible.

Recreation

1. The BLM shall allow no net increase in groomed or designated over-snow routes and snowmobile play areas in LAUs unless the designation serves to consolidate unregulated use and improves lynx habitats through a net reduction of compacted snow areas. This is intended to apply to dispersed recreation rather than existing ski areas. Winter logging activity is not subject to this restriction.
2. In lynx habitats within an LAU, the BLM shall ensure that federal actions do not degrade or compromise landscape connectivity or linkage areas when planning and operating new or expanded recreation developments.
3. The BLM shall ensure that trails, roads, and lift termini are designed to direct winter activities away from diurnal security habitats.
4. To protect the integrity of lynx habitats, the BLM shall ensure that (as new information becomes available) winter recreational special use permits (outside of permitted ski areas) that promote snow-compacting activities in lynx habitats are evaluated and amended, as needed.

Livestock Grazing

1. The BLM shall ensure that livestock use in openings created by fire or forest management that would delay successful regeneration of the shrub and tree components is not allowed. This regeneration may take 3 years or longer and will depend on site-specific conditions.
2. The BLM shall ensure that grazing in aspen stands is managed to ensure sprouting and sprout survival sufficient to perpetuate the long-term viability of the clones.

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3. Within lynx habitats, the BLM shall ensure that livestock grazing in riparian areas and willow patches is managed to maintain or achieve mid seral or higher conditions to provide cover and forage for prey species.
4. On projects where over-snow access is required, the BLM shall ensure use is restricted to designated routes.
5. Predator control activities, including trapping or poisoning on domestic livestock allotments on federal lands within lynx habitat, shall be conducted by Wildlife Services personnel in accordance with USFWS recommendations established through a formal Section 7 consultation process.
6. The BLM shall ensure that the potential importance of shrub-steppe habitats in the lynx habitat matrix and in providing landscape connectivity between blocks of lynx habitats is evaluated and considered as integral to overall lynx habitats, where appropriate. Livestock grazing within shrub-steppe habitats in such areas should be managed to maintain or achieve mid seral or higher conditions to maximize cover and prey availability. Such areas currently in late seral conditions should not be degraded.
7. In high-elevation riparian areas, especially those subject to grazing, the BLM shall ensure that weed assessments and weed control are conducted to optimize habitat for snowshoe hares.

Access

1. Within lynx habitats, the BLM shall ensure, using best available science, that key linkage areas and potential highway crossing areas are identified.
2. The BLM shall work cooperatively and proactively with the Federal Highway Administration and State Departments of Transportation to identify land corridors necessary to maintain connectivity of lynx habitats and map the location of “key linkage areas” where highway crossings may be needed to provide habitat connectivity and reduce mortality of lynx (and other wildlife).
3. Dirt and gravel roads traversing lynx habitats (particularly those that could become highways) should not be paved or otherwise upgraded (e.g., straightening of curves, widening of roadway, etc.) in a manner that is likely to lead to substantial increases in traffic volumes, traffic speeds, increased width of the cleared ROW, or would foreseeably contribute to development or increases in human activity in lynx habitats. Whenever rural dirt and gravel roads traversing lynx habitat are proposed for such upgrades, a thorough analysis should be conducted on the potential direct and indirect effects to lynx and lynx habitat.

Lands Management

1. The BLM shall ensure that proposed land exchanges, land sales, and special use permits are evaluated for effects on lynx habitats and key linkage areas.

Energy Development

1. If activities are proposed in lynx habitats, the BLM shall ensure that stipulations and conditions of approval for limitations on the timing of activities and surface use and occupancy are developed at the leasing and notice of staking/APD stages. For example, the BLM would require that activities not be conducted at night, when lynx are active, and avoid activity near denning habitats during the breeding season (April or May to July) to protect vulnerable kittens.
2. The BLM shall ensure that snow compaction is minimized when authorizing and monitoring developments, as well as encourage remote monitoring of sites located in lynx habitats so that they do not have to be visited daily.

Yellow-billed Cuckoo (Candidate)

The following conservation measures are taken directly from the *Final Programmatic Biological Evaluation for the Western Yellow-billed Cuckoo (Coccyzus americanus)* in Wyoming (BLM 2003).

Riparian Area Management

1. Consider carefully the affects to the yellow-billed cuckoo from any activities within or adjacent to cuckoo habitats.
2. Apply a 500-foot buffer through seasonal restriction to include the breeding season from May 15 through August 15 and apply rehabilitation standards in or adjacent to yellow-billed cuckoo habitat, when necessary.
3. Manage for a stable or increasing population of cottonwood/willow vegetation in yellow-billed cuckoo habitats. Ensure that all age classes are present (seedling, young, mature, and decadent), with more seedlings present than decadent plants, and more young plants than mature ones.
4. When planting trees, select only native species and avoid Russian olive and tamarisk (salt cedar).

Livestock Grazing Management

1. Use livestock management practices that minimize impacts to important cuckoo habitats. Examples of practices include planned grazing systems, riparian pasture fences, exclosures, herding, changes in class of livestock, timing and season of use, seasonal changes, managing use levels, off-site water and salting, resting for 1 or more years, and reduction in livestock numbers.
2. Improve livestock distribution and forage use by using salt and mineral blocks, but avoid placing them within riparian areas (keep them at least ¼ mile from streams) or in immediately adjacent uplands.
3. Locate livestock-handling facilities and collection points outside riparian areas. Branding, loading, and other handling efforts should be limited to areas and times that do not harm soils and plants in riparian zones.

General Construction Activities

1. Where roads, pipelines, and powerlines must be routed through riparian habitats, the construction work should not be accomplished from mid May to mid August, when the cuckoos are nesting.
2. Topography should be returned to its original condition to the greatest extent possible to ensure the hydrology remains intact.
3. Combine multiple roads and ROW to one stream-crossing site.
4. Maintain at least 100-foot buffer zones between riparian areas and mining, oil, gas, sand/gravel, and geothermal activities, including structures, roads, and support facilities.

Developed Recreation Areas

1. Boat and raft landing areas should not be developed in yellow-billed cuckoo habitats. (Discussed at April 18-19, 2003, Yellow-billed Cuckoo meeting in Rock Springs, Wyoming).
2. Outfitting camps should not be permitted in yellow-billed cuckoo habitat. (Discussed at April 18-19, 2003, Yellow-billed Cuckoo meeting in Rock Springs, Wyoming).

Pesticide Use

1. Restrict the use of foggers for insect control in yellow-billed cuckoo habitats, especially during the nesting season, so a food source remains available for birds.

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2. Chemical insecticides should not be utilized within 500 feet of occupied yellow-billed cuckoo habitats, and chemical herbicides, which do not break down upon contact with soil or water, should be prohibited within 500 feet of riparian areas. Supposedly the use of Demolin to control grasshopper outbreaks does not move through ecological systems. The chemical is an agent that affects only the ability of young grasshoppers to develop an exoskeleton. It is applied only when a potential outbreak is identified and application would not reduce grasshopper numbers to lower than those during a non-outbreak year. Demolin does not affect insects, which do not have exoskeletons. BLM state weed coordinator, Ken Henke, recommends the following as a conservation measure: “Chemical insecticides should not be utilized in occupied cuckoo habitat. In case of a grasshopper outbreak, insecticides other than Demolin should not be utilized within yellow-billed cuckoo habitat. A quarter-mile buffer zone around active nests could be applied.”
3. Chemical insecticides or herbicides, if used, should be applied by hand in yellow-billed cuckoo habitats and only in cases where insect invasion or noxious weed outbreak has the potential to degrade area ecological health.
4. In areas adjacent to yellow-billed cuckoo habitats, carefully plan aerial application of herbicides to prevent drift of chemicals into riparian areas

Prescribed Burning

1. Prescribed fire activities will be used only to maintain or enhance yellow-billed cuckoo habitats. Restrictions, such as for smoke dispersal heat intensity, buffer zones, or timing etc., will be incorporated into the fire plan and approved by a BLM biologist prior to conducting the burn. (Developed at April 18-19, 2003, Yellow-billed Cuckoo meeting in Rock Springs, Wyoming).

Wildlife Management

1. Maintain beaver populations where they occur in yellow-billed cuckoo habitats and encourage reintroduction into areas historically occupied by beavers in yellow-billed cuckoo habitats. (Discussed, along with BMPs, at April 18-19, 2003, Yellow-billed Cuckoo meeting in Rock Springs, Wyoming).

CONSERVATION AGREEMENTS

Wildlife

Conservation agreements for the two listed and one candidate wildlife species that may be potentially present within the planning area (black-footed ferret, Canada lynx, and yellow-billed cuckoo) are identified in each species’ respective statewide BA, BO, or BE. In addition, the Kemmerer Field Office adheres to the *Final Report and Recommendations from the Wyoming State-wide Bighorn/Domestic Sheep Interaction Working Group* (Wyoming State-wide Bighorn/Domestic Sheep Interaction Working Group 2004), for conservation of bighorn sheep. To strengthen the cooperative approach to the management of wildlife and wildlife habitat on public land at all levels of the respective agencies, the BLM and the Wyoming Game and Fish Department entered into the *Umbrella Memorandum of Understanding Between Wyoming Game and Fish Department and U.S. Department of the Interior Bureau of Land Management (Wyoming) For Management of the Fish and Wildlife Resources on the Public Lands* (WGFD and BLM 1990). Interested individuals can find the latest recommendations for conservation as well as any agreements or management strategies for BLM sensitive species on the Wildlife Management Program page of the BLM Wyoming website at <http://www.blm.gov/wy/st/en/programs/Wildlife.html>.

BLM-ENDORSED MANAGEMENT STRATEGIES

BLM-endorsed management strategies are governed by applicable laws, policies, and other requirements. Often, BLM-endorsed management strategies reflect BMPs as outlined in each species' respective BA, BO or BE. Interested individuals can find the latest recommendations for conservation as well as any agreements or management strategies for BLM sensitive species on the Wildlife Management Program page of the BLM Wyoming website at <http://www.blm.gov/wy/st/en/programs/Wildlife.html>.

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