

APPENDIX 18—THREATENED AND ENDANGERED SPECIES WITH THE POTENTIAL TO OCCUR IN THE PINEDALE PLANNING AREA

UTE LADIES' TRESSES (THREATENED)

Naturally occurring, reintroduced, and introduced populations of Ute ladies' tresses and their habitats will be protected. No projects will be permitted that would adversely affect the hydrology and vegetation of the species' riparian ecosystem or have a negative impact on Ute ladies' tresses orchids that would lead to a jeopardy opinion. Herbicide use will not be allowed in the vicinity of known populations.

In pastures known to contain riparian wet meadow habitat for Ute ladies' tresses, livestock grazing management will allow the plants to bloom and go to seed. Livestock grazing may also be used as a tool to reduce competing vegetation. Mineral supplements or emergency feed for livestock must be placed at least 2 miles from known occupied habitats.

To protect Ute ladies' tresses and their pollinators, prohibition of biological and chemical control of weeds and insects will be evaluated on a case-by-case basis.

Conservation Measures

The following section presents new conservation measures reviewed by all 10 Wyoming Field Offices (FO) and agreed upon by all 10 field managers. These conservation measures will be implemented upon acceptance of this biological assessment (BA) by the United States Fish and Wildlife Service (USFWS). These measures are intended to directly conserve the orchid and to reduce or eliminate adverse effects from the spectrum of management activities on Bureau of Land Management (BLM) land. These measures are provided to outline opportunities to benefit the orchid, and to help avoid negative impacts to populations through the thoughtful planning of activities. Plans that incorporate these measures, and projects that implement them, are generally not expected to have adverse effects on the orchid, and implementation of these measures is expected to lead to conservation of the species.

BLM shall implement these binding measures to facilitate conservation of the orchid. 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 have the potential to 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 or further consultation with the USFWS will be required. The order in which the 10 conservation measures appear below does not imply their relative priority.

1. Place mineral supplements, new water sources (permanent or temporary), or supplemental feed for livestock, wild horses, or wildlife at least 0.5 miles from known orchid populations. Hay or other feed and straw must be certified weed-free. These restrictions are intended to keep free-ranging livestock away from populations of the orchid and subsequent grazing on individual orchid plants. Surveys for the orchid will be conducted in potential orchid habitat prior to livestock operations projects. Placement of mineral supplements, straw, or other feed for livestock within 0.5 miles of known populations of the orchid will be evaluated and

approved by BLM with concurrence by USFWS and implemented on a case-by-case basis only.

BLM will not increase permitted livestock stocking levels in any allotment with pastures containing known orchid populations without consulting with the USFWS. It is unknown whether the overall impact on the orchid of livestock grazing is detrimental because of the actual grazing and trampling of the plants or is beneficial because the livestock remove adjacent competing vegetation.

2. Biological control of noxious plant species will be prohibited within 1.0 miles from known orchid habitat until the impact of the control agent has been fully evaluated and determined not to adversely affect the plant population. BLM will monitor biological control vectors.

Revised December 9, 2005—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 miles of known populations of the orchid to protect pollinators.

Revised December 9, 2005—Where insect or weed outbreaks have the potential to degrade area ecological health inside the buffers listed above, the following will apply: 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 in question.

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). BLM will work with the Animal and Plant Health Inspection Service (APHIS), USFWS, 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.

3. 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 keep non-native species from competing with the orchid.
4. Limit the use of off-highway vehicles (OHV) to designated roads and trails within 0.5 miles of known orchid populations. There will be no exceptions for the “performance of necessary tasks” other than fire fighting and hazardous material cleanup, which allow using vehicles off of highways. OHV competitive events will not be allowed within 1.0 miles of known orchid populations. Roads that have the potential to impact the orchid and are not required for routine operations, or maintenance of developed projects, or lead to abandoned projects will be reclaimed as directed by BLM.
5. Apply a condition of approval (COA) on all Applications for Permit to Drill (APD) 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 orchid populations. 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. For APDs conducted on existing oil and gas leases with newly discovered populations of the orchid (these would be for newly discovered populations not currently documented), BLM will require the same COA cited above, including the 0.25-mile buffer area around those newly discovered populations of the orchid for all new APDs.

6. Prohibit the sale and disposal of salable minerals in habitat containing known populations of the orchid (within a 0.25-mile buffer area of known orchid populations), and where possible, pursue acquisition of property with known populations of the orchid with salable minerals. The disposal (sale and removal) of salable minerals is a discretionary BLM action and is prohibited within a 0.25-mile buffer area of known populations of the orchid.
7. To prevent loss of habitat for the orchid, BLM “shall retain in federal ownership all habitats essential for the survival and recovery of any listed species, including habitat that was used historically, 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, BLM will survey to assess the habitat boundary and retain that area in federal ownership. BLM-administered public lands that contain identified habitat for the orchid will not be exchanged or sold, unless it benefits the species.
8. 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. Rights-of-way actions for roads, powerlines, pipelines, etc. will avoid occupied habitat for the orchid.

All proposed projects will be designed and locations selected to minimize disturbances to known populations of the orchid, and if the avoidance of adverse effects is not possible, BLM will re-initiate consultation with USFWS. Projects will not be authorized closer than 0.25 miles from any known populations of the orchid without concurrence/re-initiation of consultation between USFWS and the BLM Authorized Officer. No activities will be authorized within 0.25 miles of any known populations of the orchid during the essential growing season time period (from May 15 to September 30 during the growing, flowering, and fruiting stages) to reduce impacts to this species.

9. Revised December 9, 2005—BLM will manage stream habitats to retain, re-create, or mimic natural hydrology, water quality, and related vegetation dynamics. Projects upstream and downstream may alter natural hydrology or water quality, change the vegetation of the riparian ecosystem, and cause direct ground disturbance. These projects may adversely affect the orchid and must be evaluated and redesigned to ensure that adverse effects to the orchid do not occur.
10. To conserve and protect natural areas, planned recreational foot trails are created to control human traffic. BLM will prevent new trails from being constructed within 0.25 miles from known occurrences of the orchid and create programs that will strive to protect the orchid’s habitat.

Best Management Practices

The best management practices (BMP) cited below are to be considered on a case-by-case basis at the project level and implemented where appropriate to further protect the orchid.

1. When project proposals are received, BLM will initiate coordination with USFWS at the earliest possible date so that both agencies can advise on project design. This should minimize the need to redesign projects at a later date to include orchid conservation measures as determined appropriate by the USFWS.

BLM will participate in the development of both a conservation agreement/assessment strategy and a species-specific recovery plan for the orchid in coordination with USFWS and other agencies as appropriate. Orchid habitat on BLM-administered lands will be monitored to determine if recovery/conservation objectives are being met.

BLM will coordinate with the USFWS, the National Resource Conservation Service (NRCS), and private landowners to ensure adequate protection for the orchid and its habitat when new activities are proposed, and to work proactively to enhance the survival of the plant.

Revised December 9, 2005—In the event that a new population of the orchid is found, the USFWS Wyoming FO, (307) 772-2374, will be notified within 48 hours of discovery.

2. Livestock grazing, mowing/haying, and some burning are specific management tools that BLM may use to maintain favorable habitat conditions for the orchid, where feasible. Mowing and grazing, with proper timing and intensity, reduce native and exotic plant competition for light and possibly for water, space, and nutrients.
3. To prevent loss of habitat for the orchid, BLM “shall retain in federal ownership all habitats essential for the survival and recovery of any listed species, including habitat that was used historically, 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 *potential* orchid habitat, BLM will survey to assess the potential for the existence of the orchid. Although it is difficult to assess whether the orchid was historically present on such sites, BLM should try and retain in federal ownership all habitats essential for the survival and recovery of the orchid, including habitat that was used historically, has retained its potential to sustain this listed species, and is deemed to be essential to their survival (BLM 2001). Potential orchid habitat may be used for reintroduction efforts and is important for the recovery and enhancement of the species.
4. The dynamics of stream systems, including the movement of streams within their floodplains, that are vital for the life cycle of the orchid must be maintained and restored. Flow timing, flow quantity, and water table characteristics should be evaluated to ensure that the riparian system is maintained where these plants occur.
5. The natural species composition and structural diversity of plant communities in riparian zones and wetlands shall be maintained and restored.
6. For the protection of the orchid and its potential habitat, surface-disturbing activities listed above, should be avoided in the following areas when they occur outside of the protective 0.25-mile buffer from populations of the orchid: (a) identified 100-year flood plains; (b) areas within 500 feet from perennial waters, springs, wells, and wetlands; and (c) areas within 100 feet from the inner gorge of ephemeral channels.

Research/Monitoring/Inventories

A steering committee should be formed to develop and prioritize management practices and assist BLM and USFWS with research projects. Once the steering committee is formed, the committee should undertake the following steps:

1. Conduct inventories for the orchid in areas with potential habitat.
2. Maintain a database of all searched, inventoried, or monitored orchid sites.

3. Analyze vegetation treatments (mowing, prescribed fire, mechanical treatments, etc.) in known or potential orchid habitat to determine impacts to the species.
4. Establish monitoring; biological, ecological, and population demographics; and life history studies as funding and staffing allow. Examples include: monitoring current populations each year for trends; studies that identify pollinators; genetics; life history; effects of pesticides and herbicide; seed viability and germination; and studies that monitor the success of reintroduction efforts.
5. Monitor orchid population sites for invasion by noxious and invasive plant species.
6. Perform monitoring and analysis pertaining to flow timing, flow quantity, and water table characteristics with the goal of ensuring that riparian vegetation is maintained in areas of known and potential habitat for the orchid.

Collection

If at all possible, collect and bank orchid seeds at local, regional, national, and international arboreta, seed banks, and botanical gardens as insurance against catastrophic events, for use in biological studies, and for possible introduction/reintroduction into potential habitat.

Education

Train law enforcement personnel on protections for the orchid and its habitat, its status, and current threats to its existence. Educate resource specialists, rangers, and fire crews about the orchid and its habitat to help with project design for the general area and for fire suppression actions occurring in potential habitat for the orchid. Focus education efforts on plant identification and habitat characteristics so personnel will recognize the orchid in riparian habitat and report the sighting to the threatened and endangered species specialist in their office.

Introduction/Reintroduction

BLM should work in coordination with USFWS to develop reintroduction sites and to maintain the integrity of these sites for the survival of the orchid. The objective would be to reintroduce populations of the orchid into areas of historic occurrence and introduce new populations in suitable habitat within the plant's historic range.

Propagation techniques should be developed and used to reintroduce/introduce the orchid and to repopulate known habitats should population recovery become necessary.

BLACK-FOOTED FERRET (ENDANGERED)

Project and development activities will be avoided in white-tailed prairie dog towns/complexes greater than 200 acres. These areas will be assessed and mapped at the proposed project level and associated burrow densities on potentially affected towns will be determined, when necessary, pursuant to USFWS- and BLM-approved techniques. Assessments should be repeated every 3 to 5 years thereafter to determine whether the criteria established in the USFWS (1989) guidelines for black-footed ferrets are met.

If any black-footed ferrets or their sign are found within a prairie dog town or complex previously determined to be unsuitable for or free of ferrets, then all previously authorized project-related activities

(or actions on any future application that may directly, indirectly, or cumulatively affect the colony/complex) ongoing in such towns or complexes will be suspended immediately and Section 7 consultation will be re-initiated with USFWS.

If suitable prairie dog town/complex avoidance is not possible, surveys of towns/complexes for black-footed ferrets will be conducted in accordance with USFWS guidelines and requirements. This information will be provided to BLM and USFWS in accordance with Section 7 of the Endangered Species Act (Act) and the Interagency Cooperation Regulations.

BLM will conduct educational outreach to employees and project proponents regarding the nature, hosts, and symptoms of canine distemper and its effects on black-footed ferrets. Attention will be focused on the reasons why employees should not have pets on work sites during or after hours.

Conservation Measures

The conservation measures listed below are separated into species conservation measures that affect the species directly; habitat and mapping measures that protect habitat and address prairie dog colonies and mapping activities; and recovery/reintroduction measures that address BLM's role in and commitment to recovery of the species.

Species Conservation Measures

When project proposals are received for areas that still require black-footed ferret surveys (i.e., not block-cleared (Map 3), USFWS letter dated February 2, 2004) and meet potential habitat criteria as defined by the USFWS guidelines (USFWS 1989), BLM shall initiate coordination with USFWS to obtain its input at the earliest possible date. This should minimize the need to redesign projects at a later date to include black-footed ferret conservation measures deemed appropriate by USFWS.

If suitable prairie dog town/complex avoidance is not possible in locations identified in non-block cleared areas, surveys of towns/complexes for black-footed ferrets shall be conducted in accordance with USFWS guidelines and recommendations. This information shall be provided to BLM and USFWS in accordance with Section 7 of the Act and the Interagency Cooperation Regulations.

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 the Field Supervisor of the USFWS office in Cheyenne, Wyoming, (307) 772-2374. The report should include what was seen; the time, date, and exact location of sighting; suspected cause of death; and observer's name and telephone number. Carcasses or other suspected ferret remains shall be collected by BLM or USFWS employees and deposited with the USFWS Wyoming FO or USFWS Law Enforcement Office. Although BLM employees are not likely to have a permit to collect a black-footed ferret carcass, it is imperative that the carcass be salvaged and immediately transported to the USFWS office. This would prevent the carcass from being scavenged and allow pertinent information, including photographs, about the cause of death to be gathered so the fatality could be accurately documented.

If black-footed ferrets or their sign are found on public lands outside of the Shirley Basin nonessential experimental population boundary (even within a prairie dog town or complex previously determined to be unsuitable for or free of ferrets), all previously authorized project-related activities (or actions on any future application that may directly, indirectly, or cumulatively affect the colony/complex) ongoing in such towns or complexes shall be suspended immediately and Section 7 consultation re-initiated with USFWS. An emergency road closure for other than official travel (defined as only those activities necessary to evaluate the black-footed ferret find) will be enacted by BLM within 48 hours of the find to

protect newly discovered black-footed ferrets. This emergency road closure would apply to all non-paved roads within at least 1.0 miles of the find. A task force will be formed within 48 hours of the find to assess protection of the newly discovered black-footed ferrets. The task force will consist of at least one member from BLM, USFWS, the Wyoming Game and Fish Department (WGFD), and the United States Geological Survey (USGS) Biological Resources Division (BRD). BLM shall coordinate with these agencies to ensure that ferret surveys or other appropriate actions are conducted.

Information shall 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.

Habitat and Mapping Measures

All white-tailed prairie dog towns/complexes greater than 200 acres and black-tailed prairie dog towns/complexes greater than 80 acres shall be assessed and mapped for any projects that are proposed within such areas. The associated burrow densities on potentially affected towns shall be determined, when necessary, pursuant to USFWS- and BLM-approved techniques to determine whether the criteria established for ferret occupancy in the USFWS (1989) guidelines for black-footed ferrets are met.

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

Recovery/Reintroduction Measures

BLM shall work with USFWS and WGFD to identify and select special management areas for potential reintroduction sites for black-footed ferrets. These areas will be selected based upon a number of factors, including BLM's ability to protect and manage them, their size (5,000 to 10,000 acre sites, optimally), and potential utility to black-footed ferrets. Because reintroduction sites (of prairie dog complexes) must be managed on a landscape scale and plague is a significant but unpredictable event, special management areas 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 special management areas and may include being withdrawn from leasing and protected from commercial development (i.e., land disposal through R&PP actions, etc.). The following BMPs are examples of protective measures that will be included in these special management areas:

1. Develop prairie dog management plans with ongoing monitoring and protection of prairie dog towns and complexes on towns with high priority for black-footed ferret reintroductions.
2. Follow the guidelines outlined in the *Wyoming Black-Tailed Prairie Dog Management Plan* (Wyoming Black-tailed Prairie Dog Working Group, 2001) and the *White-Tailed Prairie Dog Conservation Assessment* (Seglund et al. 2004). Encourage the Wyoming Board of Agriculture to give regulatory management of prairie dogs to the WGFD to remove unprotected, "pest" status from prairie dogs and provide regulatory mechanisms for recreational shooting of them.
3. Establish land stewardship agreements with other agencies and/or private landowners where large (1,000 acres) prairie dog towns or complexes exist. These agreements can control potential uses that may be detrimental to prairie dogs and their habitats, while preserving the landowner's intent for use.

4. Avoid sale or exchange of lands with the potential for black-footed ferret reintroductions and attempt to acquire parcels with prairie dogs on them, especially those that have potential as part of a black-footed ferret reintroduction effort. Initiate, to the extent feasible, land exchanges in the Thunder Basin and Shirley Basin in areas with potential for black-footed ferrets to increase the land area in federal ownership.
5. Avoid vegetation stand conversions that have been shown to be detrimental to prairie dogs and reduce or eliminate any other suspected ecosystem-degrading practices.
6. Encourage, support, and/or establish a prairie dog research program, addressing issues such as the effect of recreational shooting and oil and gas development on prairie dogs, sylvatic plague control, and population viability analysis.

Knowledge of the effects of resource extraction on white-tailed prairie dog populations is limited; therefore, monitoring at sites before, during, and after energy development is recommended (Seglund et al. 2004).

COLORADO RIVER FISHES (ENDANGERED)

Permitted public land users will pay the current surface water depletion fee to the National Fish and Wildlife Foundation (NFWF) for every acre-foot of surface water (average annual depletion) used from the Colorado River system. Additional provisions for large depletions (greater than 100 acre-feet/year) include the following:

- The development and implementation of an in stream–flow work plan with concurrence by the implementation committee
- An appropriation or acquisition of water rights sufficient to substantially protect the in-stream flow needs of the endangered fishes in the Colorado River
- The development of proposed strategies to protect the tributary inflows that contribute to the Colorado River.

Emergency shut-off valves must be installed on petroleum product pipelines within the 100-year floodplain of critical habitat.

BALD EAGLE (THREATENED)

BLM will conduct site-specific consultation with the USFWS prior to authorization of any actions that “may affect” bald eagles.

Appropriately timed and authorized surveys in bald eagle habitats will be conducted prior to authorization of any activity that could disturb bald eagles or their habitats. Modification of operational plans may be required to minimize effects on bald eagles or their habitats.

BLM will verify annually the status (active or inactive) of known bald eagle nests, communal winter roosts, and concentration areas. BLM will coordinate annually with the USFWS, WGFD, and other appropriate entities to determine the status of known and new bald eagle nests, communal winter roosts, and other concentration areas. Known bald eagle nests, communal winter roosts, and concentration areas will be assumed active if status has not been verified.

Activities and habitat alterations that may disturb bald eagles will be restricted within suitable habitats occurring within bald eagle buffer zones. Surface-disturbing activities associated with bald eagle nesting will subscribe to the Bald Eagle Habitat Management Zone guidelines from the *Greater Yellowstone Bald Eagle Management Plan*.

No surface occupancy will be allowed within 0.5 miles of active bald eagle nests. Surface-disturbing and disruptive activities will be prohibited within 1.0 miles of active bald eagle nests from February 1 to August 15. Habitat alterations within 2.5 miles of active bald eagle nests or within 0.5 miles of the stream bank of all streams within 2.5 miles of the nest will be prohibited year-round to protect bald eagle foraging/concentration areas.

No ground disturbing activities will be permitted within 0.5 miles of active roost sites. Activities that could disturb bald eagles will be prohibited within 1.0 miles of known communal winter roosts from November 1 to April 1.

Power lines will be constructed to the standards identified by the Avian Power Line Interaction Committee (APLIC 1996).

BLM will monitor and restrict, when and where necessary, authorized or casual use activities that could adversely impact bald eagles or their habitats, including, but not limited to, recreational, mining, and oil and gas activities. Monitoring results would be considered in the design and implementation of future projects.

Reasonable and Prudent Measures (from the programmatic BO from USFWS)

RPM1. BLM shall implement measures at the individual project level to minimize adverse effects to bald eagles and their habitat.

RPM2. BLM shall implement measures across the Wyoming BLM-managed lands to improve habitat conditions for bald eagles.

Terms and Conditions

To be exempt from the prohibitions of Section 9 of the Act, BLM must comply with the following terms and conditions (T&C), which implement the RPMs described above and outline required reporting/monitoring requirements. These T&C are nondiscretionary. Many of them are reiterated here or modified from the *BLM Statewide Programmatic Bald Eagle Biological Assessment* (BLM 2003b).

T&C1. Activities and habitat alterations that may disturb bald eagles will be restricted within suitable habitats that occur within bald eagle buffer zones 1 (see Appendix II for further descriptions of buffer zones and Appendix Table F-2 of the BA (BLM 2003b) for estimation of activity levels as they correspond to buffer guidelines). Deviations may be made after consultation with USFWS.

- Zone 1 (within 0.5 mile, year-round) is intended to protect active and alternative nests. For active nests, minimal human activity levels are allowed during the period of first occupancy to 2 weeks after fledging.
- Zone 2 (from 0.5 miles to 1.0 miles from the nest, February 1 to August 15) is intended to protect bald eagle primary use areas and permits light human activity levels.

- Zone 3 is designated to protect foraging/concentration areas year-round within 2.5 miles from the nest.

T&C2. Activities that may disturb bald eagles will be restricted within 1.0 miles of known communal winter roosts annually during the period of November 1 to April 1. No ground disturbing activities will be permitted within 0.5 miles of active roost sites year round. Deviations may be made after consultation with USFWS.

Buffer zone distances were modified for this process from the *Greater Yellowstone Bald Eagle Management Plan* during pre-consultation discussions with BLM (BLM 2002, 2003a). This plan contains the most thorough investigation of the impacts of disturbance to nesting and roosting bald eagles in Wyoming to date (see GYBEWG 1996). However, because the Greater Yellowstone bald eagle investigations were conducted in forested mountainous habitat inside the Greater Yellowstone Ecosystem, the Wyoming BLM will extend nest buffer zones 1 and 2 and roost buffer zones in lands it administers in Wyoming. These extensions of buffer zones are based on the following three principles:

- The majority of BLM-managed lands in Wyoming are not mountainous and forested. On the contrary, bald eagle habitat on BLM-managed lands consists mainly of riparian habitat composed principally of open cottonwood stands with wide expanses of grasslands surrounding them. These expanses of open grasslands allow visual disturbances (i.e., line of site is greater in the grasslands) to nesting or roosting eagles to take place beyond the buffer zones that were developed for the Greater Yellowstone ecotype.
- There is a lack of research on the needs of nesting bald eagles in the grassland areas of the state so the zones were also increased to “err on the side of the species.”
- The bald eagles in Wyoming outside of Yellowstone Park may be less habituated to humans than those inside the park because the park annually receives multitudes of human recreational visitors (BLM 2002, 2003a).

T&C3. Appropriately timed surveys in bald eagle habitats shall be conducted prior to any activities and subsequent authorization of activities that may disturb bald eagles or their habitats. BLM would approve a qualified biologist to conduct such bald eagle surveys. All nest surveys should be conducted using standard procedures (see BLM 2003b, Appendix C) that minimize the potential for adverse effects to nesting raptors.

In the event species occurrence is verified, the proponent may be required to modify operational plans, at the discretion of the Authorized Officer, including the appropriate measures for minimizing effects to the bald eagle and its habitats.

T&C4. Per Section 7 of the Act, BLM will conduct site-specific consultation with USFWS prior to approving any actions authorized under the Wyoming Resource Management Plans (RMP) that “may affect” bald eagles. These future consultations will provide a means for site-specific analysis and documentation of levels of any potential incidental take of bald eagles.

T&C5. Power lines must be built to standards identified by APLIC (see APLIC 1996 or most recent version).

T&C6. In the event that a dead or injured bald eagle is observed, the USFWS Wyoming FO (307) 772-2374 and the USFWS Law Enforcement Office (307) 261-6365 will be notified within 24 hours of the discovery.

T&C7. BLM will monitor and restrict, when and where necessary, authorized or casual use activities that may adversely impact bald eagles or their habitats, including, but not limited to, recreational mining and oil and gas activities. Monitoring results should be considered in the design and implementation of future projects.

T&C8. Each year, BLM shall verify the status (active versus inactive) of known bald eagle nests, communal winter roosts, and concentration areas on lands administered by BLM within the RMP area. As a matter of maintaining inventory information, BLM shall coordinate annually with the USFWS, WGFD, and other appropriate entities to determine the status of known and new bald eagle nests, communal winter roosts, and other concentration areas.

Known bald eagle nests, communal winter roosts, and concentration areas will be assumed active if status has not been verified.

To monitor the impacts of site-specific projects authorized under the Wyoming statewide RMPs that are likely to adversely affect bald eagles, BLM shall prepare a report describing the progress of each such site-specific project, including implementation of the associated reasonable and prudent measures and impacts to the bald eagle (50 C.F.R. § 402.14[i][3]). The report, which shall be submitted annually to the USFWS's Wyoming FO by January 1 beginning after the first full year of implementation of the proposed action, shall list and describe—

- Adverse effects resulting from activities of each site-specific project
- When and if any level of anticipated incidental take is approached (as allowed by separate Incidental Take Statements from site-specific formal consultations)
- When and if the level of anticipated take (as allowed by separate Incidental Take Statements from site-specific formal consultations) is exceeded
- Results of annual, periodic monitoring that evaluates the effectiveness of the reasonable and prudent measures, including items such as assessment of whether implementation of each site-specific project is consistent with that described in the BA, compliance with terms and conditions, and documentation of sightings of bald eagles during activities of each site-specific project.

Conservation Recommendations

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

CR1. USFWS recommends that when project proposals are received, BLM initiates coordination at the earliest possible date so that USFWS can provide information on natural resource issues. This should minimize the need to redesign projects at a later date to include conservation measures that may be deemed appropriate by USFWS.

CR2. USFWS recommends that BLM-administered lands within 1.0 miles of an integral part of bald eagle habitats, including nests, communal winter roosts, and foraging/concentration areas not be exchanged or sold. If it is imperative that these lands are transferred out of BLM ownership, then every effort should be made to include conservation easements or voluntary conservation restrictions around the

important bald eagle habitat to restrict activities of the property and protect the bald eagles from disturbance and their habitat from destruction.

CR3. USFWS recommends that proponents of BLM-authorized actions be advised that roadside carrion can attract foraging bald eagles and potentially increase the risk of vehicle collisions with bald eagles feeding on carrion. When large carrion occurs on the road, appropriate officials should be notified for necessary removal.

CR4. USFWS recommends that BLM coordinates with APHIS, Wildlife Services Division, to minimize potential impacts to the bald eagle and its habitats from pest/predator control programs that may be included in the local animal damage control plan. USFWS should also be included in this coordination.

CR5. USFWS recommends that proposed and future water projects not be designed to discharge into drainages or reservoirs occurring within 500 feet of county roads and highways. This measure is intended to minimize vehicle collisions with wildlife using the water source and minimize the occurrence of eagle-vehicle collisions resulting from eagles feeding on road-killed wildlife.

CR6. USFWS recommends that BLM provides educational information to project proponents and the general public pertaining to the following topics: appropriate vehicle speeds and the associated benefit of reduced vehicle collisions with wildlife, use of lead shot (particularly over water bodies), use of lead fishing weights, and general ecological awareness of habitat disturbance.

CR7. USFWS recommends that BLM coordinates with other agencies and private landowners to identify voluntary opportunities to modify current land stewardship practices that may impact the bald eagle and its habitats.

CR8. Because bald eagles are often dependent upon aquatic species as prey, USFWS recommends that BLM periodically reviews existing water quality records (e.g., Wyoming Department of Environmental Quality (WDEQ), WGFD, USGS, etc.) from monitoring stations on or near important bald eagle habitats (i.e., nests, roosts, concentration areas) on public land for any conditions that could adversely affect bald eagles or their prey. If water quality problems are identified, BLM should contact the appropriate jurisdictional entity to cooperatively monitor the condition and/or take corrective action.

CR9. USFWS recommends that BLM projects with the potential to disturb bald eagles should be implemented in the least amount of time and during periods least likely to affect the bald eagle.

GRIZZLY BEAR (THREATENED)

Proposed developments or activities will be evaluated to determine their compatibility with grizzly habitat requirements. Activities adversely affecting potential grizzly bear populations (e.g., those that would cause population reductions, grizzly positive conditioning, or reduction in habitat quantity and/or quality) and/or their habitat will not be permitted.

Proposed logging and prescribed fire activities will be designed to protect, maintain, and/or improve grizzly habitat and meet grizzly management goals and objectives. Timber harvest will be limited to selective harvest and small clearcuts, with no dozer piling of slash and no mechanical soil scarification. Clear cuts may be broadcast burned to prevent extensive soil scarification and mimic natural burns. Group selected cuts and 10–20 acre irregular-shaped clearcuts using prescribed fire slash removal may be used to duplicate a wildfire to create openings that would provide high-quality food sources.

Timber sale area improvements will include reforestation to establish cover patches in cut blocks and supplement cover screens for riparian areas and other water sources and revegetation with native grasses, forbs, and shrubs to establish natural grizzly foods. Prescribed fire to emulate natural fire frequency may be used to enhance production of fruiting shrubs and improve whitebark pine/subalpine fir and subalpine fir/huckleberry habitat types.

Grazing permits will specify measures to meet grizzly management goals and objectives in areas of shared habitat use. Measures may include but will not be limited to closing grazing units temporarily, fencing modifications, and setting livestock utilization rates at levels compatible with potential grizzly needs.

If grizzlies are found within the planning area, all livestock carcasses or parts of carcasses will be packed, dragged, or otherwise transported to a location a minimum of 0.5 miles from any inhabited dwelling, sleeping area, tent, road, trail, or recreation site in as timely a manner as possible, unless otherwise directed by the Authorized Officer. Carcasses will be moved at least 100 yards from live water. Other options for carcass disposal may include using explosives or burning the carcass at the discretion of the Authorized Officer.

Roads that are not compatible with management objectives and are no longer needed for the purpose for which they were built will be closed and reclaimed.

All human and prepared livestock and pet food, beverages, garbage, cooking grease, and other odorous substances must be stored, handled, and disposed of so they are not available to bears at night or during the day when these items are unattended. Unavailable means stored in a bear-resistant container, stored in a closed vehicle constructed of solid non-pliable material, or suspended at least 10 feet clear of the ground at all points and 4 feet horizontally from any supporting tree or pole. Uneaten horse feed may not be left on the ground after feeding livestock; it must be gathered and properly stored so it is unavailable to bears. All garbage must be stored so it is unavailable to bears, packed out on a regular basis, and not allowed to accumulate. Burning food, garbage, refuse, or grease is prohibited.

Conservation Measures (From the Grizzly Bear Programmatic BA)

Conservation measures are designed to reduce the potential for human-bear encounters and related bear mortality, and to provide secure habitat for female bears to raise their young. Conservation efforts include reduction in bear access to human food and garbage, evaluation of road densities, research on availability of grizzly foods, and other study of bears and their habitat.

BLM shall ensure that authorized activities planned to occur in currently occupied grizzly bear habitat shall be analyzed and planned with active grizzly bear protection measures. Restrictions on the timing of activities and spatial considerations or other parameters for grizzly bears will be implemented to avoid or prevent significant disruptions of normal or expected bear behavior and activity in the area.

BLM shall provide a packet of educational materials to authorized permittees in grizzly habitat, including but not limited to special recreation permittees, livestock permittees, and timber operators.

In occupied grizzly bear habitat and areas of bear conflicts, BLM shall install bear-resistant refuse containers in those developed campgrounds and picnic areas where refuse containers are provided and maintained. In areas receiving dispersed recreational use, BLM shall inform the public of proper storage techniques for food and refuse.

BLM shall ensure that operation plans and special use permits in occupied grizzly bear habitat will specify food storage and handling and garbage disposal standards. All inhabitants of temporary living facilities under temporary use permits in occupied grizzly bear habitat will be required to properly store food and keep all potential attractants stored so they are unavailable to bears. Edibles and/or garbage will be secured to deny access to grizzly bears. Bear-proof refuse containers and timely refuse collection to prevent overflow shall be required.

Important grizzly bear food resources that may occur on BLM-administered land, particularly whitebark pine, army cutworm moths, ungulates (primarily elk calving grounds), and spawning cutthroat trout, shall be noted and monitored. Other important foods may be added as understanding of grizzly bear food resources on BLM-administered land grows.

BLM shall continue to attend meetings and be a member of the Yellowstone Ecosystem Subcommittee of the Interagency Grizzly Bear Committee (IGBC). After delisting, BLM shall continue to attend the appropriate coordination group(s).

BLM shall not approve commercial cutting or other removal of whitebark pine in the six bureau resource areas analyzed in this document that are occupied or potential grizzly bear habitat.

BLM shall implement strategies to reduce human-bear and domestic livestock-bear conflicts by conducting an evaluation of the causes of such conflicts when they do occur and determining what can be done to avoid or reduce such conflicts in the future

All permit holders who conduct activities on public lands in occupied grizzly bear habitat that could result in livestock carcasses being left where bears might be attracted to them shall be informed that all livestock carcasses or parts of carcasses shall be packed, dragged, or otherwise transported to a location a minimum of 0.5 miles from any inhabited dwelling, sleeping area, tent road, trail, or recreation site in as timely a manner as possible, unless otherwise directed by a BLM range/wildlife specialist or ranger. Carcasses shall be moved at least 100 yards from live water. Other options for carcass disposal may include using explosives or burning the carcass at the discretion of a BLM range/wildlife specialist or ranger. In cases of uncertainty on carcass disposition, the permit holder (or lessee) shall contact the appropriate BLM resource area.

BLM shall require that the proper functioning condition (PFC) of existing aquatic systems and riparian zones in occupied grizzly bear habitat be maintained for all BLM-administered public lands. If these areas are polluted and/or damaged from activities, the lessee/permittee/grantee or BLM will be required to assume full responsibility for rehabilitation and restoration of such areas (IGBC 1986).

BLM shall require that existing roads, drilling pads, and other areas with vegetation removed because of authorized activities in occupied grizzly bear habitat be revegetated and reclaimed by the lessee/permittee/grantee in a fashion that considers all grizzly bear needs or requirements.

Wild horse roundups and other intensive wild horse management activities will be avoided areas in or immediately adjacent to occupied grizzly bear habitat.

Reasonable and Prudent Measures

RPM1. BLM shall implement measures at the individual project level to minimize grizzly bear/livestock conflicts, grizzly bear/human conflicts, and grizzly bear habituation to human activities in BLM resource areas.

RPM2. BLM shall implement measures across the Wyoming BLM-managed lands to improve habitat conditions for grizzly bears.

Terms and Conditions

To be exempt from the prohibitions of Section 9 of the Act, BLM must comply with the following T&C, which implement the RPMs described above and outline required reporting/monitoring requirements. These T&C are nondiscretionary. Many of them are reiterated here or modified from the *BLM Statewide Programmatic Grizzly Bear Biological Assessment* (BLM 2005).

T&C1. BLM shall implement all conservation measures as described as part of the proposed action in the BA.

T&C2. As per Section 7 of the Act, BLM will consult individually over the impacts of site-specific projects authorized by the Wyoming RMPs that “may affect” grizzly bears. These future consultations will provide a means for site-specific analysis and documentation of levels of any potential incidental take of grizzly bears.

T&C3. To monitor the impacts of site-specific projects authorized under BLM’s Wyoming RMPs that are likely to adversely affect grizzly bears, BLM shall prepare a report describing the progress of each such site-specific project, including implementation of the associated RPMs and impacts to the grizzly bear (50 C.F.R. ' 402.14[i][3]).

The RPMs, with their implementing terms and conditions and the reporting criteria, are designed to minimize the impact of incidental take that might otherwise result from the authorized activities under the RMPs. If during the course of the authorized activities any level of incidental take has exceeded that which is permitted by site-specific formal consultations for grizzly bears, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. BLM must immediately provide an explanation of the causes of the taking and review with the USFWS the need for possible modification of the RPMs.

Conservation Recommendations

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

CR1. USFWS recommends that BLM (1) phases out sheep allotments in occupied grizzly bear habitat as the opportunity arises, (2) monitors and evaluates for conflicts between grizzly bears and sheep in existing sheep allotments in occupied grizzly bear habitat, and (3) offers no new permitted sheep animal unit months (AUM) in grizzly bear habitat.

CR2. USFWS recommends that BLM adjusts management of domestic livestock on public land allotments or leases to minimize grizzly bear/livestock conflicts (such as season of use, class of livestock, etc.).

CR3. USFWS recommends that BLM includes a clause on all use authorizations that allows for temporary cessation of activities, temporary cancellation, or as a last resort permanent cancellation if needed to resolve a grizzly-human conflict situation.

CR4. USFWS recommends that BLM (1) initiates a habitat mapping and monitoring effort for the grizzly bear using geographic information system (GIS) technology and (2) secures grizzly bear habitat with the appropriate route densities.

CANADA LYNX (THREATENED)

Development activities will be designed to prevent habitat fragmentation and maintain native plant communities and patterns thereby maintaining lynx movement abilities. Burn prescriptions will be designed to promote response by shrub and tree species that are favored by snowshoe hares and to retain or encourage tree species composition and structure that will provide habitat for red squirrels or other alternate prey species. During fire suppression activities, the construction of temporary roads and machine fire lines will be minimized. The construction of permanent firebreaks on ridges or saddles in lynx habitat will be avoided.

Pre-commercial thinning will occur only when stands are deemed to no longer provide snowshoe hare habitat. Following a disturbance to timber that could positively contribute to lynx denning habitat such as blowdown, fire, or insect/pathogen mortality, no salvage harvest will be conducted when the affected area is smaller than 5 acres except in areas where field-validated denning habitat comprises more than 10 percent of lynx habitat within a lynx analysis unit (LAU).

In grazing allotments that contain forested lynx habitat, the shrub-steppe habitat would be maintained at mid-seral or higher conditions. Livestock will be prevented from grazing in areas of post-fire and post-harvest until successful regeneration of shrub and tree components has occurred. Vegetation condition in riparian areas and willow stands will be maintained at mid-seral or higher conditions.

LAU will be available for oil and gas leasing unless such leasing is made unavailable elsewhere in the RMP. Surface disturbing activities will be subject to the considerations and restrictions in the *Canada Lynx Conservation Assessment and Strategy* (Ruediger et al. 2000) and may require consultation with the USFWS under Section 7 of the Act. Management actions will not change more than 15 percent of lynx habitat within an LAU to an unsuitable condition within a 10-year period. Reclamation plans (e.g., road reclamation and vegetation rehabilitation) for abandoned well sites will be required to provide suitable lynx habitat.

Snow compacting activities such as snowmobiling, cross-country skiing, or snowshoeing will be minimized or discouraged in lynx foraging habitat. Natural gas well sites will be operated to minimize snow compaction, for example, through the use of remote well monitoring.

Conservation Measures

1. Within an LAU, BLM shall ensure lynx habitat and non-habitat, including denning habitat, foraging habitat, and topographic features important for lynx movement are mapped. BLM or the project proponent shall identify whether all lynx habitat within an LAU is in suitable or unsuitable condition. This will involve interagency coordination where LAUs cross administrative boundaries.

2. BLM shall limit disturbance within each LAU to 30 percent of the suitable habitat within the LAU. If 30 percent of the habitat within an LAU is currently in unsuitable condition, no further reduction of suitable conditions shall occur as a result of management activities. BLM shall map oil and gas production and transmission facilities, mining activities and facilities, dams, timber harvest, and agricultural lands on public lands and evaluate projects on adjacent private lands to assess cumulative effects. This will involve interagency coordination, primarily with the U.S. Forest Service, where LAUs cross administrative boundaries.
3. BLM management actions shall not change more than 15 percent of lynx habitat within an LAU to an unsuitable condition within a 10-year period. This will involve interagency coordination where LAUs cross administrative boundaries.
4. BLM shall maintain denning habitat in patches generally larger than 5 acres and comprising at least 10 percent of lynx habitat. Where less than 10 percent is currently present within an LAU, BLM will defer any management actions that would delay development of denning habitat structure. This will involve interagency coordination where LAUs cross administrative boundaries.
5. BLM shall ensure that key linkage areas that may be important in providing landscape connectivity within and between geographic areas across all ownerships are identified using the best available science.
6. BLM shall ensure that habitat connectivity within and between LAUs is maintained.
7. BLM shall document lynx observations (tracks, sightings, along with date, location, and habitat), provide these to the Wyoming Natural Diversity Database, and request from it an annual update on all sightings for review in each FO.
8. Following a disturbance (blowdown, fire, and insects) that could contribute to lynx denning habitat, 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.
9. BLM shall only allow pre-commercial thinning when stands no longer provide snowshoe hare habitat.
10. In aspen stands, BLM shall ensure that harvest prescriptions favoring the regeneration of aspen apply.
11. 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.
12. In the event of a large wildfire, BLM shall ensure that a post-disturbance assessment is conducted prior to salvage harvest, particularly in stands that were formerly in late successional stages, to evaluate potential for lynx denning and foraging habitat.
13. 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 those that are necessary. Construction on ridges and saddles should be avoided if possible.

14. BLM shall allow no net increase in groomed or designated over-the-snow routes and snowmobile play areas in LAUs unless the designation serves to consolidate unregulated use and improves lynx habitat 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.
15. In lynx habitat within an LAU, 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.
16. BLM shall ensure that trails, roads, and lift termini are designed to direct winter use away from diurnal security habitat.
17. To protect the integrity of lynx habitat, BLM shall ensure that (as new information becomes available) winter recreational special use permits (outside of permitted ski areas) promoting snow compacting activities in lynx habitat are evaluated and amended as needed.
18. BLM shall ensure that livestock use in openings created by fire or timber harvest 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.
19. 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.
20. Within lynx habitat, BLM shall ensure that livestock grazing in riparian areas and willow patches is managed to maintain or achieve mid-seral or higher condition to provide cover and forage for prey species.
21. On projects where over-snow access is required, BLM shall ensure use is restricted to designated routes.
22. 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.
23. 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 habitat is evaluated and considered as integral to overall lynx habitat where appropriate. Livestock grazing within shrub-steppe habitats in such areas should be managed to maintain or achieve mid-seral or higher condition to maximize cover and prey availability. Such areas that are currently in late seral condition should not be degraded.
24. In high-elevation riparian areas, especially those subject to grazing, BLM shall ensure that weed assessments and weed control are conducted to optimize habitat for snowshoe hares.
25. Within lynx habitat, BLM shall ensure that key linkage areas and potential highway crossing areas are identified using best available science.
26. BLM shall work cooperatively and proactively with the Federal Highway Administration (FHA) and the State Department of Transportation to identify land corridors necessary to

maintain connectivity of lynx habitat 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).

27. Dirt and gravel roads traversing lynx habitat (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 significant increases in traffic volumes, traffic speeds, or width of the cleared right-of-way (ROW) or would contribute to development or increased human activity in lynx habitat. 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.
28. BLM shall ensure that proposed land exchanges, land sales, and special use permits are evaluated for effects on key linkage areas.
29. If activities are proposed in lynx habitat, BLM shall ensure that stipulation and conditions of approval for limitation on the timing of activities and surface use and occupancy are developed at the leasing and Notice of Stacking/APD stages. For example, requiring that activities not be conducted at night when lynx are active and avoiding activity near denning habitat during the breeding season (April or May to July) to protect vulnerable kittens.
30. BLM shall ensure that snow compaction is minimized when authorizing and monitoring developments. BLM shall encourage remote monitoring of sites that are located in lynx habitat so they do not have to be visited daily.

Best Management Practices

BLM considers the following BMPs to be non-binding conservation practices that will, if implemented, aid in the conservation of the Canada lynx. BMPs for the Canada lynx may be applied to areas both within and outside LAUs. These BMPs for the Canada lynx may be implemented on a case-by-case basis as appropriate.

1. Design regeneration prescriptions to mimic historical fire (or other natural disturbance) events, including retention of fire-killed dead trees and coarse woody debris.
2. Design harvest units to mimic the pattern and scale of natural disturbances and retain natural connectivity across the landscape. Evaluate the potential of riparian zones, ridges, and saddles to provide connectivity.
3. Provide for continuing availability of foraging habitat in proximity to denning habitat.
4. In areas where recruitment of additional denning habitat is desired, or to extend the production of snowshoe hare foraging habitat where forage quality and quantity is declining because of plant succession, consider improvement harvests (commercial thinning, selection, etc). Improvement harvests should be designed to retain and recruit the understory of small diameter conifers and shrubs preferred by hares; retain and recruit coarse woody debris consistent with the likely availability of such material under natural disturbance regimes; and maintain or improve the juxtaposition of denning and foraging habitat.
5. Provide habitat conditions through time that support dense horizontal understory cover and a high density of snowshoe hares. This includes, for example, mature multi-storied conifer

- vegetation. Focus vegetation management, including timber harvest and use of prescribed fire, in areas that have potential to improve snowshoe hare habitat (dense horizontal cover) but that presently have poorly developed understories with little value to snowshoe hares.
6. Design burn prescriptions to promote response by shrub and tree species that are favored by snowshoe hare and thus regenerate or create snowshoe hare habitat (e.g., regeneration of aspen and lodgepole pine).
 7. Design burn prescriptions to retain or encourage tree species composition and structure that will provide habitat for red squirrels or other alternate prey species.
 8. Consider the need for pre-treatment of fuels before conducting management ignitions.
 9. Design burn prescriptions and, where feasible, conduct fire suppression actions in a manner that maximizes lynx denning habitat.
 10. Map and monitor the location and intensity of snow compacting activities (for example, snowmobiling, snowshoeing, cross-country skiing, dog sledding, etc.) that coincide with lynx habitat to facilitate future evaluation of effects on lynx as information becomes available. Discourage recreational use in areas where it is shown to compromise lynx habitat. Such actions should be undertaken on a priority basis considering habitat function and importance.
 11. Provide a landscape with interconnected blocks of foraging habitat where snowmobile, cross-country skiing, snowshoeing, or other snow compacting activities are minimized or discouraged.
 12. Identify and protect potential security habitats in and around proposed developments or expansions.
 13. Determine where high total road densities (>2 miles per square mile) coincide with lynx habitat and prioritize roads for seasonal restrictions or reclamation in those areas.
 14. Minimize roadside brushing to provide snowshoe hare habitat.
 15. Limit public use on temporary roads constructed for timber sales. Design new roads, especially the entrance, for effective closure upon completion of sale activities.
 16. Limit public use on temporary and permanent roads constructed for access to timber sales, mines, and leases. Design new roads, especially the entrance, for effective closure. Upon project completion, reclaim or obliterate these roads.
 17. Minimize building of roads directly on ridgetops or areas identified as important for lynx habitat connectivity.
 18. To reduce mistaken shooting of lynx, initiate and/or augment interagency information and education efforts throughout the range of lynx in the contiguous states. Use trailhead posters, magazine articles, news releases, state hunting and trapping regulation booklets, and so on to inform the public of the possible presence of lynx and their field identification and status.
 19. Where needed, develop measures such as wildlife fencing and associated underpasses or overpasses to reduce mortality risk.

20. Where feasible within identified key linkage areas, maintain or enhance native plant communities, patterns, and habitat for potential lynx prey. Pursue opportunities for cooperative management with other landowners. Evaluate whether land ownership and management practices are compatible with maintaining lynx highway crossings in key linkage areas. On public lands, management practices will be compatible with providing habitat connectivity. On private lands, agencies will strive to work with landowners to develop conservation easements, exchanges, or other solutions.
21. Dirt and gravel roads traversing lynx habitat (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 significant increases in traffic volumes, traffic speeds, or width of the cleared ROW or would contribute to development of increased human activity in lynx habitat. 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.
22. In land adjustment programs, identify key linkage areas. Work towards unified management direction via habitat conservation plans, conservation easements or agreements, and land acquisition.
23. Plan recreational development and manage recreational and operational uses to provide for lynx movement and to maintain effectiveness of lynx habitat.
24. Identify, map, and prioritize site-specific locations, using topographic and vegetation features to determine where highway crossings are needed to reduce highway impacts on lynx.
25. Using the best available science, develop a plan to protect key linkage areas on federal lands from activities that would create barriers to movement. Barriers could result from an accumulation of incremental projects, as opposed to any one project.
26. When opportunities for vegetation treatments come up, develop treatments that provide or develop characteristics suitable for snowshoe hare.
27. Protect existing snowshoe hare and red squirrel habitat.

GRAY WOLF (NON-ESSENTIAL, EXPERIMENTAL)

No surface disturbing activities will be permitted within 0.5 miles of wolf den sites from April 1 to June 30.

Habituation of wolves to humans, or opportunities for use of human refuse as a food resource must be avoided.

Conservation Measures

1. No project actions are to be located within 330 feet of den sites between April 1 and June 30. Areas within 0.8 kilometers (0.5 miles) of a den site are recommended for protection from disturbance.

2. Take action to help reduce human-caused mortality wherever possible. For example, provide educational material, as appropriate, to avoid the inadvertent killing of a wolf mistaken for a coyote; provide information on compatible grazing practices (see #3 below); and avoid situations that lead to the adoption of human foods and garbage by wolves, which could lead to biting by and the subsequent elimination of the wolf.
3. Disseminate information useful to livestock producers on wolf/livestock interactions; alternative livestock practices that minimize conflicts between wolves and livestock (e.g., dispersed grazing rather than concentrated grazing); and compatible lambing and calving methods that reduce or eliminate wolf depredation in occupied habitat.
4. Designate a state representative to attend the annual interagency coordination meeting.
5. Continue to attend the annual coordination meetings with the Wyoming Game and Fish Department.

Best Management Practices

1. Avoid an increase in miles of road in crucial elk winter range.
2. Avoid situations that allow for wolves to habituate to humans or become exposed to and use human refuse as a food source.
3. Foster public outreach/education programs to provide wolf information in schools, campgrounds, and other places. Topics can include but not be limited to personal safety around wolves, wolf ecology, wolf mortality factors, and livestock grazing practices harmful to wolves.
4. Continue to support the research and documentation of wolf/livestock interactions and livestock grazing practices to improve these practices so they are more compatible with wolves.
5. Continue to provide and improve wolf habitat by monitoring elk populations and improving habitat for elk.
6. Encourage reporting of wolf observations by BLM staff and the public to the Wyoming Game and Fish Department.

WESTERN YELLOW-BILLED CUCKOO (CANDIDATE)

BMPs will be applied to surface-disturbing activities to maintain or enhance western yellow-billed cuckoo populations and habitats.

Western yellow-billed cuckoo habitats will be managed to achieve stable or increasing populations of cottonwood-willow vegetation, including all age classes present (seedling, young, mature, and decadent), more seedlings present than decadent plants, and more young plants present than mature plants. Occupied cuckoo habitats will be fenced to exclude livestock if livestock grazing is determined to impede regeneration of the habitat.

Occupied or potential yellow-billed cuckoo habitats will be avoidance areas for ROW. Necessary roads and trails will be placed near current habitat edge areas to reduce fragmentation of larger blocks of pristine habitat.

No boat and raft landing areas or outfitting camps will be permitted in western yellow-billed cuckoo habitat.

No surface-disturbing activities will be permitted within 0.5 miles of identified habitat from April 15 to August 15 for the protection of nesting western yellow-billed cuckoos.

No chemical insecticide use will be permitted within 0.25 miles of occupied cuckoo habitat and identified nests.

Recommended Conservation Measures

Riparian Area Management

All riparian areas of 20 hectares or more should be managed to preserve, protect and, if necessary, restore natural functions in compliance with Executive Orders 11988 (requires agencies to preserve natural values served by floodplains) and 11990 (requires avoidance of adverse impacts associated with destruction or modification of wetlands), with the objective of minimizing degradation of stream banks and the loss of riparian habitat.

Apply appropriate distance and seasonal restrictions and rehabilitation standards in or adjacent to yellow-billed cuckoo habitat when necessary. Seasonal restrictions should include the breeding season of May 15 through August 15 (Bennett and Keinath 2001).

Where possible, acquisition of additional riparian area acreage should be pursued to enhance riparian area management per Executive Orders 11988 and 11990.

To evaluate both long- and short-term impacts and/or benefits, implement riparian monitoring programs to establish baseline data and identify changes in habitat quality (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Protected riparian corridors should be established on BLM-managed lands along the Green, Snake, Sweetwater (above Mud Spring), Bear (Woodruff Narrows area), and New Fork River systems. Remaining corridors of riparian habitat along Cottonwood Creek and Horse Creek should also be protected.

Consideration should be given to any activities within or adjacent to cuckoo habitat (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Manage for a stable or increasing population of cottonwood/willow vegetation in yellow-billed cuckoo habitat. 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. (Wyoming Partners In Flight 2002. Birds in Green Ribbons: Best Management Practices).

When planting trees, select only native species and avoid Russian olive and tamarisk (salt cedar) (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Stabilize and protect eroding stream banks in cuckoo habitat. Activities that could erode the stream bank should be restricted (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Livestock Grazing Management

Livestock management practices should be used to minimize impacts to the riparian area. 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

When possible, fence occupied cuckoo habitat to exclude livestock where livestock grazing is determined to impede regeneration of the habitat (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Improve livestock distribution and forage use by using salt and mineral blocks, but avoid placing them within riparian areas (keep them at least 0.25 miles from streams) or in immediately adjacent uplands (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Improve adjacent upland forage to lure livestock out of riparian areas (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Develop shade and water (wells, windmills, guzzlers, or water piped from the stream) in upland areas to help spread grazing pressure. Provide escape ramps in water tanks to prevent drowning (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Locate livestock-handling facilities and collection points outside of 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 (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Construction

Where roads, pipelines, and power lines must be routed through riparian habitat, the construction work should not be accomplished during the period from mid-May to mid-August while the cuckoos are nesting (Dates per Dorn and Dorn 1999).

Topography should be returned to its original condition to the greatest extent possible to ensure the hydrology remains intact.

Vegetation removed for the project should be spread over the ground to provide protection, nutrient recycling, and a natural seed source for vegetation rejuvenation.

ROWs should be placed near current habitat edge areas to reduce fragmentation of larger blocks of pristine habitat.

Avoid building roads or new trails parallel to streams in riparian zones or through wet meadows. Stream crossings should be at right angles to minimize impacts on riparian vegetation, stream banks, soils, and water quality (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Combine multiple roads and ROWs onto one stream crossing site (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Maintain buffer zones between riparian areas and mining, oil, gas, sand/gravel, and geothermal activities, including structures, roads, and support facilities (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Avoid straightening or diverting sections of stream channels. These activities increase stream velocity and erosion, reduce stream bank stability, and negatively affect upstream and downstream habitat (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Developed Recreation Areas

Boat and raft landing areas should not be developed in yellow-billed cuckoo habitat. (Discussed at yellow-billed cuckoo meeting in Rock Springs, Wyoming, April 18–19, 2003).

Outfitting camps should not be permitted in yellow-billed cuckoo habitat (Discussed at yellow-billed cuckoo meeting in Rock Springs, Wyoming, April 18–19, 2003).

Provide firewood at developed campgrounds to decrease the use of riparian forest as a wood source (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Promote “Tread Lightly” recreation ethics. Educate recreationists about problems humans can cause in riparian habitat and how they can avoid damaging these areas (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Plant dense native vegetation such as willows to screen and reduce human use of fragile or vulnerable riparian areas (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Avoid using foggers for mosquito control in riparian habitats, especially during the nesting season, so a food source remains available for birds (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Pesticide Use

Chemical insecticides should not be used within 500 feet of riparian areas, and chemical herbicides, which do not break down upon contact with soil or water, should be prohibited within 500 feet of riparian areas. (The use of Demolin to control grasshopper outbreaks does not appear to move through ecological systems. The chemical is an agent that only affects 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 which would occur during a non-outbreak year. It does not affect insects that do not have exoskeletons. BLM state weed coordinator, Ken Henke, recommends 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.”)

Chemical insecticides or herbicides, if used, should be applied by hand in cuckoo habitat and only in cases where insect invasion or noxious weed outbreak has the potential to degrade area ecological health.

BLM should work with APHIS and USFWS to select a pesticide and method of application that would most effectively manage the insect infestation and least affect the yellow-billed cuckoo. Where possible, biological control should be used rather than chemical control (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices; K. Henke, BLM SO).

In areas adjacent to yellow-billed cuckoo habitat, carefully plan aerial application of herbicides to prevent drift of chemicals into riparian areas (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Prescribed Burning

Prescribed burning should not be used within 0.25 miles of suitable cuckoo habitat between mid-May and mid-August during the breeding season of the yellow-billed cuckoo (Dates per Dorn and Dorn 1999).

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

Water Use

Avoid depleting ground water and diverting streams outside their natural stream channels (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices).

Wildlife Management

Maintain beaver populations where they occur in cuckoo habitat and encourage reintroduction into areas that were historically occupied by beavers in cuckoo habitat (Wyoming Partners in Flight 2002. Birds in Green Ribbons: Best Management Practices and discussed at yellow-billed cuckoo meeting in Rock Springs, Wyoming, April 18–19, 2003).

Lands and Realty

Lands containing occupied cuckoo habitat should not be sold or exchanged. If lands containing yellow-billed cuckoo habitat are exchanged, sold, or acquired a strategy to protect the species should be developed (Developed at yellow-billed cuckoo meeting in Rock Springs, Wyoming, April 18–19, 2003).