

APPENDIX F
BIOLOGICAL ASSESSMENT / BIOLOGICAL EVALUATION
SUMMARY

I. INTRODUCTION AND SCOPE

This is a summary of the Prairie Biological Assessment/Biological Evaluation (BA/BE), which is a review and analysis of actions proposed in the Prairie Project Area Draft Environmental Impact Statement (DEIS). The full Prairie BA/BE is held in the Prairie Project File. The purpose of the BA/BE is to determine how the proposed action and alternatives to the proposed action will affect federally listed species or sensitive species listed by the Rocky Mountain Region (FSM 2670, R2 2600-94-2 and Regional Forester memo dated June 14, 2000). The Prairie BA/BE does not address species listed as threatened or endangered by the state of South Dakota, species tracked by the South Dakota Natural Heritage Program, or U.S. Fish and Wildlife Service (USFWS) candidate species, unless they have been identified as Region 2 sensitive species. Such species are addressed in the Prairie Wildlife Report. The Prairie BA/BE is prepared in accordance with legal requirements set forth under Section 7 of the Endangered Species Act of 1973 (19 U.S.C. 1536 (c)), and follows standards established in Forest Service Manual direction (2672.42) and the Code of Federal Regulations (50 CFR S402). The Prairie BA/BE tiers directly to the revised Black Hills National Forest Land and Resource Management Plan (Forest Plan), (USDA Forest Service 1997), the BA/BE completed for the Forest Plan Revision (Forest Plan BA/BE), and the BA/BE prepared for the Phase I Amendment (USDA Forest Service 2001).

The Prairie BA/BE evaluates management activities of all action alternatives and associated mitigation measures as set forth in the Prairie Project Area DEIS. Any actions in addition to or outside the scope of these activities will require further analysis and documentation.

II. DESCRIPTION OF THE PROPOSAL

The purpose and need for the actions proposed in the Prairie Project is to: reduce the potential for large-scale wildfire, reduce fuel loads and assure access for fire protection; protect big game winter range and provide habitat for a variety of plant and animal species; and provide for a variety of recreation opportunities including motorized and non-motorized uses.

The Prairie BA/BE was developed to review the proposed action and the alternatives of the Prairie Project Area DEIS on the Mystic Ranger District, Black Hills National Forest. The Prairie Project Area contains approximately 35,325 acres, of which 6,301 acres are privately owned. Management areas (MA) designated by the Forest Plan spatially define five differing emphasis areas in the project area. Sixty-seven percent of the Prairie Project Area is designated as MA 5.4, (big game winter range), 18% is MA 5.1 (resource production), and 13% is MA 3.7 (Late Successional Forest). The remainder of the project area is designated as MA 4.1 (Limited Motorized Use and Forest Products) and MA 8.2 (Developed Recreation Complexes).

Topography in the Prairie Project Area consists of gently rolling hills and ridges cut by steep canyons and draws. Elevations range from 3500 feet on the eastern edge of the project area where Rapid Creek leaves the Forest, to 6050 feet at the western edge. Geomorphology of the Prairie Project Area consists mostly of crystalline canyonlands, hills, and ridgelands. At lower elevations gently rolling Plateau lands are dissected by steep canyons and draws. The Prairie Project Area supports a diversity of plant community types as a result of the range of elevation in the project area and major variations in geology and geomorphology. The Ponderosa

Pine/Sedge community dominates the majority of the area, with Northern Plains Big Blue-stem Prairie stands occurring in openings. The Big Bluestem community type also occurs in the ecotone between openings and forested stands. In most drainages, a mix of Paper Birch/Beaked Hazelnut Forest and Bur Oak/Ironwood Forest can be found, depending on elevation and moisture levels. Refer to the Black Hills Community Inventory (Marriott et al. 1999) for a more detailed discussion of plant communities. Ponderosa pine are encroaching into many community types as a result of suppression of the natural fire regime. Riparian community types occur along perennial streams such as Rapid Creek, Victoria Creek, and Prairie Creek. There are also numerous intermittent streams with varying amounts of associated riparian vegetation.

Permanent private residences are abundant and scattered throughout the area, with concentrations of development in the areas of Johnson Siding and Hisega. An extensive network of system and non-system roads provides access for travel and recreational use, and removal of forest products.

The following is a brief description of each of the three action alternatives:

Alternative B – This alternative emphasizes a non-commercial vegetation treatment approach in that non-commercial thinning (6,958 acres) and prescribed fire (7,502 acres) will be the primary tools used to address the purpose and need of fire hazard and fuels reduction. Commercial harvest will be used only on a limited basis (352 acres) to construct fuelbreaks adjacent to private land in selected locations and along some key travel routes. Restoration of natural fuelbreaks (meadows, hardwoods) is planned to the extent possible using non-commercial harvest and prescribed burning. These hardwood and meadow treatments will also improve and maintain wildlife and plant species habitat for some species. No new road construction is planned in this alternative. Non-motorized travel is emphasized in the majority of the project area, with extensive road and area closures and conversion to hiking/biking trails.

Alternative C – This alternative is the proposed action. It is designed to aggressively treat vegetation using a variety of methods to address fire hazard and fuels reduction needs currently present in the project area, and concurrently provide wood fiber production. Commercial timber harvest (7,468 acres) will be used to develop landscape-scale fuelbreaks, to introduce breaks in the nearly contiguous pine canopy, and to reduce the high concentration of biomass currently present. Non-commercial thinning (8,228 acres) and prescribed burning (4,224 acres) will be used in conjunction with commercial harvest to reduce fire hazard and fuels. Meadows and hardwoods would be aggressively treated to maintain and increase their value as natural fuelbreaks. Prescribed burning, and meadow and hardwood treatments will also maintain and improve wildlife and plant species habitat for some species. Approximately three miles of new road construction will be required for planned activities. This alternative recognizes the broad spectrum of recreation and travel related uses by establishing three “core use” areas. In these three areas, roads will either be open year-round, closed year-round, or open/closed seasonally.

Alternative D – This alternative emphasizes fire hazard and fuels reduction in accordance with Forest Plan standards and guidelines, while providing wood fiber production. As with Alt. C, multiple tools will be used including commercial timber harvest (3,532 acres) and non-commercial harvest (6,121 acres), although to a lesser extent than Alt. C. No prescribed burning is planned for this alternative, although fuels reduction will be accomplished by mechanical means (crushing, chipping, piling and burning, etc.). Landscape-scale fuelbreaks

are not planned, although natural fuelbreaks such as meadows and hardwoods will be treated to maintain and enhance their ability to moderate wildfire, and maintain and improve wildlife and plant species habitat for some species. One mile of new road construction will be required to implement planned treatments. Motorized and non-motorized travel in the project area will be guided by the Forest Plan, resulting in closure of some roads.

Refer to the Prairie Project Area DEIS for more detailed discussion of the alternatives and descriptions of affected habitat types.

III. PRE-FIELD REVIEW AND FIELD RECONNAISSANCE

The pre-field review was completed using survey results, district records, literature reviews, on-line databases, the South Dakota Natural Heritage Database, and Forest Plan Monitoring Reports (USDA Forest Service 2001, 2002). Field reconnaissance of portions of the Prairie Project Area was completed in 2002. Limited surveys of potentially suitable habitat for northern goshawk were completed in 2002 by trained Forest Service personnel. Known nests are monitored annually to determine nest status. Data and results of all surveys performed can be found in District project files. Publications based on fieldwork performed in the Black Hills (Peterson 1974, Turner 1974, Peterson 1993, Tigner and Aney, 1994, etc.) and the Expert Interview Summary for the Black Hills National Forest Plan Phase I Amendment were also used.

Plant surveys were conducted from May 24 to October 9, 1999, and July 17 to September 19, 2002 by Forest Service contract personnel trained and experienced in plant identification. cursory or general surveys were conducted in areas where the probability of finding target plant species was lower, generally pine or upland grass/shrub habitat. More intense surveys were conducted where habitat was determined to offer greater probability to support rare plant species. These areas were often north-facing slopes, riparian, spring, and seep habitats, or at the base of rimrocks and cliffs. More time was spent searching such areas.

IV. ENDANGERED, THREATENED, AND PROPOSED SPECIES CONSIDERED IN THE ANALYSIS

A list of Federally threatened, endangered and proposed species for Pennington County, South Dakota was obtained from the website of the South Dakota Field Office of the U.S. Fish and Wildlife Service (<http://southdakotafieldoffice.fws.gov/endsppbycounty.htm>, updated June 2003). The South Dakota State Office is the primary contact for the Black Hills in South Dakota. There are six threatened or endangered species but no proposed wildlife species, and no plant species, included on the list, as shown in Table 1 below. There is no designated critical habitat for any of the species in Table 1 on the Black Hills National Forest. Table 1 documents the rationale for excluding a species from further analysis. If a species is known or suspected to occur in the Prairie Project Area, or if suitable but unoccupied habitat is present, then the species has been fully analyzed with respect to direct, indirect, and cumulative effects of project activities.

Table 1. Federally endangered, threatened, and proposed species for Pennington County, South Dakota.

Common Name (Scientific Name)	Status ¹	Known/Suspected in Project Area ²	Suitable Habitat Present ³	Analysis Provided ⁴	Habitat Description
Whooping crane (<i>Grus americana</i>)	E	No	No	No	Known only from eastern Pennington county; breeds/nests along prairie lake margins and in marshes; migratory in SD (USFWS 2003).
Least tern (<i>Sterna antillarum</i>)	E	No	No	No	Known only from eastern Pennington county; nests on open shorelines, riverine sandbars and mudflats (USFWS 2003).
Black-footed ferret (<i>Mustela nigripes</i>)	E	No	No	No	Closely associated with prairie dog towns on short-grass prairie (USFWS 2003).
American burying beetle (<i>Nicrophorus americanus</i>)	E	No	No	No	Known only from Gregory, Tripp, and Todd counties (USFWS 2003); no indication associated with western montane forests.
Bald eagle (<i>Haliaeetus leucocephalus</i>)	T	Yes (winter)	Yes (winter)	Yes	Usually found near open water or in areas with abundant carrion in winter (Tallman et al. 2002).

¹E = endangered; T = threatened.

²Species presence known or suspected in the Prairie Project Area.

³Potentially suitable habitat present in the Prairie Project Area.

⁴Species not known or suspected to be present and with no suitable habitat present in the Prairie Project Area will not be further analyzed in this document because they would not be affected by project activities.

No further analysis is needed for species not known or suspected to occur in the project area, and for which no suitable habitat is present. Table 1 above documents the rationale for excluding a species from further analysis.

V. SENSITIVE SPECIES CONSIDERED IN THE ANALYSIS

The sensitive species list for the Rocky Mountain Region was originally published as a Regional Supplement (2670-94-2) effective March 21, 1994, and the black-tailed prairie dog was added to the list in June 2000 (R2 Regional Forester memo dated June 14, 2000). The list of sensitive species was verified by checking the Region 2 Threatened, Endangered and Sensitive Species Program website (http://fsweb.r2.fs.fed.us/rr/tes/1994_r2_tes_by_unit.doc dated April 2003).

There are 27 wildlife species and 18 plant species on the Forest Service Region 2 sensitive species list that are known or suspected to occur, or for which potentially suitable habitat is suspected to occur on the Black Hills National Forest. These species are shown in Table 2 below. Table 2 documents the rationale for excluding a species from further analysis. If a species is known or suspected to occur in the Prairie Project Area, or if suitable but unoccupied habitat is present, then the species has been fully analyzed with respect to direct, indirect, and cumulative effects of project activities.

Table 2. U.S. Forest Service Region 2 sensitive species for the Black Hills National Forest.

Common Name (Scientific Name)	Species Present ¹	Suitable Habitat Present ²	Analysis Provided ³	Habitat Description
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Common Name (Scientific Name)	Species Present ¹	Suitable Habitat Present ²	Analysis Provided ³	Habitat Description
Fringe-tailed myotis (<i>Myotis thysanodes pahasapensis</i>)	No	Yes	Yes	Roosts in caves and mines, on snags and rock faces; forages on insects in various habitats, including shrublands and forested areas (Schmidt 2003a).
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	Yes	Yes	Yes	Roosts in caves and mines, occasionally buildings; forages on insects in various habitats including forested and wet areas (Schmidt 2003b).
Black-tailed prairie dog (<i>Cynomys ludovicianus</i>)	No	No	No	Short and mixed grass prairie with soils conducive to burrowing (Higgins et al. 2000). Higgins et al. 2000
American marten (<i>Martes americana</i>)	No	No	No	Spruce forests with complex near-ground structure, extending into adjacent pine stands (Buskirk 2002).
Northern goshawk (<i>Accipiter gentilis</i>)	Yes	Yes	Yes	Nests primarily in dense mature conifer forests; forages in a variety of forested areas and small openings (Kennedy 2003).
Osprey (<i>Pandion haliaetus</i>)	Yes	Yes	Yes	Lakes and large rivers with large populations of fish (Tallman et al. 2002).
Merlin (<i>Falco columbarius</i>)	No	Yes	Yes	Open pine forests and woodland edges for nesting (Stephens and Anderson 2002, Tallman et al. 2002).
Peregrine falcon (<i>Falco peregrinus</i>)	Historical	Yes	Yes	Open areas and woodland edges (Tallman et al. 2002); nests on rocky cliffs or buildings.
Upland sandpiper (<i>Bartramia loicauda</i>)	No	Yes	Yes	Grasslands (Tallman et al. 2002).
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	No	Yes	Yes	Low elevation riparian areas and cottonwood/willow or bur oak woodlands with dense shrub understory (Panjabi 2003).
Burrowing owl (<i>Athene cunicularia</i>)	No	No	No	Short/mixed grass prairie, usually associated with ground squirrels or prairie dogs (Johnson and Anderson 2002, Tallman et al. 2002).
Flammulated owl (<i>Otus flammeolus</i>)	No	Yes	Yes	Open ponderosa pine forests (Hayward and Verner 1994).
Lewis's woodpecker (<i>Melanerpes lewis</i>)	No	Yes	Yes	Burns, open pine, oak, or cottonwood forests with large snags for nesting (Anderson 2003, Panjabi 2003).
Black-backed woodpecker (<i>Picoides arcticus</i>)	No	Yes	Yes	Burned areas with high density of pre-burn snags; dense and/or mature forest with high snag density (Anderson 2003, Panjabi 2003).
Three-toed woodpecker (<i>Picoides tridactylus</i>)	No	No	No	Mature spruce forests, burned areas (Anderson 2003, Panjabi 2003).
Pygmy nuthatch (<i>Sitta pygmaea</i>)	No	Yes	Yes	Mature, open, large-diameter pine in park-like stands with large snags for nesting and winter roosting (Ghalambor 2003).
Golden-crowned kinglet (<i>Regulus satrapa</i>)	No	No	No	Dense spruce forests, usually mature (DeGraaf et al. 1991, Panjabi 2003).
Loggerhead shrike (<i>Lanius ludovicianus</i>)	No	Yes	Yes	Open areas with scattered, low deciduous thickets (Tallman et al. 2002).

Common Name (Scientific Name)	Species Present ¹	Suitable Habitat Present ²	Analysis Provided ³	Habitat Description
Fox sparrow (<i>Passerella iliaca</i>)	No	Yes	Yes	Shrubby woodlands, groves, and thickets, including undergrowth in coniferous or mixed woodlands (DeGraaf et al. 1991, Tallman et al. 2002).
Tiger salamander (<i>Ambystoma tigrinum</i>)	No	Yes	Yes	Non-moving or slow-flowing water bodies for reproduction; upland habitats with logs, rocks, or other cover for adults (Smith 2003b).
Leopard frog (<i>Rana pipiens</i>)	Yes	Yes	Yes	Riparian and wetland areas for tadpoles, subadults, and breeding adults; upland habitats for foraging adults (Smith 2003a).
Black Hills red-belly snake (<i>Storeria occipitomaculata pahasapae</i>)	Yes	Yes	Yes	Moist habitats with well-developed ground litter (Smith and Stephens 2003a).
Milk snake (<i>Lampropeltis triangulum</i>)	No	Yes	Yes	Diverse habitats including meadows, woodlands, and pine forests; may be strongly associated with prey habitats (Behler and King 1979, Smith and Stephens 2003b).
Cockerell's striate disc snail (<i>Discus shimeki cockerellii</i>)	No	No	No	Moist woodland sites with limestone substrate, often at the base of north-facing slopes or at dry edge of riparian areas (Frest and Johannes 2002).
Cooper's Rocky Mountain snail (<i>Oreohelix strigosa cooperi</i>)	No	No	No	Lowland wooded or riparian areas on limestone soils (Frest and Johannes 2002).
Regal fritillary butterfly (<i>Speyeria idalia</i>)	No	Yes	Yes	Tall-grass or mixed-grass prairie with violets (Marrone 2002).
Tawny crescent butterfly (<i>Phyciodes batesii</i>)	Yes	Yes	Yes	Moist meadows and stream bottoms near forest openings (Marrone 2002).
American trail plant (<i>Adenocaulon bicolor</i>)	No	Yes	Yes	Moist shaded forests with a hardwood component; often aspen/hazelnut or birch/hazelnut woods on north-facing slopes and small drainages (USDA Forest Service 1996, 2002).
Southern maidenhair fern (<i>Adiantum capillus-veneris</i>)	No	No	No	Suitable habitat of warm, calcareous springs not present (USDA Forest Service 1996, 2002).
Northern arnica (<i>Arnica lonchophylla</i>)	Yes	Yes	Yes	Dry to moist partially shaded conifer, hardwood, and mixed stands (USDA Forest Service 2002).
Prairie moonwort (<i>Botrychium campestre</i>)	No	Yes	Yes	Grasslands and forest openings in sandy soils or over limestone, with past soil disturbance (Flora of North America 1993).
Fox tail sedge (<i>Carex alopecoidea</i>)	No	Yes	Yes	Wet meadows and willow-sedge communities along streams (Ode and Marriott 1990, Marriott 1991).
Greater bladder sedge (<i>Carex intumescens</i>)	No	Yes	Yes	Partially to heavily shaded streambanks in moist spruce and birch woods (USDA Forest Service 1996, 2002).

Common Name (Scientific Name)	Species Present ¹	Suitable Habitat Present ²	Analysis Provided ³	Habitat Description
Long-stalk sedge (<i>Carex pedunculata</i>)	No	Yes	Yes	Moist deciduous/conifer forests on rich, loamy soils on north, east, and west-facing slopes, terraces, and streambanks (USDA Forest Service 1996, 2002).
Autumn coralroot (<i>Corallorhiza odontorhiza</i>)	No	Yes	Yes	Suitable habitat in the Black Hills cannot be defined at this time (USDA Forest Service 2000, 2002).
Giant helleborine (<i>Epipactis gigantea</i>)	No	No	No	Suitable habitat of warm, calcareous springs not present (USDA Forest Service 1996, 2002).
Dwarf scouring rush (<i>Equisetum scirpoides</i>)	No	Yes	Yes	Shaded, damp habitats along streams and on terraces in spruce and birch forests (USDA Forest Service 2000).
Trailing clubmoss (<i>Lycopodium complanatum</i>)	No	Yes	Yes	Moist, shaded, steep, north-facing slopes in spruce/birch forest, often in moist side drainages (Hornbeck et al. 2002).
Treelike clubmoss (<i>Lycopodium dendroideum</i>)	No	Yes	Yes	Moist, north-facing slopes, side drainages, and ravines associated with spruce and hardwoods (USDA Forest Service 2002).
Marsh muhly (<i>Muhlenbergia glomerata</i>)	No	Yes	Yes	Habitats range from open pine and spruce with a hardwood component to ledges and slopes along creeks; open, grassy hardwood draw bottoms (USDA Forest Service 2002).
Large roundleaf orchid (<i>Platanthera orbiculata</i>)	No	Yes	Yes	Shady, north-facing slopes in birch/hardwoods, occasionally conifer forests on damp, rich, humus soil (Hornbeck et al. 2003).
Autumn willow (<i>Salix serissima</i>)	No	No	No	Suitable calcareous bog/fen habitat not present (USDA Forest Service 2002).
Bloodroot (<i>Sanguinaria canadensis</i>)	No	Yes	Yes	Floodplains, terraces, and north-facing slopes of rich deciduous forests in leaf litter and loamy soil; occasionally coniferous forests (Hornbeck et al. 2003).
Woolrush (<i>Scirpus cyperinus</i>)	No	Yes	Yes	Moist to saturated soils of forested streambanks and wetlands (USDA Forest Service 2000).
Great-spurred violet (<i>Viola selkirkii</i>)	No	No	No	Suitable habitat of spruce, cold air drainages not present (USDA Forest Service 1996, 2002).

¹Species presence known or suspected in the Prairie Project Area.

²Potentially suitable habitat present in the Prairie Project Area.

³Species not known or suspected to be present and with no suitable habitat present in the Prairie Project Area will not be further analyzed in this document because they would not be affected by project activities.

No further analysis is needed for species that are not known or suspected to occur in the project area, and for which no suitable habitat is present. Table 2 above documents the rationale for excluding a species from further analysis. Determinations for all other species are found below in the Determinations Section.

VI. ANALYSIS OF EFFECTS FOR ALL ACTION ALTERNATIVES

Analysis was conducted on the effects of all action alternatives on USFWS endangered, threatened and proposed species and R2 sensitive species that may occur or for which potentially suitable habitat occurs in the Prairie Project area. This analysis considers management activities of all action alternatives and associated mitigation measures as set forth in the Prairie Project Area DEIS. The effects analysis primarily considers and documents the effects of the most aggressive combination of management activities (i.e. number of acres treated); implementation of a less aggressive combination of activities would be considered to have a lesser effect. Effects to species and their habitats caused by all action alternatives can be found in Appendix A of the Prairie BA/BE (located in the Prairie Project File). Mitigation and monitoring to avoid, minimize, or rectify effects to species and their habitats, integral to the determinations, can be found in Appendix B of the Prairie BA/BE (located in the Prairie Project File).

Sources of information used to develop the species accounts and effects analysis include the following:

- Scientific literature;
- South Dakota Natural Heritage Database;
- Habitat maps provided in the Forest Plan BA/BE (USDA Forest Service 1996);
- Online species information sources;
- Forest Plan Monitoring Reports (USDA Forest Service 2001, 2002);
- BA/BE for the Phase I Amendment to the Forest Plan (USDA Forest Service 2001);
- Revised Forest Plan BE (USDA Forest Service 1996, Appendix H) gives a thorough overview of distribution and life history for all sensitive species, and provides maps of suitable habitat across the Black Hills; this document is incorporated by reference;
- The Expert Interview Summary for the Black Hills National Forest Land and Resource Management Plan Amendment (USDA Forest Service 2000) provides further information on life history, habitat relationships, and effects of specific management activities; this document is also incorporated by reference; and
- Conservation assessments have been completed for selected species, which assimilate current knowledge about a species and provide a thorough, informed and objective overview of the species' status within the Black Hills. These conservation assessments were also used as information sources, and are incorporated by reference.

Table 3 summarizes factors considered in the analysis of Federally listed and Region 2 sensitive species that occur or for which potentially suitable habitat occurs in the Prairie Project Area. Each column represents a summary of information compiled for analysis and provides information on each species' occurrence, distribution, abundance, population trend, dispersal capabilities, life history and demographic characteristics, and availability and vulnerability of habitats to management activities. This summary also provides the determination of effects of all alternatives made for each species for the Prairie Project. Refer to Appendix A of the Prairie BA/BE (located in the Prairie Project File) for the detailed analysis for each species upon which this summary is based.

Table 3. Analysis Summary for Federally listed and Region 2 sensitive species for the Prairie Project Area (see corresponding Table Legend below).

Species	Evaluation Criteria								Determination
	Listing Status	Black Hills Occurrence	Black Hills Distribution	Distribution Outside BH	Black Hills Abundance	BH Population Trend	Black Hills Habitat	Project Area Habitat	
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	B	D	C	C	B	B	C	E	A
Fringe-tailed myotis (<i>Myotis thysanodes pahasapensis</i>)	D	A	B	A	B	D	A	B	G
Townsend's Big-eared bat (<i>Corynorhinus townsendii</i>)	D	A	B	C	B	D	A	B	G
Northern Goshawk (<i>Accipiter gentilis</i>)	D	A	C	C	B	D	B	B	G
Osprey (<i>Pandion haliaetus</i>)	D	B	A	C	A	C	A	C	G
Merlin (<i>Falco columbarius</i>)	D	A	B	C	A	D	C	C	G
Peregrine Falcon (<i>Falco peregrinus</i>)	D	C	A	C	A	D	B	C	G
Upland Sandpiper (<i>Bartramia longicauda</i>)	D	B	B	C	B	D	B	B	G
Yellow-billed Cuckoo (<i>Coccyzus americanus</i>)	D	B	A	C	A	D	B	B	G
Flammulated Owl (<i>Otus flammeolus</i>)	D	D	A	C	A	D	B	B	G
Lewis's Woodpecker (<i>Melanerpes lewis</i>)	D	A	C	C	B	D	B	B	G
Black-backed Woodpecker (<i>Picoides arcticus</i>)	D	A	B	C	A	D	B	B	G
Pygmy Nuthatch (<i>Sitta pygmaea</i>)	D	A	B	C	A	D	B	B	G
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	D	B	B	C	B	D	B	B	G
Fox Sparrow (<i>Passerella iliaca</i>)	D	C	A	C	A	D	B	B	G
Tiger Salamander (<i>Ambystoma tigrinum</i>)	D	A	C	C	B	D	B	B	G
Leopard Frog (<i>Rana pipiens</i>)	D	A	C	C	C	D	B	B	G
Black Hills Red-belly Snake (<i>Storeria occipitomaculata pahasapae</i>)	D	A	C	A	D	D	B	B	G
Milk Snake (<i>Lampropeltis triangulum</i>)	D	A	C	B	D	D	C	E	G
Regal Fritillary (<i>Speyeria idalia</i>)	D	A	B	B	A	D	B	B	G
Tawny Crescent (<i>Phyciodes batesii</i>)	D	A	B	B	A	D	B	B	G

Species	Evaluation Criteria								Determination
	Listing Status	Black Hills Occurrence	Black Hills Distribution	Distribution Outside BH	Black Hills Abundance	BH Population Trend	Black Hills Habitat	Project Area Habitat	
American Trail Plant (<i>Adenocaulon bicolor</i>)	D	A	B	C	C	D	B	B	G
Northern Arnica (<i>Arnica lonchophylla</i>)	D	A	C	C	C	D	C	D	G
Prairie Moonwort (<i>Botrychium campestre</i>)	D	A	A	C	A	D	D	E	G
Fox Tail Sedge (<i>Carex alopecoidea</i>)	D	A	B	C	A	D	B	B	G
Greater Bladder Sedge (<i>Carex intumescens</i>)	D	A	B	B	A	D	B	B	G
Long-stalk Sedge (<i>Carex pedunculata</i>)	D	A	B	B	B	D	B	B	G
Autumn Coralroot (<i>Corallorhiza odontorhiza</i>)	D	C	D	C	A	D	D	D	G
Dwarf Scouring Rush (<i>Equisetum scirpoides</i>)	D	A	B	C	B	D	B	B	G
Trailing Clubmoss (<i>Lycopodium complanatum</i>)	D	A	A	C	A	D	A	A	G
Treelike Clubmoss (<i>Lycopodium dendroideum</i>)	D	A	B	C	C	D	B	B	G
Marsh Muhly (<i>Muhlenbergia glomerata</i>)	D	A	B	C	A	D	D	D	G
Large Roundleaf Orchid (<i>Platanthera orbiculata</i>)	D	A	B	C	B	D	B	B	G
Bloodroot (<i>Sanguinaria canadensis</i>)	D	A	B	B	B	D	A	A	G
Woolrush (<i>Scirpus cyperinus</i>)	D	A	B	C	B	D	B	B	G

Analysis Summary Table Legend

Listing status.

- A = USFWS Endangered Species
- B = USFWS Threatened Species
- C = USFWS Proposed Species
- D = USFS Region 2 Sensitive Species

Occurrence in the Black Hills. Primary focus of effects determination is on resident populations.

- A = Year-round resident or plant species located in last 10 years.
- B = Seasonal resident.
- C = Occurrence in the Black Hills is occasional or transient, or plant species has historical records/herbarium specimen.
- D = Insufficient information available.

Geographic distribution within the Black Hills.

- A = A few locations.
- B = Several locations.
- C = Throughout the forest.
- D = Insufficient information available.

Geographic distribution outside of the Black Hills.

- A = Only in the Black Hills.
- B = Limited distribution outside of the Black Hills.
- C = Wide distribution outside of the Black Hills.
- D = Insufficient information available.

Abundance of the species in the Black Hills.

- A = Rare.
- B = Uncommon.
- C = Common in suitable habitats.
- D = Insufficient information available.

Population Trend in the Black Hills.

- A = Suspected Downward Trend.
- B = Appear to be Stable.
- C = Suspected Upward Trend.
- D = Insufficient information available.

Availability of habitats in the Black Hills, and vulnerability to modification by land management activities.

- A = Habitat very limited and/or very vulnerable.
- B = Habitat somewhat limited and/or somewhat vulnerable.
- C = Habitat widely available and/or resilient.
- D = Insufficient information available regarding species habitat needs or availability on the forest.

Availability of habitats in the Prairie Project Area, and vulnerability to project activities.

- A = Habitat very limited and/or very vulnerable.
- B = Habitat somewhat limited and/or somewhat vulnerable.
- C = Habitat limited but not vulnerable to the proposed action.
- D = Habitat widely available and not vulnerable to the proposed action.
- E = Not enough information available regarding species habitat needs or availability.

Species Determination (A through D apply to threatened or endangered species only; E through H apply to Region 2 sensitive species only).

- A = No Effect.
- B = May affect, not likely to adversely affect.
- C = May beneficially affect.
- D = May affect, likely to adversely affect.
- E = No impact.
- F = Beneficial impact.
- G = May adversely impact individuals, but not likely to result in a loss of viability on the Planning Area, nor cause a trend to federal listing or a loss of species viability rangewide.
- H = Likely to result in a loss of viability on the Planning Area, in a trend to federal listing, or in a loss of species viability rangewide.

VII. DETERMINATIONS

The determination of effects on federally listed species and Region 2 Sensitive Species BA/BE were made as the result of the information gathered in the pre-field review, field reconnaissance, and effects analysis for all action alternatives. Since analysis considered management activities of all

action alternatives and associated mitigation measures, only one determination is made for each species, which applies to all action alternatives. The basis for these determinations was potential habitat, distribution, effects from proposed activities, and implementation of mitigation measures. The determination language is set forth in Forest Service Manual 2670 and by the USFWS.

Objectives, standards, and guidelines have been identified in the Forest Plan, as amended, that protect all federally listed species and conserve Region 2 Sensitive Species found in the Black Hills. Project implementation will incorporate all Forest Plan Standards and Guidelines, with the exception of those identified for site-specific amendment in the Record of Decision.

With implementation of Forest Plan direction, as amended, and project specific mitigation measures (see Appendix B of the Prairie BA/BE, located in the Prairie Project File), the determination of “No Effect” for all action alternatives is made for the bald eagle.

With implementation of Forest Plan direction, as amended, and project specific mitigation measures (see Appendix B of the Prairie BA/BE, located in the Prairie Project File), a determination of “May adversely impact individuals, but not likely to result in a loss of viability on the planning area, nor cause a trend to federal listing or a loss of species viability range-wide” is made for the following species for all action alternatives:

Fringe-tailed myotis	<i>Adenocaulon bicolor</i> (American trailplant)
Townsend’s big-eared bat	<i>Arnica lonchophylla</i> (Northern arnica)
Northern goshawk	<i>Botrychium campestre</i> (Prairie moonwort)
Osprey	<i>Carex alopecoidea</i> (Fox tail sedge)
Merlin	<i>Carex intumescens</i> (Greater bladder sedge)
Peregrine falcon	<i>Carex pedunculata</i> (Long stalk sedge)
Upland sandpiper	<i>Corallorhiza odontorhiza</i> (Autumn coralroot)
Yellow-billed cuckoo	<i>Equisetum scirpoides</i> (Dwarf scouring rush)
Flammulated owl	<i>Lycopodium complanatum</i> (Trailing clubmoss)
Lewis’s woodpecker	<i>Lycopodium dendroideum</i> (Treelike clubmoss)
Black-backed woodpecker	<i>Muhlenbergia glomerata</i> (Marsh muhly)
Pygmy nuthatch	<i>Platanthera orbiculata</i> (Large roundleaf orchid)
Loggerhead shrike	<i>Sanguinaria canadensis</i> (Bloodroot)
Fox sparrow	<i>Scirpus cyperinus</i> (Cottongrass bulrush)
Tiger salamander	
Northern leopard frog	
Black Hills red-belly snake	
Milk snake	
Regal fritillary butterfly	
Tawny crescent butterfly	

VIII. CONSULTATION WITH U.S. FISH AND WILDLIFE SERVICE

Based on review of the Prairie DEIS, the USFWS on July 22, 2003 concurred with the determination that the planned activities will have No Effect on the bald eagle. No further consultation with the USFWS for the Prairie Project is required.