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

THREATENED AND ENDANGERED SPECIES

As conditions, law, and policy change over time or new data are collected, the Resource Management Plan (RMP) will be updated through maintenance actions or amendments, as appropriate, to ensure management decisions reflect those changes. For example, if a species is delisted, the conservation measures and best management practices (BMP) for that species may no longer apply or could change upon delisting but will still be included in this appendix. Conversely, if a new species is listed, conservation measures and BMPs for that species will be added to this appendix.

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

These conservation 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 through the thoughtful planning of activities. Plans that incorporate them, 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.

These conservation measures are binding measures that BLM shall 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 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 U.S. Forest Service (USFS) will be required. The order in which the conservation measures appear below does not imply their relative priority.

1. The Wyoming BLM Standard Mitigation Guidelines for Surface-Disturbing Activities requires any lessee or permittee to conduct inventories or studies in accordance with BLM and U.S. Fish and

Wildlife Service (USFWS) guidelines to verify the presence or absence of threatened or endangered species before any activities can begin onsite. When the presence of one or more of these species is verified, the operation plans of a proposed action will be modified to include protection of the species and its habitat, as necessary. Possible protective measures include seasonal or activity limitations, or other surface management and occupancy constraints (USDI, BLM 1990).

- Surface disturbance will be prohibited within 500 feet of surface water and/or riparian areas (Wyoming BLM Mitigation Guidelines for Surface-disturbing and Disruptive Activities).
- No surface occupancy will be allowed within special management areas (e.g., known threatened or endangered species habitat) (Wyoming BLM Mitigation Guidelines for Surface-Disturbing and Disruptive Activities).
- 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 BLM and USFWS 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) (Wyoming BLM Mitigation Guidelines for Surface-Disturbing and Disruptive Activities).

2. Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for the Public Lands Administered by the Bureau of Land Management in the State of Wyoming, specifically:

   - Standard 1—Within the potential of the ecological site (soil type, landform, climate, and geology), soils are stable and allow for water infiltration to provide for optimal plant growth and minimal surface runoff.
   - Standard 2—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 (BLM Wyoming Guidelines for Livestock Grazing Management).
   - Standard 3—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.
   - Standard 4—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.
   - Grazing management practices will incorporate the kinds and amounts of use that will restore, maintain, or enhance habitats to assist in the recovery of federal 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 (BLM Wyoming Guidelines for Livestock Grazing Management).

3. The BLM will maintain biological diversity of plant and animal species; support Wyoming Game and Fish Department (WGFD) strategic plan population objective levels to the extent practical and to the extent consistent with BLM 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 (ESA) and approved recovery plans.

4. In any proposed new access, wetland and riparian areas will be avoided where possible (18 Code of Federal Regulations [CFR] §725.2 – Floodplain Management and Protection of Wetlands).

The following two conservation measures (5 and 6), will be added to grazing permit renewals in allotments with known populations of the orchid.

5. Place mineral supplements, new water sources (permanent or temporary), or supplemental feed for livestock, wild horses, or wildlife at least 1 mile 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 prevent 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 1 mile of known populations of the orchid will be evaluated and approved by the BLM with concurrence by USFWS and implemented on a case-by-case basis only.

6. The BLM will not increase permitted livestock stocking levels in any allotment with pastures containing known orchid populations without consulting with the USFWS. The overall impact that livestock grazing has on the orchid is unknown—whether it is detrimental due to actual grazing and trampling of plants or beneficial due to livestock removal of adjacent competing vegetation.

7. Grazing will be intensively managed within known habitat containing populations from July through September to allow plants to bloom and go to seed.

8. Recreational site development will not be authorized in known Ute ladies' tresses habitat.

9. The BLM 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.

10. 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. BLM will monitor biological control vectors.

11. Except in cases of extreme ecological health (insect or weed outbreaks/infestations), herbicide treatment of noxious plants/weeds will be prohibited within one-quarter mile of known populations of the orchid and insecticide/pesticide treatments will be prohibited within 1 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, at the discretion of BLM's Authorized Officer and with concurrence by the USFWS, 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 one-quarter-mile buffer). BLM will work with the Animal and Plant Health Inspection Service (APHIS), the 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.

12. If revegetation projects are conducted within one-quarter mile 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.

13. Limit the use of off-highway vehicles (OHV) to designated roads and trails within one-half mile of known populations of the orchid, 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 mile of known populations of the orchid. Roads that have the potential to impact the orchid and are not required for routine operations or maintenance of developed projects or that lead to abandoned projects will be reclaimed as directed by BLM.

14. Apply a condition of approval (COA) on all Applications for Permit to Drill (APD) oil and gas wells for sites within one-quarter mile 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 one-quarter-mile buffer of orchid populations, such as "directional drilling" to reach oil or gas resources underneath the orchid's habitat, would be acceptable.

15. For known Ute ladies' tresses populations, BLM will place a Controlled Surface Use (CSU) stipulation prohibiting all surface disturbances on new oil and gas leases, buffering the area within one-quarter mile 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 rather than those currently documented), BLM will require the COA in conservation measure 14 above, including the same one-quarter-mile buffer area around those known Ute ladies' tresses populations.

16. Prohibit the sale and disposal of salable minerals in habitat containing known populations of the orchid (within a quarter-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 one-quarter-mile buffer area of known populations of the orchid.

17. 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, that has retained its potential to sustain listed species, and is deemed to be essential to their survival" (USDI, 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.

18. All proposed rights-of-way projects (power lines, pipelines, roads, etc.) will be designed and locations selected at least one-quarter mile from any known orchid habitat to minimize disturbances. Rights-of-way actions for roads, power lines, pipelines, etc., will avoid occupied habitat for the orchid. If avoidance of adverse effects is impossible, BLM will reinitiate consultation with the USFWS.

19. All proposed projects will be designed and locations selected to minimize disturbances to known populations of the orchid; and if it is impossible to avoid adverse affects, BLM will reinitiate

consultation with the USFWS. Projects will not be authorized closer than one-quarter mile from any known populations of the orchid without concurrence of the USFWS and the BLM Authorized Officer. No ground-disturbing construction activities will be authorized within one-quarter mile of any known populations of the orchid during the essential growing season time period (from July to September, the growing, flowering and fruiting stages) to reduce impacts to this species.

20. To conserve and protect natural areas, planned recreational foot trails are created to control human traffic. BLM will create programs that will strive to protect the orchid's habitat and prevent new trails from being constructed within a quarter mile from known occurrences of the orchid.

Best Management Practices

The following BMPs 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 the 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, determined as appropriate by the USFWS.

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

3. The 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 plant survival.

4. In the event that a new population of the orchid is found, the USFWS Wyoming Field Office (307-772-2374) will be notified within 48 hours of discovery.

5. Livestock grazing, mowing/haying, and some burning are specific management tools that the BLM may use to maintain favorable habitat conditions for the orchid where feasible. With proper timing and intensity, mowing and grazing reduce the native and exotic plant competition for light and possibly for water, space, and nutrients.

6. Recreational foot trails that may be located adjacent to Ute ladies' tresses plant habitat should be constructed to reduce impacts to this species.

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, that has retained its potential to sustain listed species, and is deemed to be essential to their survival" (USDI, BLM 2001). Prior to any land tenure adjustments in *potential* orchid habitat, BLM will survey to assess the potential for existence of the orchid. Although it is difficult to assess whether the orchid was historically present on such sites, BLM should try to retain in federal ownership all habitats essential for the survival and recovery of the orchid, including habitat that was used historically, that has retained its potential to sustain this listed species and may be used for reintroduction efforts, and is important for the recovery and enhancement of the species.

8. Prescribed fire and grazing activities shall be coordinated between biologists, rangeland management specialists, and fire personnel to ensure that no damage occurs to the plant habitat when being used to maintain the habitat for the species.

9. Maintain and restore the dynamics of stream systems, including the movement of streams within their flood plains, that are vital for the life cycle of the orchid. Flow timing, flow quantity, and water table characteristics should be evaluated to ensure that the riparian system is maintained where these plants occur. BLM should continue water use in a manner that maintains suitable habitat for the Ute ladies' tresses orchid to benefit the species.

10. Maintain and restore the natural species composition and structural diversity of plant communities in riparian zones and wetlands.

11. 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 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

12. Form a steering committee to develop and prioritize management practices and assist BLM and USFWS with research projects.

13. Conduct inventories for the orchid in areas with potential habitat.

14. Maintain a database of all searched, inventoried, or monitored orchid sites.

15. Analyze vegetation treatments (mowing, prescribed fire, mechanical treatments, etc.) in known or potential habitat for the orchid to determine impacts to the species.

16. Establish monitoring, biological, ecological, population demographics, and life history studies as funding and staffing allow, such as monitoring current populations each year for trends; conducting studies to identify pollinators, genetics, life history, effects of pesticides and herbicides, seed viability and germination; and conducting studies to monitor the success of reintroduction efforts. Monitor orchid population sites for invasion by noxious and invasive plant species.

17. Perform monitoring and analysis pertaining to flow timing, flow quantity, and water table characteristics with the goal of ensuring that riparian vegetation in areas of known and potential habitat for the orchid is maintained.

Collection

18. When 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

19. Train law enforcement personnel on protection measures for the orchid and its habitat, its status, and current threats to its existence.

20. 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 and on the habitat characteristics and plant identification for the plant, so that if they encounter the orchid occurring in riparian habitat, they can report it to their office threatened and endangered species specialist.

Introduction/Reintroduction

21. The BLM should work towards developing reintroduction sites in coordination with the USFWS and then maintain the integrity of these sites for the orchid's survival. 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.

22. Develop propagation techniques and use them to reintroduce/introduce the orchid and to repopulate known populations 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 is found 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 will be suspended immediately; and Section 7 consultation will be reinitiated with USFWS.

If suitable prairie dog town/complex avoidance is impossible, 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 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, 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 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 [i.e., non-block-cleared (see Map 3 of the black-footed ferret biological assessment (USDI, BLM 2005) or USFWS' block clearance letter of February 2, 2004 (USFWS 2004)] and meet potential habitat

criteria as defined by USFWS guidelines (USFWS 1989), BLM shall initiate coordination with the USFWS at the earliest possible date so that USFWS can provide input. This should minimize the need to subsequently redesign projects to include black-footed ferret conservation measures, determined as appropriate by USFWS.

2. In areas identified in conservation measure number 1 above (non-block-cleared areas), if suitable prairie dog town/complex avoidance is impossible, surveys of towns/complexes for black-footed ferrets shall be conducted in accordance with current USFWS guidelines and recommendations. This information shall be provided to BLM and the USFWS in accordance with Section 7 of the Endangered Species Act of 1973, as amended (50 CFR §402.10 and 13), 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 BLM's office in Cheyenne, Wyoming (307-772-2374). Observations will include a description including what was seen, time, date, exact location, suspected cause of death, and observer's name and telephone number. Carcasses or other "suspected" ferret remains shall be collected by USFWS or BLM employees and deposited with the USFWS Wyoming Field Office or the 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 USFWS so pertinent information concerning the cause of death can be gathered, including photographs to preserve an accurate depiction of the fatality.

4. Discovery of a live black-footed ferret outside of the nonessential experimental population areas in Wyoming would have profound importance to the species' recovery. Reporting of such a discovery by staff, contractors, permittees, etc., will be fully encouraged by BLM staff and management.

5. If black-footed ferrets or their sign is found on public lands outside of the nonessential experimental population areas in Wyoming, all previously authorized surface-disturbing 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 BLM 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. BLM shall coordinate with these affected parties to ensure that ferret surveys or appropriate actions are conducted as deemed necessary. BLM will also reinitiate Section 7 consultation with USFWS. An emergency road closure limiting access to the site will be enacted by BLM within 48 hours of the find to protect the newly discovered black-footed ferrets. This emergency road closure will be for all nonpaved 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.

Habitat and Mapping Measures

6. Information on ferret identification 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 outline the relationship between project development and possible impacts to black-footed ferrets, especially regarding canine distemper and recreational shooting.

7. 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

8. The BLM shall work with the USFWS and the 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 of the need to manage reintroduction sites (of prairie dog complexes) on a landscape scale, and because 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 block cleared areas (see Map 3 of BLM 2005). Protective measures will be drawn up for these special management areas, and may include being withdrawn from leasing and protected from commercial development (e.g., land disposal through Recreation and Public Purpose [R&PP] Act actions). The following are examples of protective measures that will be included in these special management areas:

   - BLM shall work with respective state game and fish agencies and 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 that 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.
   - 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.
   - 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 work sites during or after hours. 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 in these areas until one month after their final distemper vaccination due to potential effects of the modified live virus vaccine.

Best Management Practices

1. Develop prairie dog management plans with ongoing monitoring and protection of prairie dog towns and complexes 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 transfer regulatory management of prairie dogs to the WGFD to remove unprotected, "pest" status on prairie dogs and provide regulatory mechanisms for recreational shooting of prairie dogs.

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.

5. 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.

6. Avoid vegetation stand conversions that have been shown to be detrimental to prairie dogs, and reduce or eliminate any other suspected ecosystem-degrading practices.

7. 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.

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

Colorado River Fishes (Endangered)

Species Conservation Measures

For projects that cause depletions to the Colorado River system, the BLM will initiate formal consultation with the USFWS.

Best Management Practices

When developing or improving water sources in the Colorado River system, BLM will consider development designs such as water wells and guzzlers rather than surface impoundments to minimize impacts to surface water hydrology resulting from attenuation of flood peaks and evaporative loss.

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.

Precommercial 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 Resource Management Plan (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 Strategies

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 the thoughtful planning of activities. Plans that incorporate them and projects that implement them are generally not expected to adversely affect lynx; and implementation of these measures across the range of the lynx is expected to lead to conservation of the species (Ruediger et al. 2000).

These conservation measures are binding measures that BLM shall implement to facilitate conservation of lynx. LAUs typically encompass both lynx habitat (may or may not be currently in suitable condition for denning or foraging habitat) and other areas (such as lakes, low elevation ponderosa pine forest, and alpine tundra). The conservation measures listed below generally apply only to lynx habitat within the LAUs. However, their use in areas of lynx habitat or potential lynx habitat not fitting the criteria of an LAU is encouraged.

However, 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 have the potential to 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. The order in which the conservation measures appear below does not imply their relative priority.

Conservation Measures

1. Within an LAU, BLM shall ensure lynx habitat and nonhabitat, 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 USFS, 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 field office.

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 allow precommercial thinning only 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. Should a large wildfire occur, 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 is 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 Wyoming 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 roadways) 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. An example of these conditions is 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 nonbinding conservation practices that will, if implemented, aid in the conservation of the Canada lynx. BMPs for the Canada lynx may be applied to areas 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 are 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 multistoried 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 the 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 pretreatment 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-county skiing, dog sledding) 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 ridge tops 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 roadways) 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 arise, develop treatments that provide or develop characteristics suitable for snowshoe hare.

27. Protect existing snowshoe hare and red squirrel habitat.

BLM SENSITIVE SPECIES

Bald Eagle

The bald eagle has recently been removed from the Endangered Species List; however, it is protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act and is considered a BLM sensitive species.

Conservation Measures

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

2. Appropriately timed surveys in bald eagle habitats should be conducted prior to any activities and subsequent authorization that may disturb bald eagles or their habitats. A qualified biologist (not limited by job title) would be approved by the BLM to conduct such bald eagle surveys. All nest surveys should be conducted using procedures that minimize the potential for adverse effects to nesting raptors.

3. In the event species occurrence is verified, the proponent may be required to modify operational plans, at the discretion of the authorized officer, to include the appropriate measures for minimization of effects to the bald eagle and its habitats.

4. Each year BLM should verify the status of known bald eagle nests, communal winter roosts, and concentration areas on lands administered by BLM. As a matter of maintaining inventory information, BLM should coordinate annually with 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.

5. Activities and habitat alterations that may disturb bald eagles will be restricted within suitable habitats that occur within bald eagle buffer zones (see Appendix D for detailed descriptions).

    - **Zone 1** (within one-half mile February 1 to August 15) 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** (within one-half to 1 mile from the nest) 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. Zone 3 would include one of two larger areas, depending on habitat types: a) 2.5 miles extending in all directions from the nest or b) one-half mile from the bank of all streams within 2.5 miles of the nest. Site-specific habitat types and foraging areas will be evaluated to determine which Zone 3 buffer applies. Zone delineation depends on habitat types. Exceptions may be made after consultation with USFWS.

6. Activities that may disturb bald eagles will be restricted within 1 mile of known communal winter roosts during the period of November 1 to April 1. No ground-disturbing activities will be permitted within 1 mile of active roost sites year round.

7. BLM-administered lands that are within 1 mile of an integral part of bald eagle habitats, including nests, communal winter roosts, and foraging/concentration areas, should not be exchanged or sold.

8. Power lines should be built to standards identified by the Avian Power Line Interaction Committee (APLIC 1996).

9. Proponents of BLM-authorized actions should 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.

10. BLM should coordinate 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.

11. Proposed and future water projects should 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.

12. BLM should provide 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.

13. In the event a dead or injured bald eagle is observed, the USFWS Wyoming Field Office (307-772-2374) and the USFWS Law Enforcement Office (307-261-6365) should be notified within 24 hours of the discovery.

14. BLM should coordinate 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.

15. BLM should monitor and restrict, when and where necessary, authorized or casual use activities that may impact bald eagles or their habitats, including, but not limited to, recreational mining and oil and gas activities.

16. BLM should periodically review existing water quality records (e.g., Wyoming Department of Environmental Quality [WDEQ], WGFD, United States Geological Survey [USGS]) from monitoring stations on or near important bald eagle habitats (i.e., nests, roosts, concentration areas) on public land for any conditions that could potentially adversely affect the species. If water quality problems are identified, the BLM should contact the appropriate jurisdictional entity to cooperatively monitor the condition and/or take corrective action.

17. 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.

18. Projects with the potential to disturb bald eagles or their habitats should be monitored, and the monitoring results should be considered in the design and implementation of future projects.

Bald Eagle Survey Methodology

Guidelines For Breeding/Nesting Site Populations[1]

Traditional monitoring methods for bald eagle breeding/nesting populations involve annual completion of three temporally separate surveys (collectively designated productivity surveys) to determine 1) occupancy, 2) activity, and 3) results of all breeding attempts in the population.

Modification of accepted productivity survey practices for more efficient, less disruptive, and more representative methods of determining population threads are recommended. ***Number of active breeding pairs and number of total young of advanced age produced*** adequately represent annual status and reproductive performance of the population. Analysis of these annual statistics in a historical context will indicate trends.

Absence of occupancy surveys will not affect detection of new breeding areas because Flath et al. (1991) almost always found new nest sites or pairs during activity surveys, seldom during occupancy surveys, and rarely during production surveys or thereafter. Continued determination of occupancy would be at the discretion of the entity responsible for completion of productivity surveys.

Specific timing of surveys must be based on local nesting chronology. Surveys should be designed to minimize disturbance as much as possible. When planning surveys, agency personnel should be aware that ***nesting phenology among breeding areas may vary as much as 45 days***, but general guidelines for timing are—

- **Occupancy surveys (*not mandatory*)** —may occur as early as February 7 but should be concentrated in the third week of March for most breeding areas.
- **Activity surveys and searches for new nests**—should generally occur from April 15 to May 5 (cottonwood leaf-out).
- **Production surveys**—should occur in late June but may extend into early July.

[1] Adapted from Montana Bald Eagle Management Plan, July 1994

Task: Annually survey in a standard manner all breeding areas known to be viable to determine status and annual productivity.

Guidelines:

1. A Bald Eagle Nest Survey Form standardizes data collection during nesting surveys and should be used. Individuals or agencies assigned specific nest survey responsibilities will receive from the Working Group survey forms prior to each year's survey effort.

2. At least once every 5 years, survey historical breeding areas that have not been active since 1990 to determine current status.

These surveys should follow the timing guidelines provided above and use the Bald Eagle Nest Survey Form.

Task: Maintain current nest record information for all bald eagle nests.

Guideline:

The Bald Eagle Nest Record Form establishes a permanent record of each nest location in the state. This form includes general descriptive information about the nest site. A map of the nest location and instructions on how to find the nest should be included whenever a new nest is found. It is the responsibility of the respective land management agency to complete the Bald Eagle Nest Record Form.

Guidelines for Wintering Period Surveys[2]

The guidelines in this appendix address four main questions: 1) What areas should be surveyed? 2) How often are surveys needed? 3) What information should be obtained? 4) What procedures should be used?

Survey Locations

The vicinities of known nest sites should be checked to determine whether eagles are resident during part or all of the nonbreeding season. If eagles are present, attempts should be made to identify their feeding area(s) and night roost(s), and to determine the period of time the eagles remain in the area.

The selection of survey locations outside of nesting habitat depends on whether the objective is to check feeding areas. Night roosts usually are checked in separate surveys because they may be as much as 15 miles apart (the longest recorded distance is approximately 17 miles), and because the number of eagles present at them varies with the time of day and several other factors.

To date, most surveys of feeding areas have been confined to locations associated with water. However, where food other than fish or waterfowl is available, open water is not a habitat requirement. Food resources from terrestrial habitats, such as big game and livestock carrion, jack and cottontail rabbits, and ground squirrels, are the major food items of wintering bald eagles in several locations. Thus, in addition to aquatic habitats, surveys of feeding areas should include terrestrial habitats.

Priorities for areas to check can be established on the basis of known or suspected levels of prey availability. Other things equal, the number of eagles is likely to be greatest where the most food is available.

Night roosts are found in a variety of habitat types and are not necessarily in the immediate vicinity of feeding areas. Trees in ravines, on the leeward side of hills, or in other wind-protected areas are the most

[2] Adapted from Northern States Bald Eagle Recovery Plan, July 1983.

likely to be used, particularly during harsh weather. In relatively flat terrain where few trees are present, eagles usually roost in trees that are clumped or screened from the prevailing wind by other vegetation. As a general rule, trees in exposed sites are occupied only during mild weather.

Survey Frequency

The number of surveys needed in local wintering areas depends on the amount of information available for site-specific management plans. If the approximate date when bald eagles first arrive in an area is not known, surveys should begin in mid- to late October. The main value of an early survey is to establish the initial date for seasonal restrictions on human activity in important wintering areas.

At locations where peak periods and levels of use have not been determined, or where preferred feeding sites and night roosts are not known, surveys are recommended at 7- to 21-day intervals throughout the winter period. Survey frequency can be adjusted so that areas with the greatest potential for high use are checked most frequently.

Biologists unfamiliar with the characteristics of wintering eagles might question the need for more than one or two surveys each winter, especially because only two surveys are recommended for the breeding season. The need for repeated surveys stems from the high mobility of wintering bald eagles. Some remain in one location for months, but others move quite frequently. Reasons for the movements are not fully understood, although some clearly are related to changes in prey availability and weather conditions. As a result of these movements, distribution and abundance of eagles in local areas fluctuate considerably during winter. For example, a location where an average of 10 eagles are seen in January might have an average count of 40 in February and a peak of 60 in March. Preferred feeding sites within an area could shift from open water early in the winter to adjacent terrestrial habitat later in the season. The level of use at night roosts also is variable. Thus, to identify important feeding areas and night roosts, surveys are needed throughout the winter period. In many locations, a high level of survey effort probably will be required for at least two winters to identify regularly used sites. Thereafter, survey frequency can be reduced to whatever is desired for monitoring a particular area of interest.

Survey Information

For each survey of a roost or feeding area, a complete record should be made of the date, time, personnel, procedures, route, and weather conditions. Determining the distribution of wintering bald eagles is as important as determining their abundance. Therefore, the locations of eagles observed during surveys should be plotted as precisely as possible on maps. Consistently used feeding areas and even individual hunting perches are identified by comparing the observations plotted over a number of surveys. Detailed information of this type is essential for delineating the boundaries and special features of wintering areas where site-specific management plans are needed. This level of detail also is needed for Endangered Species Act (Section 7) formal consultations.

Survey Procedures

To the extent possible, survey procedures should be the same all winter. Because observer competence is a major source of variability in winter survey results, the same experienced observer(s) should conduct all surveys in a particular area with the same pilot and aircraft for aerial surveys. To record detailed information during a survey, it may be necessary to have a primary observer to look for eagles and a recorder to plot the locations of eagles, carrion, waterfowl, stretches of open water, or other items of interest and value. Eagles missed by the primary observer but seen by the recorder or the pilot should be noted separately.

Surveys can be conducted from the air, the ground, or by boat. Visibility from a boat usually is limited by shoreline vegetation or topography; therefore, surveys by boat are advisable only for locations

inaccessible from the ground or unsafe for aerial survey. Surveys from the ground are recommended where vegetation and terrain do not restrict visibility, e.g., small lakes or rivers where the entire shoreline can be seen from a few fixed points. Aerial surveys are recommended for large wintering areas and locations where ground access is poor or visibility is limited. Some feeding areas and roosts appear suitable for both ground and aerial surveys. At such locations, initial surveys can be conducted simultaneously from the ground and the air to assess which procedure is better.

Safety is the foremost consideration during aerial surveys. Pilots should have considerable experience in conducting wildlife surveys that require slow, low-level flying. The route and the location of potential hazards such as power lines should be determined before each flight. Tight turns should be minimized.

Aerial surveys can be conducted from helicopters or fixed-wing aircraft. More eagles are likely to be detected from helicopters because eagles usually flush ahead of them and are quite noticeable. However, flushing eagles from roosts or feeding areas on a regular basis could lead to abandonment of these essential wintering sites by some or all of the affected birds. Also, the cost of using a helicopter (about five times the hourly cost of a fixed-wing aircraft) is seldom justified. Therefore, helicopters are recommended only where use is dictated by safety considerations.

A small plane such as a Piper PA18 ("Super Cub") is ideal for aerial surveys by one observer. For surveys that require two observers, a small four-seater capable of slow flight (e.g., Cessna 172 or 180) is recommended. During aerial surveys, a speed of 60 to 75 mph is optimal; up to 90 mph is acceptable. Detection of bald eagles drops sharply above 90 mph. The recommended survey height is 100 to 300 feet above ground or tree level. Flights above 300 feet are of limited value because many less conspicuous eagles are missed. During surveys along rivers, both shorelines should be visible from one side of the plane. Where tree cover is dense or a river is braided or so wide that both shorelines cannot be seen adequately on a single pass, the plane should circle and make additional passes until the area is covered thoroughly.

Surveys in feeding areas should coincide with the time of day when most bald eagles are foraging. This usually is one to three hours after daylight. It is advisable to check night roosts just before an early morning survey of feeding areas, and to delay the survey until later in the morning if a large number of birds are still at roosts. Surveys late in the morning or in the afternoon are not recommended because some bald eagles soar when weather conditions are appropriate, and others move to roosts or other protected sites to rest after feeding.

Both direct and indirect methods can be used to determine whether bald eagles hunt in terrestrial habitats adjacent to water. One indirect, highly recommended method is checking beneath roost trees for prey remains and regurgitated pellets of undigested material. This should be done only when no eagles are at the roosts, e.g., at mid-day. Because eagles can digest fish completely, few castings are found where fish are the major item in the diet. Vegetation from fish stomachs sometimes is regurgitated in pellet form, and fish scales and cartilage occasionally are found in castings that contain feathers or hair. A large proportion of castings with hair indicates that eagles are obtaining carrion or live prey in terrestrial habitats. By analyzing castings, it may be possible to determine which mammals are their prey; in many instances, one species clearly is dominant. These data can be used to infer that eagles hunt at particular sites or in certain vegetation types known to support the prey species. Roost sites should be checked for castings on a regular basis, e.g., once per month. For night roosts, compare the results with a count made the following morning in aquatic feeding areas. The morning survey should be preceded by a check of roost areas to determine how many eagles are still there. A night roost count that substantially exceeds the count from the morning aquatic area survey is an indication that some of the eagles may be in terrestrial areas.

The general pattern of eagle distribution in terrestrial feeding areas usually can be determined directly by conducting surveys in suitable prey habitat. Where there are few suitable sites for bald eagles to hunt, each site can be checked. However, where the potential hunting area is vast, aerial surveys along the transect lines are recommended. This type of survey provides an index of eagle distribution in relation to vegetation types and other habitat characteristics. Transect lines spaced 1.5 miles apart are suggested. The length of the lines depends on the suitability of vegetation as prey habitat. In any case, transects normally need not extend further than 15 miles from roosts. It should be recognized that a survey along transect lines provides an index of distribution and information on the extent of feeding areas; it does not provide accurate data on use by eagles. The best means of assessing abundance is to count at night roosts.

Night roost surveys are conducted at dusk or dawn. Dusk is preferred because most eagles return to roosts before dark, while there is still enough light to see them, whereas some eagles leave roosts at or before daybreak, when it is too dim for an accurate count. It is important to search periodically for roosts until there is a high degree of confidence that all regularly used sites have been identified.

Occasionally, counts at roosts cannot be made safely from the air, nor can roosts be seen directly from the ground. In these situations, observers watch from a distance and count eagles as they fly toward the roost site (or from it, if the survey is done in the morning). This procedure results in underestimates of the actual number of birds using a roost because eagles remaining there all day are not seen, and some flying to (or from) the roost could be missed.

Other considerations

There has been confusion over the interpretation of winter survey data, particularly with regard to abundance, and a discussion of the matter is appropriate in these guidelines:

1. Because of visibility biases inherent to surveys, a survey provides an index rather than an absolute count of the eagles present at a particular time.

2. Counts at night roosts generally provide more accurate indices of abundance than counts in feeding areas provided all roosts in a wintering area are checked.

3. The total number of eagles using a particular location during winter cannot be determined because individual birds vary in the length of time they remain in any one place. Therefore, the "wintering population" in a particular location, county, state, or region is dynamic, not fixed in size. At present the range, average, and peak number of eagles observed in feeding areas or at roost sites are the most meaningful measures of use in wintering years. Better indices (e.g., estimates of "bald eagle use days") for comparing levels of use in various locations are desirable and hopefully will be developed in the future.

4. Fluctuations in use occur between winters and within winters. As a general rule, however, wintering areas where suitable prey resources are regularly available, relatively abundant, and easy for eagles to obtain are used each year and support far more eagles than do surrounding, less suitable locations. Properly conducted surveys should reflect these types of differences.

Surveys do not provide all the information necessary for the preparation of site-specific management plans. Additional studies are needed for the following:

- Identifying and assessing important habitat for major prey species
- Assessing tree regeneration at night roosts and in feeding areas

- Identifying vegetation or terrain features that screen roosts and feeding areas from human activity or wind.

Also, in some locations, intensive observations or telemetry studies will be necessary to adequately define the extent of bald eagle hunting areas. This is particularly true when eagles use terrestrial habitats extensively.

Sample Bald Eagle Nest Survey Form

Year: _____
I. ID Territory Name: _____ Territory Number _____ Historical Data: _____ Survey Results _____
II. SURVEY SUMMARY Survey: _____ (1) Not Checked _____ (2) Not Located _____ (3) No Occupancy Check _____ (4) No Activity _____ (5) Unknown Outcome _____ (6) Complete Survey Status: _____ (1) Unoccupied _____ (2) Other Species _____ (3) Single Adult _____ (4) Occupied _____ (5) Active _____ (6) Unsuccessful _____ (7) Successful _____ (8) Inactive _____ (9) Unknown _____ (A) Found _____ (B) New Territory Nest Condition: _____ (1) New Nest # _____ _____ (2) Good _____ (3) Fair _____ (4) Poor _____ (5) Destroyed Nest # _____ Number of Young: _____

III. SURVEY RESULTS

Nesting Period	Date Checked	Survey Method	Nest Condition	Findings	Observer	Comments
Occupancy (3/1-3/31)						
Activity (4/1-4/31)						
Nestlings (5/1-5/31)						
Fledglings (6/1-7/15)						

IV. Supplemental Nesting Information (if known)
Date of adult arrival: _____ Date of adult dispersal: _____
_____
Date of hatching: _____ Date/number of fledglings at dispersal: _____
Date of fledging: _____ Banding data: _____
_____
V. NARRATIVE INFORMATION
Nesting failure, date/nesting period failure:
_____
Reason for failure:
_____
Observations, remarks, food habits:
_____
_____
_____
_____
Prepared by: _____ Phone: _____ Date: _____

Mailing Address:

_____

_____

Date:

_____

Agency and Office

Sample Bald Eagle Nest Record Form

Species: _____
Territory name: _____
Territory/nest number: _____
Reported by and date: _____
Location: T _____ R _____ Section _____ ¼ _____ ¼ _____
State:_____County:_____
Elevation:_____Aspect:_____
Lat/long:_____Hydrologic unit:_____
Nest stratum:_____Nest height:_____
Position on slope:_____Nest condition:_____
Land ownership: _____
Directions to nest:_____
Other:_____

_____

_____

_____

Map (1:24000 USGS quad) and Photos

- Photograph Showing Nest Site
- Photograph Showing Nest

Prepared by: _____Date:_____

Bald Eagle Habitat Management Zones[3]

Nest Site Management Zones

Nest site management zones include areas that are progressively farther from a nest constructed by bald eagles (i.e., one-half mile; one-half to 1 mile; and one-quarter to 2 and a-half miles). Correspondingly, recommended restrictions decrease as distance from the nest site increases. Zone boundaries may be altered after intensive study of eagle activity and development of site-specific management plans.

Definitions of terms used in the zone recommendations:

1. Habitat alterations—Any removal of trees, snags, or understory (includes such activities as timber harvest, firewood cutting of standing snags, or clearing and treatment of vegetation). Habitat alterations also include projects dealing with wetland and aquatic habitats, such as levee building, channeling, dredging, gravel removal, or wetland draining. Livestock use that significantly impacts the habitat or occurs at a level that would prevent habitat or prey base objectives being attained is included in habitat alterations.

2. Minimal human activity levels—(Min) Essentially no human activity with the following exceptions:

[3] Adapted from Greater Yellowstone Bald Eagle Management Plan

a. Existing patterns of ranching and agricultural activities

b. Nesting surveys and banding by biologists experienced with eagles

c. River traffic by boats that continue travel at the rate of the main current and at a frequency which results in no boat traffic for at least 30 percent of the daylight hours (fishing from boats with such movement rates and frequency is acceptable).

3. Light human activity levels—(L) This level allows for day use and low impact activities, such as boating, fishing, and hiking but at low densities and frequencies. Excluded activities include extended use and activities such as heavy construction, timber harvest, seismic exploration, blasting, concentrated use associated with recreation centers (e.g., picnic areas, boat landings), permanent housing, and helicopters or jets within one-half mile of the ground.

4. Moderate human activity levels—(Mod) Low impact (light) activity levels are included, but intensity of such activities is not limited. A limited number of recreation centers designed to avoid eagle conflicts may be considered. Other activities, such as construction, seismic exploration, blasting, and timber harvest, should also be designed to specifically avoid disturbance. (Mod+) Designing projects or land uses to avoid eagle conflicts requires sufficient data to formulate a site-specific management plan.

Zone I: Occupied Nesting Zone

Zone I is the area within a half-mile radius of an occupied nest. Ideally, this zone should be biologically relevant to the tolerance of eagles to human disturbances (i.e., the distance at which the presence of humans first causes significant stress or behavior that results in inattentiveness to young or eggs). Since human activity patterns are easier to control if restrictions do not fluctuate from year to year, it may be desirable that this zone be established for each alternate nest. However, Zone I guidelines for **habitat alterations** should be applied to all alternate nests.

Recommendations

1. Human activity should not exceed minimal levels during the period from first occupancy of the nest site until 2 weeks following fledging (approximately February 1 to August 15). Light human activity levels should not be exceeded during the rest of the year.

2. Habitat alterations should be restricted to projects specifically designed for maintaining or enhancing bald eagle habitat and conducted only during September through January.

3. Human activity restrictions for Zone I may be relaxed during years when a nest is not occupied. However, light human activity levels should not be exceeded, and land use patterns should not preclude a return to minimal activity levels.

Zone II: Primary Use Area

Zone II includes the area within a one-half to 1 mile radius of the active nest and of all known alternate nests. Intensive study of a nesting pair for several years should allow for the boundaries of this zone to be altered to include the area where over 75 percent of the adults' foraging and loafing activity occurs during the nesting season (excluding Zone I). The area could be discontinuous if movement data indicate the need.

Recommendations

1. Light human activity levels should not be exceeded during the nesting season. Moderate levels should not be exceeded during other times of the year.

2. Habitat alterations should be carefully designed and regulated to ensure preferred nesting and foraging habitats are not degraded.

3. Developments that may increase human activity levels and use patterns should not be allowed.

4. Structures that have the potential for increasing mortality due to collision should not be constructed (e.g., power and telephone lines). Existing lines posing a potential problem should be modified to minimize the potential for collision or electrocution.

Zone III: Home Range

Ideally, the home range should be delineated by monitoring eagle movements during nesting and brood rearing for several years. Lacking such data, the zone should include all potential foraging habitat within a 2 and one-half mile radius of the nest. Areas within the 2 and one-half mile radius of the nest that do not include potential foraging habitat may be excluded. However, the zone will include a quarter-mile buffer along foraging habitat where the zone has been reduced. The primary purposes of this zone are to maintain adequate foraging conditions and aid in maintaining the integrity of Zones I and II.

Recommendations

1. Human activity levels should not exceed moderate.

2. Projects that could potentially alter the habitat of forage species should be carefully designed to ensure that availability of prey is not degraded. Adequate design of such projects will require data from site-specific management plans.

3. Terrestrial habitat alterations should ensure important components are maintained (i.e., perch trees and snags, visual screening from existing or anticipated areas of human activity, and potential nesting habitat). Major habitat alterations should be considered only if site-specific management plans are developed and only if alterations are compatible with management plans.

4. Permanent developments that are suitable for human occupancy should be avoided.

5. Other developments that may increase human activity levels should be carefully designed to ensure objectives will not be exceeded for all three management zones.

6. Utility lines should be limited and restricted to locations where the potential for eagle collisions and electrocutions is minimal.

7. Pesticide use within the home range should be avoided.

Zone IV: Communal Winter Roost Protection Zone

Zone IV is the area within 1 mile of a communal winter roost. Zone IV would be applicable only from November 1 to April 1. No ground-disturbing activities will be permitted within one-half mile of active communal winter roost sites year-round.

Grizzly Bear

On March 29, 2007, the USFWS published a *Federal Register* notice (72 CFR §14865) announcing that the Yellowstone Distinct Population Segment (DPS) of grizzly bears is a recovered population that no longer meets the definition of threatened or endangered under the Endangered Species Act of 1973, as amended (16 United States Code [USC] 1531 et seq.). The delisting of the Yellowstone DPS does not change the threatened status of the remaining grizzly bears in the lower 48 states. BLM is committed to implementing the 2007 Final Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area (GYA) and is participating in the Yellowstone Grizzly Bear Coordinating Committee to ensure the continued conservation of the grizzly bear in the GYA.

Conservation Strategies

The following BLM-committed conservation measures are to be implemented in grizzly bear habitat and are intended to minimize or eliminate adverse impacts likely to result from implementation of the management actions provided in the RMPs. BLM is committed to the implementation of conservation measures (1 through 12), and BLM will also consider implementing any appropriate best management practices (BMP), items 13 through 20, at every opportunity to further protect the grizzly bear. In the future, it is expected that grizzly bears will reoccupy historic ranges and move into new areas. BLM will ensure the implementation of these conservation strategies for the protection and management of newly established populations.

The most important environmental factors affecting grizzly bears are the levels of human activities, including food storage, livestock allotments, motorized access, and site development (ICST 2003). One of the key habitat factors in the maintenance of grizzly bear populations is the protection of secure habitat, defined as all areas more than 500 meters from an open or gated motorized access route or high use nonmotorized trail, and larger than 10 acres, and providing all the key elements needed for the survival and life functions of these animals (such as food sources, cover, denning areas, and security from human disturbance and disruptive activities). Human behavior and habitat are both addressed in the following conservation measures and best management practices.

Conservation Measures

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

2. The 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.

3. In occupied grizzly bear habitat and in 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.

4. The BLM shall ensure that operation plans and special use permits in occupied grizzly bear habitat specify food storage and handling and garbage disposal standards. All temporary living facilities under temporary use permits in occupied grizzly bear habitat will be required to practice proper food storage and keep all potential attractants stored so they are unavailable to bears. Edibles and/or

garbage will be secured from access by grizzly bears. Bear-proof refuse containers and timely refuse collection to prevent overflow shall be required.

5. Important grizzly bear food resources that may occur on BLM 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 to those listed above as our understanding of grizzly bear food resources on BLM land grows. Monitoring protocols for these food resources can be adapted from Appendix E of the Conservation Strategy (ICST 2003) (http://www.fs.fed.us/r1/wildlife/igbc/ConservationStrategy/CSappendices.pdf).

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

7. BLM shall not approve commercial cutting or other removal of whitebark pine in the six field offices (FO) analyzed in this document in occupied or potential grizzly bear habitat.

8. BLM shall implement strategies to reduce human-bear and domestic livestock-bear conflicts by evaluating the causes of such conflicts when they do occur and determining what can be done to avoid or reduce such conflicts in the future. Currently these conflicts are discussed at the NW Wyoming Level One Streamlining Team meetings held approximately every 45–60 days.

9. All permit holders that conduct activities on public lands in occupied grizzly bear habitat that could result in livestock carcasses being left in locations where bears might be attracted to them shall be informed that all livestock carcasses or parts of carcasses shall be either packed, dragged, or otherwise transported to a location a minimum of one-half mile 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 FO.

10. 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 (from IGBC 1986).

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

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

Best Management Practices

1. With the intent of reducing potential conflicts between grizzly bears and livestock, BLM should phase out sheep allotments in occupied grizzly bear habitat as the opportunity arises. Existing sheep allotments in occupied grizzly bear habitat should be monitored and evaluated for conflicts between grizzly bears and sheep. BLM should offer no new permitted sheep animal unit months (AUM) in grizzly bear habitat where conflicts have occurred in the past or are likely to occur in the future.

2. BLM should adjust management of domestic livestock on public land allotments or leases to minimize grizzly bear-livestock conflicts (such as season of use, class of livestock).

3. BLM should include a clause on all use authorizations that allows for permanent cancellation, temporary cancellation, or temporary cessation of activities if such are needed to resolve a grizzly-human conflict situation.

4. Wherever possible, BLM should reduce motorized access routes in occupied grizzly bear habitat and will try to avoid authorizing any new motorized access in occupied grizzly bear areas (e.g., big game ranges).

5. Wherever possible, BLM will implement appropriate closures or seasonal restriction areas of cross-country motorized travel to provide more security in occupied grizzly bear habitat.

6. Where possible, road densities of less than 1 mile per square mile in occupied grizzly bear habitat should be maintained. Where existing road densities are currently below 1 mile per square mile, increases in road density should be avoided to maintain management options and secure habitat. All big game winter range areas should be considered as areas where road density objectives are less than 1 mile of road per square mile.

7. BLM should initiate a habitat mapping and monitoring effort for the grizzly bear. Habitat mapped on BLM lands will be done using geographic information system (GIS) technology. Secure habitat, open motorized access route density (OMARD, refers to roads that are actively used) greater than 1 mile/square mile, and total motorized access route density (TMARD, includes all roads, even gated roads) greater than 2 miles/square mile will be monitored utilizing the Yellowstone Grizzly Bear Cumulative Effects Model (CEM) GIS databases and will be reported annually, as is described in ICST (2003) and conducted in the PCA.

8. In areas of vital importance to grizzly bears (known denning areas, army cutworm moth aggregations, cutthroat trout spawning sites, spring ungulate concentration sites, etc.) activities that adversely affect grizzly bear populations and/or their habitat should be avoided. Adverse habitat effects could result from land surface disturbances; water table alterations; reservoirs, rights-of-way, roads, pipelines, canals, transmission lines, or other structures; increased human foods; and reduced availability of natural foods. Areas of vital importance to grizzlies are identified through the evaluation process described in the Grizzly Bear Management Guidelines (IGBC 1986).

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 (USDI, 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 CFR §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) phase out sheep allotments in occupied grizzly bear habitat as the opportunity arises, (2) monitor and evaluate for conflicts between grizzly bears and sheep in existing sheep allotments in occupied grizzly bear habitat, and (3) offer no new permitted sheep AUMs in grizzly bear habitat.

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

CR3. USFWS recommends that BLM include 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) initiate a habitat mapping and monitoring effort for the grizzly bear using GIS technology, and (2) secure grizzly bear habitat with the appropriate route densities.

Gray Wolf

Conservation Strategies

Because of the wolf's status in Wyoming as an experimental nonessential species under Section 10(j) of the Endangered Species Act, conservation measures are not inherent in the recovery plan. Nor are any

conservation measures outlined in the 2003 (unapproved by USFWS) Wyoming State Management Plan for wolves (WGFD 2003). Wolves are very adaptable and have done very well in Wyoming since their release in 1995-1996. Two main factors affecting the continued existence of wolves in an area are the maintenance of a good ungulate prey base and the containment of roads and human activity. Habitat improvement projects for elk and other big game foraging areas are already part of the RMPs and one of the main activities carried out by the individual FOs. The other significant factor is to reduce human-caused mortality. Road density (highly correlated with human causes of death), public outreach and education, and cattle-ranching practices as they relate to wolf depredations are overarching elements in the maintenance of successful wolf populations.

The maintenance of a good database on the location of wolf packs is the first step toward protecting the animals. It is important to develop and maintain contact with appropriate staff with the USFWS and WGF to stay informed of wolf packs in the FO and/or on BLM land. Following delisting and as wolf populations expand, it may be necessary to develop monitoring protocols for wolves on BLM lands. These would be most effective if coordinated with other agencies.

These conservation measures are meant to be a tool to clarify what activities have impacted the species in the past, what conservation measures have been or could be used to minimize impacts, and to assist the agencies in the development of BAs and BOs. Implementation of the following conservation strategies is intended to minimize adverse impacts that are likely to result from implementation of the management actions provided in the RMPs. BLM has committed to implementing conservation measures 1 through 5. BLM will also consider implementing BMPs, items 1 through 6, at every opportunity to further protect the gray wolf. All conservation measures and BMPs apply to the known populations of the gray wolf. If wolf packs are formed in new areas, these measures would also apply to these areas.

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 (one-half mile) 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 number 3 below); and avoid situations that lead to the adoption of human foods and garbage by wolves, which could lead to humans being bitten and cause 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 WGFD.

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 WGFD.

Western Yellow-Billed Cuckoo (Candidate)

Conservation Recommendations

1. The following habitat conservation measures and species conservation measures will be implemented within the PFO in areas where there is the potential for the western yellow-billed cuckoo to occur in nesting and/or foraging habitat.

2. Surface-disturbing activities would be avoided within 500 feet of perennial waters and wetland/riparian areas for protection of western yellow-billed cuckoo and identified habitat. Boat and raft landing areas will not be developed, and outfitting camps will not be permitted in western yellow-billed cuckoo habitat.

3. Surface-disturbing or disruptive activities will be prohibited within one-half mile of identified habitat during the period of April 15 to August 15 for the protection of nesting western yellow-billed cuckoos.

Best Management Practices

1. BMPs would be applied to surface-disturbing and disruptive activities to maintain or enhance the western yellow-billed cuckoo and their habitats. Incorporate yellow-billed cuckoo habitat guidelines into livestock standards and guidelines assessments.

2. Where possible, biological control of pests would be used rather than chemical control. Where needed, pesticide use would be applied by land within one-quarter mile of cuckoo habitat and only in cases where insect or weed outbreaks have the potential to degrade area ecological health. Outside the one-quarter mile buffer, aerial application of pesticides would be carefully planned to prevent drift. BLM shall work with APHIS and USFWS to select a pesticide and method of application that will most effectively manage the infestation and least affect the western yellow-billed cuckoo.

3. Ensure adequate livestock practices to protect yellow-billed cuckoo habitat. These include, but are not limited to, placement of salt and mineral blocks, livestock water locations, fencing, livestock handling facilities, and season of use.

4. All high-quality riparian areas of 20 hectares or more shall be managed to preserve, protect, and if necessary, restore natural functions to minimize degradation of stream banks and the loss of riparian habitat.

5. When necessary or required, fence known occupied cuckoo habitat to exclude or shorten the duration of livestock use where livestock grazing is determined to impede regeneration of the habitat. This will stabilize and protect eroding stream banks in cuckoo habitat.

6. Avoid building roads or new trails parallel to streams in riparian zones or through wet meadows that have the potential, or are identified as containing, habitat for the western yellow-billed cuckoo. If stream crossings are required, they shall be constructed at right angles to minimize impacts to riparian vegetation, stream banks, soils, and water quality. Roads and trails shall be placed near current habitat edge areas to reduce fragmentation of larger blocks of pristine habitat. Combine multiple roads and rights-of-way into one stream crossing site.

7. Avoid depleting ground water and diverting streams outside their natural stream channels in riparian areas with potential western yellow-billed cuckoo habitat.

8. Maintain beaver populations where they occur in cuckoo habitat and encourage reintroduction into areas that were historically occupied by beavers in western yellow-billed cuckoo habitat.

9. In identified western yellow-billed cuckoo habitat, implement riparian monitoring programs to establish baseline data and identify changes that have occurred in order to evaluate both long-term and short-term impacts and/or benefits to the birds.

10. Manage for stable or increasing population of cottonwood-willow vegetation in areas identified as western 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 present than mature plants.

11. Prescribed fire would be used only to maintain or enhance yellow-billed cuckoo habitat. Restrictions such as smoke dispersal, heat intensity, buffer zones, or timing stipulations would be incorporated into the fire plan.

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 (EO) 11988 (requires agencies to preserve natural values served by flood plains) 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 EOs 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 one-quarter mile 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 into 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 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 that would occur during a nonoutbreak 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 a quarter mile 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 be used only 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 groundwater 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).

Mountain Plover

Implementation of the following conservation measures is intended to minimize adverse impacts resulting from the previously described management actions in each of the 11 affected RMPs. In addition to the existing mountain plover conservation measures in the RMPs (items 1 through 4), the BLM has

committed to implementing conservation measures 5 and 6. The BLM will also consider the implementation of BMPs that include, but may not be limited to, items 7 through 25, to further protect the mountain plover and its habitat.

Existing Protections in the RMPs

1. The Wyoming BLM Standard Mitigation Guidelines for Surface-Disturbing Activities requires any lessee or permittee to conduct inventories or studies in accordance with BLM and USFWS guidelines to verify the presence or absence of threatened or endangered species before any activities can begin on site. In the event the presence of one or more of these species is verified, the operation plans of a proposed action will be modified to include the protection of the species and its habitat, as necessary. Possible protective measures may include seasonal or activity limitations, or other surface management and occupancy constraints (USDI, BLM 1990).

2. Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for the Public Lands Administered by the Bureau of Land Management in the State of Wyoming, specifically—

   Standard 1 Within the potential of the ecological site (soil type, landform, climate, and geology), soils are stable and allow for water infiltration to provide for optimal plant growth and minimal surface runoff.

   Standard 3 Upland vegetation on each ecological site consists of plant communities appropriate to the site that are resilient, diverse, and able to recover from natural and human disturbance.

   Standard 4 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.

3. Grazing management practices will incorporate the kinds and amounts of use that will restore, maintain, or enhance habitats to assist in the recovery of federal 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 (BLM Wyoming Guidelines for Livestock Grazing Management).

4. BLM will maintain biological diversity of plant and animal species; support WGFD strategic plan population objective levels to the extent practical and to the extent consistent with BLM 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 ESA and approved recovery plans.

Conservation Measures

5. BLM will use the plover project screen in the preliminary analysis of the impacts associated with proposed projects in areas with occupied or potential mountain plover habitat. This multi-agency document is designed to quickly determine if the effects of a proposed action should be altered to avoid impacts to the species.

6. Implement the Mountain Plover Survey Guidelines (USFWS 2002b) when surface-disturbing activities are proposed in suitable mountain plover nesting habitats. No ground-disturbing activities shall occur in suitable nesting habitat prior to surveys conducted. Specifically, BLM will establish a quarter-mile buffer around occupied mountain plover nests and include timing restrictions to protect the species. In cases where an exception will be provided to the proponent during the April 10 to July 10 breeding and nesting time period, BLM personnel will adhere to approved protocols describing survey protocol for exceptions.

7. Building on previous research and census efforts (Plumb et al. 2005), continue to census and monitor the mountain plover population on BLM-administered lands in Wyoming.

Best Management Practices

The following BMPs are to be considered on a case-by-case basis at the project level and implemented where appropriate to further protect the mountain plover.

1. BLM should apply a COA on all APDs within areas containing known populations of mountain plovers to protect breeding and nesting activities from April 10 through July 10.

2. There should be No Surface Occupancy (NSO) of ancillary facilities (e.g. compressor stations, processing plants, etc.) within one-half mile of known mountain plover nesting areas. Variance may be granted only after consultation with and agreement of the BLM, USFWS, and WGFD.

3. The amount and nature of ground-disturbing activities should be limited within identified nesting aggregation areas to avoid the abandonment of these areas. Directional drilling, the piping and storage of condensate off of the nesting concentration area, or to a centralized facility, or other techniques for the minimization of ground disturbance and habitat degradation should be implemented where practicable and feasible. Construction of ancillary facilities (e.g., compressor stations, processing plants) should be avoided within one-half mile of known aggregation areas where possible.

4. Because adult mountain plovers and broods may forage along roads, particularly at night, traffic speed and volume should be limited during night-time hours within the breeding season in identified plover breeding areas. Whenever possible, avoid constructing roads through plover breeding and nesting habitat. Within one-half mile of identified aggregation areas, speed limits should be posted at 25 mph on dirt surface resource roads, and 35 mph on local county dirt surface roads during the brood rearing period (June 1 to July 31). Traffic should be minimized by car-pooling and organizing work activities to minimize trips on dirt surfaced roads within one-half mile of known plover breeding aggregation areas from June 1 to July 31. If possible, work schedules and shift changes should be set to avoid the periods from one-half hour before sunrise to 9:00 am and from 5:00 pm to one-half hour after sunset from June 1 to July 31, when mountain plovers and other wildlife are most active.

5. Project related features that increase the population levels or hunting efficiency of predators of the mountain plover should be strictly limited. Creation of artificial hunting perches or nest structures for avian predators within one-half mile of identified aggregation areas should be avoided by burying power lines or including perch inhibitors in their design and using the lowest possible structures for fences, condensate storage, and other elevated structures and incorporating perch inhibitors into their design. Capped and abandoned wells within one-half mile of nesting aggregation areas should be identified with markers no more than 4 feet tall with perch inhibitors on top to avoid creation of raptor hunting perches, or better yet, placed at or below ground level (according to Onshore Oil and Gas Order No. 2 – issued under 43 CFR §3164).

6. Road-killed animals should be promptly removed from areas within one-half mile of identified aggregation areas to avoid attracting avian and mammalian predators and supplementing their natural food supplies.

7. Seed mixes and application rates for reclamation should produce stands of vegetation suitable for plover nesting in plover aggregation areas, while meeting BLM's requirements for stabilizing soil and controlling weeds. Seed mixes and application rates for reclamation should be designed to produce stands of sparse, low-growing vegetation suitable for plover nesting in previously suitable mountain plover habitat. Reclamation should attempt to return the plant community to the preexisting condition as soon as possible.

8. To minimize destruction of nests and disturbance to breeding plovers from reclamation activities, no grading, seeding, or other ground-disturbing activities should occur from April 10 to July 10 each year unless surveys consistent with the current Mountain Plover Survey Guidelines or other USFWS approved method find that no plovers are nesting in the area.

9. In mountain plover habitat, native seed mixes will be used to reestablish short grass prairie vegetation during reclamation.

10. In the event that a dead or injured mountain plover is located during construction and operation, the USFWS, Wyoming Field Office (307-772-2374) and the BLM, Wyoming State Office (307-775-6256) should be notified within 24 hours to ensure proper protection measures are implemented in an attempt to avoid further injury or death.

11. Develop and implement a statewide monitoring plan for the mountain plover to establish baseline data for protection of the species.

12. Where feasible, prohibit the sale and disposal of salable minerals in areas containing known mountain plover populations. Also, pursue acquisition of property with known mountain plover populations, where possible.

13. Livestock grazing and some prescribed burning are specific management tools that BLM may use to maintain favorable habitat conditions for mountain plover where feasible. Grazing, with proper timing and intensity, may reduce the native and exotic plant competition for light and possibly for water, space and nutrients.

14. Herbicide and pesticide use should be analyzed for their effects on mountain plover prey-base prior to use in the vicinity of known populations or suitable habitats.

15. Coordinate with the USFWS, WGFD, and private landowners to ensure adequate protection for the mountain plover and its habitat.

16. Form a steering committee to develop and prioritize management practices and assist WGFD and USFWS with research efforts.

17. Train and educate resource specialists, rangers, fire crews, and enforcement personnel on protection of the mountain plover and its habitat, its status, and current threats to its existence.

18. Establish monitoring, biological, ecological, and life history studies as funding and staffing allow.

19. The following actions or projects will likely cause no significant long-term changes to mountain plover habitat if constructed outside of the nesting season (April 10–July 10):

- conducting prescribed burns
- water wells not requiring windmills
- waterbars for erosion control
- livestock fences (if constructed greater than one-half mile from aggregation areas)
- buried power lines
- small pits
- spring developments
- water troughs
- in-stream structures
- chaining vegetation
- wildlife exclosures
- construction of pipelines
- pesticide application
- herbicide application
- weed control
- seismic exploration
- wildlife guzzlers

Exception Policy for Mountain Plover

If surface-disturbing activity is requested to take place in mountain plover habitat between April 10 and July 10, presence/absence surveys are required. Survey results will determine when activities will be permitted.

Mountain plovers are protected under the Migratory Bird Treaty Act. On February 16, 1999, the USFWS proposed the mountain plover for federal listing as threatened. On September 9, 2003, the USFWS withdrew its proposed rule to list the mountain plover; currently, they are considered sensitive by the BLM.

Mountain Plover Breeding/Nesting Season Exception Protocol: If a surface-disturbing activity is requested to take place in mountain plover (MP) habitat (e.g., areas with low, sparse vegetation, bare ground, prairie dog colonies) during the MP breeding/nesting season (April 10 to July 10), presence/absence surveys would be required. These surveys would take place within one-quarter mile buffer around the activity and must not occur during poor weather conditions (e.g., high winds, precipitation). The initial survey would begin on or after April 20 and be followed by a second survey 14 days later (earliest date for second survey would be May 4). If cold, wet weather pushes the nesting period later into spring, the initial survey would also need to be delayed accordingly. These two surveys will capture the vast majority of nesting MPs, with the intent of reducing the risk of concluding that the site is not nesting habitat because no nesting birds were observed during a single survey. No surface-disturbing activity is allowed to occur until both surveys have been completed and one of the following two findings has taken place:

If no MPs are found during either survey, the disturbing activity must begin within 72 hours. If the disturbing activity does not commence within 72 hours, an additional survey will be required to check for late nesting MPs, which will start the clock again—giving another 72-hour time period.

If MPs are found during the first or second survey, then either—

1. The activity can be postponed until July 10 with no additional surveys required.

2. Additional surveys could be done to locate active nests. Because of the colonial nature of MPs, the entire quarter-mile buffer area would need to be thoroughly surveyed. When nests are found, the

activity could commence after 37 days to allow the young MPs to hatch and be mobile, or the nest could be monitored and activity could commence after 7 days post-hatching. If a brood of flightless chicks is observed, activities could commence after at least 7 days.

MP survey or field data should be forwarded to the local USFWS office, and this information should include the locations and dates when MPs are showing up on their breeding grounds so that the USFWS may document this information. This Interim Management Policy was developed with the input and review of the Wyoming Endangered Species Office of the USFWS.