APPENDIX C

BIOLOGICAL ASSESSMENT

of

Effects to Threatened and Endangered Species

from

Proposed Management Changes in
Off-Highway Vehicle (OHV)
Area Designations

on

Public Lands Administered by the
Bureau of Land Management and
Forest Service Northern Region in
Montana, North Dakota, and South Dakota

December 6, 2000

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EXECUTIVE SUMMARY

Federal agencies are required to comply with provisions of the Endangered Species Act of 1973, as amended (ESA). This includes a requirement to "consult" with the Fish and Wildlife Service (FWS) on any action that may affect species listed as threatened and endangered (T&E) or result in destruction or adverse modification of habitat designated as critical for listed species. In addition, federal agencies must "confer" with FWS on any action that is likely to jeopardize the continued existence of any species proposed to be listed or any action that may result in the destruction or adverse modification of critical habitat proposed to be designated for listed species.

The purpose of this programmatic Biological Assessment (BA) is to document potential effects from the Preferred Alternative (i.e. changes in off-highway vehicle (OHV) use on public lands administered by the Bureau of Land Management (BLM) and National Forest System (NFS) lands administered by the Forest Service Northern Region (FS) in Montana, North Dakota, and portions of South Dakota) on individuals, populations, and critical habitat of federally threatened, endangered, and proposed species.

This BA is intended to ensure that management decisions can be made with the most current scientific knowledge concerning these species. The primary purpose for this programmatic BA is to document the effects of the Preferred Alternative. Focus for this BA is to determine if the Preferred Alternative (i.e. restricting motorized wheeled cross-country travel) would have an effect on any federally listed or proposed species. The BA will also provide a basis for forest plan and resource management plan amendments.

Consultation History

In the process of evaluating the effects of the preferred alternative on listed and proposed species, the action agencies (BLM and FS) indicated in the draft environmental impact statement and plan amendment of November 1999 (DEIS) that there would be "no effect" to many of the species reviewed. Subsequent conversations with the FWS and further evaluation made the agencies realize that sufficient species information on such a large area and program-level action was not available to support a "no effect" determination for many of these species.

As a result of public comments, internal review and informal consultation with the FWS, the action agencies have selected a Preferred Alternative (Alternative 5) for the final environmental impact statement and proposed plan amendment (FEIS). The action agencies believe the Preferred Alternative, as currently stated, **May Affect, but Is Not Likely to Adversely Affect** some of the listed species that occur in the analysis area. For some of the species there is still a no effect finding and there would also be positive effects for some of the species.

Thus, changes have been made for many of the "No Effect" determinations in the DEIS to "May Affect, Not Likely to Adversely Affect" in the FEIS.

Species Considered

On March 31, 1999, the action agencies requested a list of threatened and endangered (T&E) species from the FWS for the preparation of the EIS and plan amendment. This list was provided and is shown in the DEIS Appendix E.

Since that time the peregrine falcon was delisted, the Canada lynx was listed as threatened, and the Spalding's catchfly was proposed for listing. A review by FWS, of the current list, was recently requested. Written verification was received from the North Dakota field office and verbal verification was received from the South Dakota and Montana field offices. The following represents the current list of species considered under ESA for effects.

Seventeen species which may occur, are presently known to occur, or historically occurred in the analysis area are included in this evaluation. Seven are **Endangered**, eight are **Threatened**, and two are **Proposed for Listing**. These species are as follows:

Endangered

- Least tern (*Sterna antillarum*)
- Whooping crane *(Grus americana*)
- Black-footed ferret (*Mustela nigripes*)
- Gray wolf (*Canis lupus*)
- Pallid sturgeon (*Scaphirhvnchus albus*)
- White sturgeon (*Acipenser transmontanus*)
- American burying beetle (*Nicrophorus americanus*)

Threatened

- Bald eagle (*Haliaeetus leucocephalus*)
- Piping plover (*Charadrius melodus*)
- Canada lynx (*Lynx canadensis*)
- Grizzly bear (*Ursus arctos horribilis*)
- Bull trout (*Salvelinus confluentus*)
- Ute ladies' tresses (*Spiranthes diluvialis*)
- Water howellia (*Howellia aquatilis*)
- Western prairie fringed orchid (*Platanthera praeclara*)

Proposed for Listing

- Mountain plover (*Charadrius montanus*), proposed as threatened
- Spalding's catchfly (*silene spaldingii*), proposed as threatened

Summary of Potential Effects

This assessment is of a programmatic nature to address effects from the proposed broad-scale direction provided through this change in current land management direction (i.e. restricted/limited area designations). This analysis is not intended to address effects from continued use on open roads and trails. The Preferred Alternative is to restrict motorized wheeled cross-country travel. This BA makes a determination of potential effects to T&E species from implementation of the Preferred Alternative.

Site-specific planning efforts (e.g. activity plans/travel management plans) would be prepared in the future for individual administrative units. These future actions will require site-specific environmental assessments and, if necessary, associated biological assessments for T&E species.

Some of the most prevalent effects to T&E species from OHV's have resulted from the spread of noxious weeds (competition to native plants and reduced quality of wildlife habitat) and increased miles (resulting in a higher density) of user-created roads. The Preferred Alternative would reduce these effects by prohibiting or otherwise limiting motorized wheeled cross-country travel.

Other ongoing associated activities have existing management direction, standards, and/or guidelines that can mitigate effects and promote recovery efforts. Agencies currently have the authority to immediately close any area, road or trail where off-road vehicles are causing or will cause considerable adverse effects upon soil, vegetation, wildlife, wildlife habitat, cultural resources, threatened or endangered species, or other resources (43 CFR 8341.2 and 8364.1 and 36 CFR 295.2 and 295.5). T&E habitats and riparian/wetland areas are priority areas for protection. Agencies are required to follow T&E species Recovery Plans and Conservation Strategies. If a T&E plant or animal is being negatively affected by vehicles either on or off-road, the local agency manager is obligated to take action to stop that threat.

Effects Determination by Species

NO EFFECTS

Least tern
A ***No Effect*** determination is made for the least tern.

Rationale: No Effect - There is no known nesting or roosting occurring on BLM or NFS lands in the analysis area. Favorite nesting sites for this endangered species include bare ground (recent alluvium) on islands. One island in the Yellowstone River, adjacent to public land, contains a colony of nesting least terns. Foraging may occur in certain river systems that are administered by BLM; however, the Preferred Alternative does not affect foraging habitat.

The Preferred Alternative would restrict motorized wheeled cross-country travel and eliminate any potential direct or indirect effects to the least tern or its habitat. There would be no cumulative effects from the Preferred Alternative. There could be potential long-term beneficial effects but a Beneficial Effect determination would be presumptuous at this time.

Whooping crane
A ***No Effect*** determination is made for the whooping crane.

Rationale: No Effect - Whooping cranes migrate over the analysis area and potential habitat exists but there has been no documented nesting, roosting, or foraging occurring on BLM or NFS lands in the analysis area. OHV use has not been identified as a threat to the whooping crane and the Preferred Alternative to restrict motorized wheeled cross-country travel would reduce or eliminate any potential direct, indirect, or cumulative effects to the species from motorized wheeled cross-country travel.

There could be some positive effects to the species by reducing potential disturbance and/or displacement of animals should they occur in the future. This is somewhat unlikely and it is more likely that the Preferred Alternative would result in neutral effects to the species.

Pallid sturgeon
A ***No Effect*** determination is made for the pallid sturgeon.

Rationale: No Effect - This endangered species is well adapted for life at the bottom of swift, large, turbid and free flowing rivers. "On the mainstream of the Missouri River, approximately 36% of riverine habitat within the pallid sturgeon's range was eliminated by construction of six massive earthen dams between 1926 and 1952 and another 40% has been channelized. The remaining 24% has been altered due to changes in water flows caused by dam operations" (Dryer and Sandoval 1993).

Because of the great size of the rivers that pallid sturgeons inhabit, the typical water depths in which they have been found, and the apparent minimal effects to water quality of motorized wheeled cross-country travel reported across the region, it is not believed that such travel, at the current levels, would further compromise the status of the pallid sturgeon.

Recovery actions to protect and restore pallid sturgeon populations are outlined in the 1993 Recovery Plan. The

Preferred Alternative is consistent with this recovery plan direction.

The Preferred Alternative to restrict motorized wheeled cross-country travel should reduce any potential indirect effects to water quality from motorized wheeled cross-country travel and could have some minimal positive effects. There would be no cumulative effects from the Preferred Alternative.

White sturgeon
A ***No Effect*** determination is made for the white sturgeon.

Rationale: No Effect - This endangered species occurs in the Columbia River system and its major tributary that is within the analysis area, the Kootenai River. It has been documented that the decline of the Kootenai River white sturgeon is primarily a result of impoundments and exploitation (USDI 1999a).

Because of the apparent minimal effects to water quality of motorized wheeled cross-country travel reported across the region, it is not believed that such travel, at the current levels, would further compromise the status of the white sturgeon.

The Preferred Alternative to restrict motorized wheeled cross-country travel should reduce potential effects to water quality from motorized wheeled cross-country travel and could have some minimal positive effects.

American burying beetle
A ***No Effect*** determination is made for the American burying beetle.

Rationale: No Effect - This endangered species is very rare and listed only for the South Dakota portion of the analysis area. There is no documented occurrence of the species on BLM or NFS lands in South Dakota.

Suitable habitat for the beetle is any site with significant humus or topsoil for burying carrion (USFWS 1995). The Preferred Alternative would restrict or limit motorized wheeled travel to existing trails and roads, which would be lacking these habitat conditions. Therefore, the Preferred Alternative should reduce or eliminate potential direct, indirect, or cumulative effects to the species from motorized wheeled cross-country travel.

Ute ladies' tresses
A ***No Effect*** determination is made for the Ute ladies' tresses

Rationale: No Effect - None of the 11 occurrences in Montana are on BLM or NFS lands. They are in a four-county area of the Jefferson River and confluent lower reaches of the Beaverhead, Gallatin, Madison and Ruby Rivers. Intensive surveys were conducted for this species, primarily for the purpose of delimiting the range of distribution in Montana, including the most likely BLM and NFS lands. No occupied habitat was found on BLM or NFS lands (B. Heidel, pers. comm. 2000).

The likelihood of this species occurring on federal lands is extremely low and no effects from motorized wheeled cross-country travel are known or anticipated to occur. The Preferred Alternative would restrict or limit wheeled motorized travel to existing trails and roads, which would further reduce or eliminate any potential direct, indirect, or cumulative effects to the species from motorized wheeled cross-country travel.

Water howellia
A ***No Effect*** determination is made for the water howellia

Rationale: No Effect - This threatened plant species occurs as a submerged or floating annual associated with lakes and ponds. The habitat of this plant is not conducive to OHV traffic, and there would be no direct, indirect, or cumulative effects to the species from motorized wheeled cross-country travel.

Western prairie fringed orchid
A ***No Effect*** determination is made for the western prairie fringed orchid

Rationale: No Effect - This species is associated with sedge meadows, primarily within the tallgrass prairie. It occurs in the sandhills habitat association on the Sheyenne National Grassland.

The following mitigation measures for the western prairie fringed orchid would apply:

1. Motorized wheeled cross-country travel for FS official administrative business would not be allowed in known western prairie fringed orchid habitat on the Sheyenne National Grassland in eastern North Dakota without prior approval so as to eliminate impacts to occupied habitat.

2. Motorized wheeled cross-country travel for lessees and permittees to administer federal leases or permits would not be allowed in known western prairie fringed orchid habitat on the Sheyenne National Grassland in eastern North Dakota without prior approval so as to eliminate impacts to occupied habitat.

With the above mitigation measures there would be no direct, indirect, or cumulative effects to the species.

MAY AFFECT - NOT LIKELY TO ADVERSELY AFFECT

General - The Preferred Alternative would lessen the direct and indirect effects associated with motorized wheeled cross-country travel; however, motorized wheeled cross-country travel could still be allowed under special exceptions. These exceptions include motorized wheeled cross-country travel for: any military, fire, search and rescue, or law enforcement vehicle used for emergency purposes; disabled access per the Rehabilitation Act of 1973; BLM and FS administrative purposes; travel for lessees and permittees limited to the administration of a federal lease or permit; and personal use permits such as firewood and Christmas tree cutting which could be allowed in specific areas identified at the local level (BLM field office or FS ranger district).

Black-footed ferret
A ***May Affect - Not Likely To Adversely Affect*** determination is made for the black-footed ferret.

Rationale: Not Likely to Adversely Affect - The endangered black-footed ferret is one of the most imperiled mammals in the world and certainly the most endangered mammal in North America. Prairie dog colonies are considered key to the survival and recovery of the endangered black-footed ferret. Burrows provide shelter and the prairie dog itself is food for the ferret. Large prairie dog colonies or complexes are needed for ferret survival, and this is the reason Phillips County was chosen as Montana's reintroduction area.

In 1994, ferrets were reintroduced onto the UL Bend/C.M. Russell National Wildlife Refuge in Montana under a nonessential experimental population designation. According to the FWS, 41 ferrets were counted on the C.M.R. during the fall of 1998 (R. Matchette, pers. comm. 1999). In 1997, ferrets were first released on the Fort Belknap Indian Reservation in Montana and in 2000, black-footed ferrets were first released on the Cheyenne River Sioux Reservation in South Dakota.

In 1992, a disease believed to be sylvatic plague erupted in the Phillips County area and by 1996, as much as 80 percent of the prairie dog population had been lost. In the past, these prairie dog towns in Phillips County have been an important area to sport shooters. In 1999, because of declines in prairie dogs numbers as a result of disease, BLM issued a shooting closure on prairie dog towns in portions of southern Phillips County.

Although no black-footed ferrets have been released or are known to occur on BLM or NFS lands in the analysis area, BLM lands are in close proximity to occupied habitat on the Fort Belknap Reservation and the UL Bend area of the C.M. Russell National Wildlife Refuge. In addition, BLM lands in Phillips County are still very high priority for reintroduction to aid in the recovery of this species.

Although the direct and indirect effects from motorized wheeled cross-country travel would be minimized by the Preferred Alternative, there may be some insignificant or discountable effects associated with continued motorized wheeled cross-country travel as allowed under the exceptions cited above. In addition, when considered with other ongoing or foreseeable future actions on private, local, state, and/or tribal lands the cumulative effects may lead to insignificant or discountable effects to the black-footed ferret should they occur on NFS or BLM lands.

Gray wolf
A ***May Affect - Not Likely To Adversely Affect*** determination is made for the grey wolf.

Rationale: Not Likely to Adversely Affect - Increases in gray wolf numbers, expansion of the species' occupied range, and progress toward achieving the reclassification and delisting criteria of at least two approved gray wolf recovery plans (Great Lakes and Northern Rocky Mountain) have led to a proposed downlisting of this species throughout most of its range, including Montana, North Dakota and South Dakota.

Although the direct and indirect effects from Motorized wheeled cross-country travel would be minimized by the Preferred Alternative, there may be some insignificant or discountable effects associated with continued Motorized wheeled cross-country travel as allowed under the exceptions cited above. In addition, when considered with other ongoing or foreseeable future actions on private, local, state, and/or tribal lands the cumulative effects may lead to insignificant or discountable effects to the grey wolf.

Bald eagle
A ***May Affect - Not Likely To Adversely Affect*** determination is made for the bald eagle.

Rationale: No Effect - This threatened species is a migrant in North Dakota and South Dakota and occurs year-round in Montana. In 1978, only 12 breeding pairs were known in Montana (Servheen 1978). Spring counts in 1998 totaled 248 nests, which exceeds the state recovery goals (D. Flath, pers. comm. 1999). As a result of significant gains in breeding numbers throughout the species range, the FWS issued a proposed rule to delist the bald eagle in July of 1999.

The current condition is apparently providing suitable conditions for the recovery of the species, as evidenced by

the proposed rule to delist the species. Specific bald eagle management direction to promote recovery is provided in the July 1994 Montana Bald Eagle Management Plan. Specific direction is provided to eliminate potential threat to nesting bald eagles through the use of nest site management zones. These zones have various levels of restricted use. Agencies are required to follow T&E species Recovery Plans and Conservation Strategies.

The Preferred Alternative which restricts or limits motorized wheeled cross-country travel would reduce potential direct, indirect, or cumulative effects to the species by eliminating use in the nest site management zones. If user-created routes in these zones exist or are discovered, the FS and BLM would take actions to comply with the Bald Eagle Management Plan. Although the direct and indirect effects from motorized wheeled cross-country travel would be minimized by the Preferred Alternative, there may be some insignificant or discountable effects associated with continued motorized wheeled cross-country travel as allowed under the exceptions. In addition, there could be some positive effects by reducing potential disturbance and/or displacement of nesting or roosting eagles.

Piping plover

A ***May Affect - Not Likely To Adversely Affect*** determination is made for the piping plover.

Rationale: Not Likely to Adversely Affect - In the Northern Great Plains this threatened species breeds along major rivers and wetlands from Saskatchewan and Manitoba through Nebraska. On rivers, plovers primarily nest on sand beaches, flats, pebble beaches, and drained floodplains. In Montana, nesting habitat is primarily unvegetated sand-pebble beaches or islands. In North Dakota, they have also been documented on saline wetlands. Both habitats occur on BLM lands but the amount of habitat on NFS and BLM is limited.

There are no known occurrences on any NFS or BLM lands in North Dakota and South Dakota. One piping plover nest has been documented in Montana on a 16-acre parcel of BLM land in the Miles City Field Office area, which has been designated an Area of Critical Environmental Concern for the piping plover.

Although the direct and indirect effects from Motorized wheeled cross-country travel would be minimized by the Preferred Alternative, there may be some insignificant or discountable effects associated with continued Motorized wheeled cross-country travel as allowed under the exceptions cited above. In addition, when considered with other ongoing or foreseeable future actions on private, local, state, and/or tribal lands the cumulative effects may lead to insignificant or discountable effects to the piping plover.

Canada lynx

A ***May Affect - Not Likely To Adversely Affect*** determination is made for the Canada lynx.

Rationale: Not Likely to Adversely Affect - The Canada lynx was recently listed (July 24, 2000 final rule) as threatened. In Montana, lynx are known to occur in the western montane forests. Snowshoe hares are the primary prey of lynx, although diet can be more varied in the summer than the winter.

Recent studies indicated that lynx show no preference or avoidance of unpaved forest roads and road density does not appear to affect lynx habitat selection (McKelvey et al. 2000). However, relocation of lynx to historic habitats (reintroduction) both in the Adirondack Mountains of New York and more recently in Colorado, resulted in mortality from vehicle collision. Direct and indirect effects from use by OHV's during the non-winter period when snow is not present are believed to be insignificant or discountable and probably have very little, if any, effect on lynx.

Although these direct and indirect effects from Motorized wheeled cross-country travel would be minimized by the Preferred Alternative, there may be some insignificant or discountable effects associated with continued Motorized wheeled cross-country travel as allowed under the exceptions cited above. In addition, when considered with other ongoing or foreseeable future actions on private, local, state, and/or tribal lands the cumulative effects may lead to insignificant or discountable effects to the Canada lynx.

Grizzly bear

A ***May Affect - Not Likely To Adversely Affect*** determination is made for the grizzly bear.

Rationale: Not Likely to Adversely Affect - Within the project area, this species occurs in the Northern Continental Divide Ecosystem of western Montana, the Yellowstone Ecosystem that includes southwestern Montana and portions of Wyoming and Idaho (essentially centered in Yellowstone National Park), and some limited grizzly bear occupancy in the Selkirk-Cabinet-Yaak Mountains of Montana. A recent proposal has been made to reintroduce grizzly bears into the Selway-Bitterroot.

Grizzlies are opportunistic and omnivorous and feed on animal or vegetable matter. Herbaceous plants are utilized, as are ground squirrels, carrion, garbage, ungulates, roots, fruits, berries, tubers, fungi, pine nuts, and even tree cambium. Bears occasionally prey on livestock and also are attracted to bone yards and dead livestock. Many bear foods, both animal and vegetable, occur in riparian and wetland areas, with some of the berry-producing shrubs occurring in the uplands.

Large areas of relatively undisturbed land with food, cover, denning habitat, solitude, and space are important for effective grizzly bear habitat (Interagency Grizzly Bear Committee 1987, Craighead et al. 1982). Recreational activity may diminish the value of habitat for grizzly bears through modification or displacement (Joslin and Youmans 1999). The Grizzly Bear Recovery Plan (USDI 1993) identifies human depredation, competitive use of habitat, and livestock grazing as sources of conflict.

Numerous studies have shown that grizzly bears are negatively affected by increased road density or increased use of roads within a bear's home range. Although no evidence is available to document the effects from off-road/trail vehicle travel, it is logical to assume that vehicle activity, whether on or off-road, would negatively effect grizzly bears.

The analysis of effects to grizzly bear habitat includes an assessment of impacts to core (secure) areas. Core areas are partially defined by the lack of open roads. Roads may be present in the core area but they are closed to vehicle traffic. In addition to the current restriction, that does not allow motorized vehicle travel on roads and trails in the core area, this action (Preferred Alternative) would further restrict motorized wheeled cross-country travel in core areas as well as outside the core areas. This action would provide additional security for grizzly bears.

Further, road and trail access is managed to conserve grizzly bear habitat outside the core areas. Open and total route densities are limited in these areas to protect grizzly bears. The preferred alternative would restrict all cross-country motorized use to existing roads and trails which will reduce off-road/trail disturbance to grizzly bears. According to IGBC guidance (IGBC 1994, 1998) all roads or tails receiving motorized use should be counted in open motorized route densities. Therefore, if user-created routes outside core areas exist or are discovered, the FS and BLM would take actions to make such routes inaccessible to motorized use or the routes would be included in access density calculations and thereby subject to appropriate access limitations.

Effects from the Preferred Alternative are not likely to adversely affect the grizzly bear and, in fact, would likely be positive/beneficial as motorized wheeled cross-country travel would be prohibited or restricted, further protecting grizzly bear habitat from human disturbance.

Bull trout

A ***May Affect - Not Likely To Adversely Affect*** determination is made for the bull trout.

Rationale: Not Likely to Adversely Affect - This threatened species occurs within the Columbia River basin and, in Montana, the majority of spawning occurs in a small percentage of the total stream habitat available. Proximity of cover for adult fish before and during spawning is an important habitat component. Spawning tends to be concentrated in reaches influenced by groundwater where temperature and flow conditions may be more stable. Groundwater influence plays a large role in embryo development and survival by mitigating mortality factors. Rearing habitat requirements for juvenile bull trout include cold summer water temperatures (15 degrees C) provided by sufficient surface and groundwater flows. Highly variable streamflow, reduction in large woody debris, bedload movement, and other forms of channel instability can limit the distribution and abundance of juvenile bull trout. Open migratory corridors, both within and among tributary streams, larger rivers, and lake systems are critical for maintaining bull trout populations.

Although the direct and indirect effects from motorized wheeled cross-country travel would be minimized by the Preferred Alternative, there may be some insignificant or discountable effects associated with continued motorized wheeled cross-country travel as allowed under the exceptions cited above. In addition, when considered with other ongoing or foreseeable future actions on private, local, state, and/or tribal lands the cumulative effects may lead to insignificant or discountable effects to the bull trout.

NOT LIKELY TO JEOPARDIZE THE CONTINUED EXISTENCE

For the following proposed species, a determination of effects is made in addition to making a determination of jeopardy. Should the mountain plover and/or Spalding's catchfly be found to warrant listing under the ESA and subsequently be listed as a threatened species, the determination of effects in this document could be informally consulted on. This could eliminate the need to reinitiate consultation for this action should the FWS list either species.

Mountain plover

A ***Not Likely to Jeopardize the Continued Existence*** determination is made for the mountain plover.

Rationale: Not Likely to Jeopardize the Continued Existence - Effects from the proposed action would not adversely affect the mountain plover (see May Affect determination below) and therefore would not likely jeopardize the continued existence of the species.

Mountain plover
A ***May Affect - Not Likely To Adversely Affect*** determination is made for the mountain plover.

Rationale: Not Likely to Adversely Affect - This species is proposed to be listed as threatened. Within the analysis area, mountain plovers primarily occur on the shortgrass prairie of eastern Montana. Knowles and Knowles (2000) summarized their survey of mountain plovers from 1991-1998 for Montana east of the continental divide. Mountain plovers were found at nine distinct areas. They were closely associated with sites characterized by slopes under 5%, vegetative height under 6 cm, and greater than half the soil surface being bare ground, lichen and/or club moss. Often they are associated with prairie dog colonies.

Recent developments in conservation strategies for black-tailed prairie dog management identified the importance of this keystone species to several closely associated species, including the mountain plover. Any actions that contribute to the conservation of the black-tailed prairie dog will undoubtedly benefit the mountain plover.

The Preferred Alternative to restrict motorized wheeled cross-country travel should reduce or eliminate potential direct and indirect effects to the black-tailed prairie dog from motorized wheeled cross-country travel. This should indirectly benefit the mountain plover.

Although the direct and indirect effects to mountain plover from motorized wheeled cross-country travel would be minimized by the Preferred Alternative, there may be some insignificant or discountable effects associated with continued motorized wheeled cross-country travel as allowed under the exceptions cited above. These could include disturbance and displacement but would not likely adversely affect the species.

When considered with other ongoing or foreseeable future actions on private, local, state, and/or tribal lands this proposed action would not significantly contribute to the cumulative effects.

Spalding's catchfly
A ***Not Likely to Jeopardize the Continued Existence*** determination is made for Spalding's catchfly.

Rationale: Not Likely to Jeopardize the Continued Existence - Effects from the proposed action would not adversely affect the Spalding's catchfly (see May Affect determination below) and therefore would not likely jeopardize the continued existence of the species.

Spalding's catchfly
A ***May Affect - Not Likely To Adversely Affect*** determination is made for the Spalding's catchfly.

Rationale: Not Likely to Adversely Affect - Currently proposed as threatened, this species is known from a total of 52 populations distributed across Washington, Oregon, Idaho, Montana, and British Columbia. The habitat is primarily restricted to moist grasslands that make up the Palouse region in southeastern Washington, northwestern Montana and adjacent portions of British Columbia, Idaho and Oregon.

Within the analysis area, none of the known populations of Spalding's catchfly occur on NFS or BLM lands. However, one of the largest populations occurs in Eureka, Montana in close proximity to NFS lands and other populations in Montana also occur near federal lands. The probability that this species occurs on federal lands is moderate. Past surveys for this species have been conducted on the Kootenai and Flathead National Forests without detecting the species. Future surveys of potential habitat on NFS and BLM lands will be needed to determine the extent of this species.

The Preferred Alternative to restrict motorized wheeled cross-country travel should reduce or eliminate potential direct and indirect effects to Spalding's catchfly from motorized wheeled cross-country travel.

Although the direct and indirect effects to Spalding's catchfly from motorized wheeled cross-country travel would be minimized by the Preferred Alternative, there may be some insignificant or discountable effects associated with continued motorized wheeled cross-country travel as allowed under the exceptions cited above.

When considered with other ongoing or foreseeable future actions on private, local, state, and/or tribal lands this proposed action would not significantly contribute to the cumulative effects.

Summary of Effects to Species

NO EFFECT

Least tern (*Sterna antillarum*), endangered
Whooping crane *(Grus americana*), endangered
Pallid sturgeon (*Scaphirhvnchus albus*), endangered
White sturgeon (*Acipenser transmontanus*), endangered
American burying beetle (*Nicrophorus americanus*), endangered
Water howellia (*Howellia aquatilis*), threatened
Ute ladies' tresses (*Spiranthes diluvialis*), threatened
Western prairie fringed orchid (*Platanthera praeclara*), threatened

MAY AFFECT - NOT LIKELY TO ADVERSELY AFFECT

Black-footed ferret (*Mustela nigripes*), endangered
Gray wolf (*Canis lupus*), endangered
Bald eagle (*Haliaeetus leucocephalus*), threatened
Piping plover (*Charadrius melodus*), threatened
Canada lynx (*Lynx canadensis*), threatened
Grizzly bear (*Ursus arctos horribilis*), threatened
Bull trout (*Salvelinus confluentus*), threatened
Mountain plover (*Charadrius montanus*), proposed as threatened (this determination would be made if the final rule is to list the Mountain plover as threatened)
Spalding's catchfly (*Silene spaldingii*), proposed as threatened (this determination would be made if the final rule is to list Spalding's catchfly as threatened)

NOT LIKELY TO JEOPARDIZE THE CONTINUED EXISTENCE

Mountain plover (*Charadrius montanus*), proposed as threatened
Spalding's catchfly (*Silene spaldingii*), proposed as threatened

BIOLOGICAL ASSESSMENT

Purpose and Need

Federal agencies are required to comply with provisions of the Endangered Species Act of 1973, as amended (ESA). This includes a requirement to "consult" with the Fish and Wildlife Service (FWS) on any action that may affect species listed as threatened and endangered (T&E) or result in destruction or adverse modification of habitat designated as critical for listed species. In addition, federal agencies must "confer" with FWS on any action that is likely to jeopardize the continued existence of any species proposed to be listed or any action that may result in the destruction or adverse modification of critical habitat proposed to be designated for listed species.

The purpose of this programmatic Biological Assessment (BA) is to document potential effects of continued implementation of the Preferred Alternative on individuals or populations of: federally endangered, federally threatened, and species proposed for federal listing. This BA is intended to document effects of management decisions using the most current knowledge available concerning these species.

The objectives of this BA are to:

1. Comply with requirements of the ESA, as amended, that actions by federal agencies (in this case, the Bureau of Land Management (BLM) and Forest Service Northern Region (FS)) not jeopardize the existence of these species or adversely modify their critical habitat.

2. Assess the effects that implementation of the Preferred Alternative will have on threatened and endangered species known or suspected to exist on or near the analysis area.

3. Document current standards and guidelines prescribed in the Preferred Alternative that benefit these species.

4. Provide biological input to ensure action agencies' compliance with the Federal Land Policy and Management Act (FLPMA), National Forest Management Act (NFMA), BLM Manual 6840, Forest Service Manual 2670, National Environmental Policy Act (NEPA), and the Endangered Species Act (ESA), as amended.

The primary focus for this programmatic BA is to document the effects of the Preferred Alternative.

Proposed Action - FEIS Alternative 5 (Preferred Alternative)

This alternative was developed in response to comments on the draft environmental impact statement and plan amendment (DEIS) from the public and other agencies. It restricts motorized wheeled cross-country travel throughout the analysis area to protect riparian areas, wetlands, crucial wildlife habitat, threatened or endangered species, soils and vegetation, aquatic resources, and to reduce user conflicts.

The BLM and FS regulations (43 CFR 8341.2 and 8364.1 and 36 CFR 295.2 and 295.5) allow for area, road or trail closures where off-road vehicles are causing or will cause considerable adverse effects upon soil, vegetation, wildlife, wildlife habitat, cultural resources, threatened or endangered species, other authorized uses, or other resources. The authorized officer can immediately close the areas affected until the effects are eliminated and measures are implemented to prevent future recurrence.

The BLM and FS would restrict motorized wheeled cross-country travel yearlong (Map 1 in the FEIS). These lands, approximately 16 million acres, would be designated limited or restricted yearlong for motorized wheeled cross-country travel under BLM or FS regulations (43 CFR 8342 or 36 CFR 295). The appropriate forest plan and resource management plan would be amended by this alternative.

Through subsequent site-specific planning, the BLM and FS would designate roads and trails for motorized use. With public involvement the agencies would continue with

ongoing travel management plans and develop new travel management plans (i.e., landscape analysis, watershed plans, or activity plans) for geographical areas. Through site-specific planning, roads and trails would be inventoried, mapped, and analyzed to the degree necessary to evaluate and designate the roads and trails as open, seasonally open, or closed. The inventory would be commensurate with the analysis needs, issues, and desired resource conditions based on forest plan or resource management plan objectives for the analysis area.

Site-specific planning could include identifying opportunities for trail construction and/or improvement, or specific areas where intensive OHV use may be appropriate. A change in area designations from limited/restricted to open would require a plan amendment. Implementation and monitoring are described in Appendix B of the FEIS. Implementation includes prioritizing areas for site-specific planning within six months of the respective agencies' Record of Decision based on the resources in the area, such as riparian areas and threatened or endangered species, along with opportunities for recreational OHV use.

The agencies recognize there are some valid needs for motorized wheeled cross-country travel. However, when driving cross-country individuals should avoid riparian areas, avoid steep slopes, wash vehicles after use in weed-infested areas, travel with care near wildlife, avoid areas with important wildlife habitat, and travel with care near cultural sites. Restrictions in riparian areas, areas with steep slopes, important wildlife habitat areas, etc. are addressed through the BLM and FS normal permitting and leasing process based on existing management plans and best management practices. The following outlines the varied needs for motorized wheeled cross-country travel.

Motorized wheeled cross-country travel would be allowed for any military, fire, search and rescue, or law enforcement vehicle used for emergency purposes.

Motorized wheeled cross-country travel for the BLM and FS would be limited to official administrative business as outlined by internal memo (see Appendix D in the FEIS). Examples of administrative use would be prescribed fire, noxious weed control, revegetation, and surveying. Where possible, agency personnel performing administrative functions would locate a sign or notice in the area they are working to identify for the public the function they are authorized to perform.

Motorized wheeled cross-country travel for other government entities on official administrative business would require authorization from the local field manager or district ranger in their respective areas. This authorization would be through normal permitting processes and/or memoranda of understanding. Some examples of other agency administrative use would be noxious weed control, surveying, and animal damage control efforts. Where possible, the authorized party performing administrative functions would locate a sign or notice in the area they are working to identify for the public the function they are authorized to perform.

Motorized wheeled cross-country travel for lessees and permittees would be limited to the administration of a federal lease or permit. Persons or corporations having such a permit or lease could perform administrative functions on public lands within the scope of the permit or lease. However, this would not preclude modifying permits or leases to limit motorized wheeled cross-country travel during further site-specific analysis to meet resource management objectives or standards and guidelines.

Motorized wheeled cross-country travel for personal use permits, such as firewood and Christmas tree cutting, could be allowed at the local level (BLM field office or FS ranger district) in specific areas identified for such use. In all other areas, motorized wheeled cross-country travel associated with personal use permits would not be allowed.

Motorized wheeled cross-country travel for big game retrieval would not be allowed. The retrieval of a big game animal that is in possession (i.e. tagged), would be allowed on roads and trails unless currently restricted. Through subsequent site-specific planning, options for big game retrieval could be considered. For example, big game retrieval could be allowed from 10 a.m. to 2 p.m. daily on restricted roads or trails. This big game retrieval requirement would also apply to the BLM's Big Dry and Judith-Valley-Phillips Resource Management Plans where motorized wheeled cross-country travel is currently allowed for big game retrieval.

The following exception would apply unless currently restricted:

> Motorized wheeled cross-country travel to a campsite would be permissible within 300 feet of roads and trails. Site selection must be completed by nonmotorized means and accessed by the most direct route causing the least damage. This exception does not apply where existing seasonal restrictions prohibit traveling off designated routes to a campsite. Existing local rules take precedence over this exception. This distance could be modified through subsequent site-specific planning.

The following mitigation measures for the western prairie fringed orchid would apply:

1. Motorized wheeled cross-country travel for FS official administrative business would not be allowed in known western prairie fringed orchid habitat on the Sheyenne National Grassland in eastern North Dakota without prior approval so as to eliminate impacts to occupied habitat.

2. Motorized wheeled cross-country travel for lessees and permittees to administer federal leases or permits would not be allowed in known western prairie fringed orchid habitat on the Sheyenne National Grassland in eastern North Dakota without prior approval so as to eliminate impacts to occupied habitat.

Species Evaluations

Descriptions of threatened, endangered, and proposed plant, animal, and fish species, including habitat requirements, are summarized below. Additional information is included in Chapter 3 of the final environmental impact statement and proposed plan amendment (FEIS).

Effects on Fish

Introduction
The impacts of motorized wheeled cross-country travel on aquatic resources have been documented in the Aquatics, Affected Environment section of the FEIS and are considered part of the existing condition. With no action the intensity of motorized wheeled cross-country use on National Forest System (NFS) and BLM lands within the analysis area is expected to increase. This analysis evaluates the effects of prohibiting or otherwise limiting off road/trail travel as described in the Preferred Alternative.

The Montana Department of Environmental Quality (1998) identified probable causes of pollution for each stream listed as threatened or impaired (303(d)). Common causes of pollution for streams on NFS or BLM lands are habitat alterations and siltation. While numerous sources often exist for such pollution, the degraded conditions attributed to OHV use in riparian areas and stream bottoms are also likely contributors of such pollution on listed streams. Because sediment and aquatic habitat alterations associated with OHV traffic would likely continue to increase, it is probable that water quality on some of the 303(d) streams would, in some cases, further deteriorate. These effects would likely be most pronounced east of the continental divide. It is conceivable that isolated populations of bull trout could become more vulnerable to angling and poaching as more people utilize motorized wheeled cross-country travel to access streams that were formerly accessible only by nonmotorized travel. It is also conceivable that as the number of trail-stream crossings increase, salmonid redds could be at greater risk from disturbance at stream fords. This scenario is more likely as OHV technology continues to improve, producing machines more capable of accessing difficult terrain. Salmonid habitat may be compromised in the future on the west side of the divide as technology improves.

The primary factors associated with the decline of sturgeon, which are the development of water resource projects within the Missouri River basin during the 1950's and 1960's, continued maintenance and operation of these projects, as well as the construction and operation of main stem and tributary dams and reservoirs, construction of river training structures and levees for navigation and flood control, respectively, and water diversion projects, have contributed to the past and present destruction and modification of habitat (USDI 1999b). The past and continuing destruction and alteration of the large river functions and habitat once provided by the Missouri and Mississippi Rivers is believed to be the primary cause of declines in reproduction, growth, and survival of large river fish such as the endangered pallid sturgeon. The decline of the Kootenai River white sturgeon is primarily a result of impoundments and exploitation (USDI 1999a).

Because of the great size of the rivers that these sturgeons inhabit, and the apparent minimal effects of motorized wheeled cross-country travel reported across the region, it is unlikely that motorized wheeled cross-country travel at current levels would further compromise the status of the white sturgeon or pallid sturgeon.

The Preferred Alternative restricts motorized wheeled cross-country travel but use could continue where OHV user-created roads and trails have been established in riparian areas, areas of unusual erosiveness, or areas of critical aquatic habitats. Should user-created routes be identified that are effecting riparian areas or stream conditions, the agencies can and will take action to immediately close any route where off-road vehicles are causing or will cause considerable adverse effects upon threatened or endangered species (43 CFR 8341.2 and 8364.1 and 36 CFR 295.2 and 295.5).

The amount of sediment routed to streams and rivers in the analysis area is highly variable and dependent upon numerous factors, such as the amount of OHV use, soil type, topography, vegetative conditions, etc., that cannot be easily quantified at this level.

White Sturgeon: This endangered species historically occurred on the Pacific coast from the Aleutian Islands to central California. It occurs in the Columbia River system and its major tributary, the Kootenai River. They are generally long-lived, with females living from 34 to 70 years. Females normally require a longer period to mature

than males, with females spawning between 15 to 25 years of age. White sturgeon are broadcast spawners in large rivers during peak flows from April through July. The Kootenai River population is one of 18 landlocked populations known to occur in western North America. White sturgeon is mainly a bottom feeder and feeds on mostly fishes and a wide variety of invertebrates (Scott and Crossman 1973). It has been documented that the decline of the Kootenai River white sturgeon is primarily a result of impoundments and exploitation (USDI 1999a).

Because of the apparent minimal effects to water quality of motorized wheeled cross-country travel reported across the region, it is not believed that such travel, at the current levels, would further compromise the status of the white sturgeon.

Pallid Sturgeon: This endangered species is well adapted for life at the bottom of swift, large, turbid and free flowing rivers. Pallid sturgeon evolved in the diverse environments of the Missouri and Mississippi Rivers. Flood plains, backwaters, chutes, sloughs, islands, sandbars, and main channel waters formed the large river ecosystem that provided macro habitat requirements for pallid sturgeon and other native large river fish (Dryer and Sandoval 1993). These habitats within the analysis area have been drastically altered. "On the mainstream of the Missouri River, approximately 36% of riverine habitat within the pallid sturgeon's range was eliminated by construction of six massive earthen dams between 1926 and 1952 and another 40% has been channelized. The remaining 24% has been altered due to changes in water flows caused by dam operations" (Dryer and Sandoval 1993).

The range of water depths where pallid sturgeon were frequently found in South Dakota is 7 to 20 feet. In Montana, pallid sturgeon were captured from depths that ranged from 3.9 to 12.1 feet, but they were captured in deeper waters during the winter (Dryer and Sandoval 1993). During late summer in North Dakota, pallid sturgeon were captured at depth that ranged from 6.9 to 24.9 feet (Dryer and Sandoval 1993).

Because of the great size of the rivers that pallid sturgeons inhabit, the typical water depths in which they have been found, and the apparent minimal effects to water quality of motorized wheeled cross-country travel reported across the region, it is not believed that such travel, at current levels, would further compromise the status of the pallid sturgeon.

Bull Trout: This is a threatened species within the Columbia River basin. The following discussion of bull trout habitat requirements is taken from Montana Bull Trout Scientific Group (1998). The majority of migratory bull trout spawning in Montana occurs in a small percentage of the total stream habitat available. Spawning takes place between late August and early November, principally in third and fourth order streams. Spawning adults use low gradient areas (less than 2%) of gravel/cobble substrate with water depths between 0.1 and 0.6 m and velocities from 0.1 to 0.6 m/s. Proximity of cover for adult fish before and during spawning is an important habitat component. Spawning tends to be concentrated in reaches influenced by groundwater where temperature and flow conditions may be more stable. The relationship between groundwater exchange and migratory bull trout spawning requires more investigation. Spawning habitat requirements of resident bull trout are poorly documented.

Successful incubation of bull trout embryos requires water temperatures below 8 degrees C, less than 35 to 40% of sediments smaller than 6.35 mm in diameter, and high gravel permeability. Eggs are deposited as deep as 25.0 cm below the streambed surface and the incubation period varies depending on water temperature. Spawning adults alter streambed characteristics during redd construction to improve survival of embryos, but conditions in redds often degrade during the incubation period. Mortality of eggs or fry can be caused by scouring during high flows, freezing during low flows, superimposition of redds, or deposition of fine sediments or organic materials. A significant inverse relationship exists between the percentage of fine sediment in the incubation environment and bull trout survival to emergence. Entombment appeared to be the largest mortality factor in incubation studies in the Flathead drainage. Groundwater influence plays a large role in embryo development and survival by mitigating mortality factors.

Rearing habitat requirements for juvenile bull trout include cold summer water temperatures (15 degrees C) provided by sufficient surface and groundwater flows. Warmer temperatures are associated with lower bull trout densities and can increase the risk of invasion by other species that could displace, compete with, or prey on juvenile bull trout. Juvenile bull trout are generally benthic foragers, rarely stray from cover, and they prefer complex forms of cover. High sediment levels and embeddedness can result in decreased rearing densities. Unembedded cobble/rubble substrate is preferred for cover and feeding and also provides invertebrate production. Highly variable streamflow, reduction in large woody debris, bedload movement, and other forms of channel instability can limit the distribution and abundance of juvenile bull trout. Habitat characteristics that are important for juvenile bull trout of migratory populations are also important for stream resident subadults and adults. However, stream resident adults are more strongly associated with deep pool habitats than are migratory juveniles.

Both migratory and stream resident bull trout move in response to developmental and seasonal habitat requirements. Migratory individuals can move great distances (up to 250 km) among lakes, rivers, and tributary streams in response to spawning, rearing, and adult habitat needs. Stream resident bull trout migrate within tributary stream networks for spawning purposes, as well as in response to changes in seasonal habitat requirements and conditions. Open migratory corridors, both within and among tributary streams, larger rivers, and lake systems are critical for maintaining bull trout populations.

Effects of the Preferred Alternative

This Preferred Alternative would reduce stream bank erosion, compaction of riparian soils, and the loss of riparian vegetation. Habitat alterations and sediment generated by OHV use are not expected to spread to new areas since the Preferred Alternative restricts motorized wheeled cross-country travel in riparian areas and stream corridors. Should user-created routes be identified that are effecting riparian areas or stream conditions the agencies can and will take action to immediately close any route where off-road vehicles are causing or will cause considerable adverse effects upon threatened or endangered species (43 CFR 8341.2 and 8364.1 and 36 CFR 295.2 and 295.5).

Effects, as a result of the exceptions under the Preferred Alternative, are not likely to affect streams and riparian habitats, nor increase the vulnerability of isolated fish populations to further losses. Although unlikely, these effects can not be totally dismissed for the bull trout and, as a result, a **May Affect but Not Likely to Adversely Affect** determination is made for the bull trout. This is not the case for the two species of sturgeon and, due to the severely altered nature of the river systems on which these fish depend, as well as other environmental factors and exploitation issues, it is the FS and BLM's determination that the Preferred Alternative would have no direct, indirect, or cumulative effects. As a result the finding would be **No Effect** to the Pallid Sturgeon or White Sturgeon.

Effects on Animals

Introduction

As documented in the Montana Chapter of the Wildlife Society Report (Joslin et al.1999), vehicles do impact wildlife. The severity of the impact may be in direct relationship to the amount of vehicle travel occurring.

The current level of impact (as discussed in the Wildlife, Existing Impacts from Vehicles on Wildlife section of the FEIS) in the three-state area from motorized wheeled cross-country travel would be reduced with the Preferred Alternative. Many of the direct and indirect impacts discussed in that section that could affect the sensitive species listed in Appendix F of the FEIS, including direct crushing of individual animals, habitat modification through vegetation and soil disturbance, abandonment of disturbed areas in favor of undisturbed sites, behavioral alterations affecting mating, feeding and predator avoidance, and nest abandonment, would be reduced.

Impacts from vehicles can be direct as a result of collision or crushing of individual animals, however, with small mammals most impacts are related to the impacts on vegetation and barriers created by trails and roads. Habitat fragmentation reduces effective habitat for particular species. Generally, the more important the habitat type and the smaller the home range of the species, the greater the effect of fragmentation. Fragmentation of habitat from OHV use would occur as a result of long-term and repeated use resulting in the creation of a road or trail system in the particular habitat. This situation has been documented at a number of localities, often the result of hunters and the hunting season. Under the Preferred Alternative, fragmentation from motorized wheeled cross-country travel or from user-created roads and trails would be reduced.

Physiological effects on wildlife from human disturbances, including from vehicles, have been well documented. Most studies of these effects have been on ungulates such as deer and elk, prey species for T&E carnivores such as gray wolves. The casual observer who visits a big game winter range and watches the deer and elk may observe little disturbance exhibited by the animals. But that observer is unaware of the actual physiological stress the animal is experiencing and how that contributes to the animal's cost of living. Vehicular harassment on winter range, important summer range or other special habitat features can be governed by road placement. Animals can leave the area if the harassment is too severe or, possibly, adapt to it if the harassment has become frequent, both of which have negative consequences. However, motorized wheeled cross-country travel, which is less patterned and less expected, may be more relatively disruptive. Off-road areas now open to travel would be restricted by the Preferred Alternative and these impacts would be minimized.

One of the greatest indirect impacts from vehicles in Montana, both on and off roads, has been the spread of noxious weeds in wildlife habitats. Weed establishment has reduced the quality and quantity of wildlife forage over large areas. Weeds spread by OHV's are particularly hard to control as they are spread at random over large areas, and not just along a roadway. The Preferred Alternative would restrict motorized wheeled cross-country travel and would minimize the spread of weeds and loss of wildlife habitat.

Agencies currently have the authority to immediately close any area, road or trail where off-road vehicles are causing or will cause considerable adverse effects upon soil, vegeta-

tion, wildlife, wildlife habitat, cultural resources, threatened or endangered species, or other resources (43 CFR 8341.2 and 8364.1 and 36 CFR 295.2 and 295.5). T&E habitats and riparian/wetland areas are priority areas for protection.

Insects

American Burying Beetle: This endangered species is very rare and listed only for the South Dakota portion of the project area. Within South Dakota it is only known to occur in Gregory and Tripp Counties of which BLM has 172 and 160 surface acres, respectively. There is no documented occurrence of the species on federal land in South Dakota and the likelihood that it would occur on federal land is low.

Suitable habitat for the beetle is any site with significant humus or topsoil for burying carrion (USFWS 1995). The Preferred Alternative would restrict or limit wheeled motorized travel to existing trails and roads, which would be lacking these habitat conditions. Therefore, the Preferred Alternative should eliminate any chance of effects to the species from motorized wheeled cross-country travel.

Effects of the Preferred Alternative

The Preferred Alternative would have **No Effect** to the American burying beetle.

Animals - Birds

Whooping Crane: This endangered species has not been documented on federal lands in Montana, North Dakota or South Dakota. Migrations pass over this area, but there have been no documented nesting, roosting, or foraging on BLM or NFS lands.

Bald Eagle: This threatened species is a migrant in North Dakota and South Dakota but occurs year-round in Montana and has made significant gains in breeding numbers. In 1978, only 12 breeding pairs were known in Montana (Servheen 1978). Spring counts in 1998 totaled 248 nests, which exceeds recovery goals (D. Flath, pers. comm. 1999). In July of 1999 the FWS issued proposed rule to delist the bald eagle.

In Montana, bald eagles use riparian and wetland habitats during breeding season and choose old, large diameter trees for nesting (Montana Bald Eagle Working Group 1994). On the west side of the continental divide, where most of the nests are located, no evidence has surfaced that indicates disturbance from OHV travel is having a significant effect on eagles (M. Hillis, pers. comm. 1999).

The current condition is apparently providing suitable conditions for the recovery of the species, as evidenced by the proposed rule to delist the species. Specific bald eagle management direction to promote recovery is provided in the July 1994 Montana Bald Eagle Management Plan. Specific direction is provided to eliminate potential threat to nesting bald eagles through the use of nest site management zones. These zones have various levels of restricted use. Agencies are required to follow T&E species Recovery Plans and Conservation Strategies.

The Preferred Alternative, which restricts or limits motorized wheeled cross-country travel, would reduce potential direct, indirect, or cumulative effects to the species by eliminating use in the nest site management zones. If user-created routes in these zones exist or are discovered, the FS and BLM would take actions to comply with the Bald Eagle Management Plan. Although the direct and indirect effects from motorized wheeled cross-country travel would be minimized by the Preferred Alternative, there may be some insignificant or discountable effects associated with continued motorized wheeled cross-country travel as allowed under the exceptions. In addition, there could be some positive effects by reducing potential disturbance and/or displacement of nesting or roosting eagles.

Piping Plover: This threatened species breeds along the Atlantic coast from southern Canada to North Carolina; along major rivers and wetlands in the northern Great Plains from Saskatchewan and Manitoba through Nebraska; and along portions of the western Great Lakes. On rivers, plovers primarily nest on sand beaches, flats, pebble beaches, and drained floodplains. In Montana, nesting habitat is primarily unvegetated sand-pebble beaches or islands. In North Dakota, they have also been documented on saline wetlands. Both habitats occur on BLM lands.

One piping plover nest has been documented in Montana on a 16-acre parcel of BLM land in the Miles City Field Office area, which has been designated an Area of Critical Environmental Concern for the piping plover. There are no known occurrences on NFS or BLM lands in North Dakota and South Dakota, and the amount of habitat on NFS and BLM land is limited.

Habitat loss and degradation due to coastal development, recreation, navigation, dredging, and shoreline stabilization and replenishment projects have been major contributors to this species' decline. On rivers, widespread impoundment throughout the Great Plains has had negative effects from the curtailment of scouring of sandbars and limiting formation of new sandbars.

Existing threats associated with motorized wheeled cross-country travel have not been documented in the analysis area.

Mountain Plover: This species is proposed to be listed as threatened. Mountain plovers would most likely occur on the shortgrass prairie of eastern Montana. Knowles and Knowles (2000) summarized their survey of mountain plovers from 1991-1999 for Montana east of the continental divide. Mountain plovers were found at nine distinct areas. They were closely associated with sites characterized by slopes under 5%, vegetative height under 6 cm, and greater than half the soil surface being bare ground, lichen and/or club moss. Often they are associated with prairie dog colonies.

Least Tern: Favorite nesting sites for this endangered species include bare ground (recent alluvium) on islands. One island in the Yellowstone River, adjacent to public land, contains a colony of nesting least terns. None are known to occur on BLM or NFS lands in the analysis area. During spring and fall migrations least terns may use stock water reservoirs.

Effects of the Preferred Alternative

The direct, indirect, and cumulative effects associated with motorized wheeled cross-country travel would vary by species. Motorized wheeled cross-country travel would be restricted or eliminated with the possible exception of administrative and permitted uses that may continue. These uses would be administered to avoid T&E habitat but could still result in insignificant or discountable effects to the bald eagle, piping plover and mountain plover. Any routes found or created would be managed in accordance with the Bald Eagle Management Plan. Therefore, the preferred alternative **May Affect but Is Not Likely to Adversely Affect** the bald eagle, piping plover and mountain plover. Under the current status of Proposed Threatened, the FS and BLM find that the Preferred Alternative **Is Not Likely to Jeopardize the Continued Existence of the** mountain plover. If listed, the Preferred Alternative **May Affect but Is Not Likely to Adversely Affect** the mountain plover.

Due to the lack of presence in areas of OHV use, there would be **No Effect** to the least tern or whooping crane.

Animals - Mammals

Black-Footed Ferrets: The black-footed ferret is one of the most imperiled mammals in the world and certainly the most endangered mammal in North America. The last known wild population of black-footed ferrets was discovered near Meeteetse, Wyoming in 1981. By 1987 the last known black-footed ferrets were removed from the wild and placed in a captive breeding program. In 1994, ferrets were reintroduced onto the UL Bend/C.M. Russell National Wildlife Refuge in Montana under a nonessential experimental population designation. Releases have occurred annually on the C.M. Russell National Wildlife Refuge. According to the FWS, 41 ferrets were counted on the C.M.R. during the fall of 1998 (R. Matchette, pers. comm. 1999). In 1997, ferrets were first released on the Fort Belknap Indian Reservation in Montana and in 2000, black-footed ferrets were first released on the Cheyenne River Sioux Reservation in South Dakota.

Prairie dog colonies are considered key to the survival and recovery of the endangered black-footed ferret. Burrows provide shelter and the prairie dog itself is food for the ferret. Large prairie dog colonies or complexes are needed for ferret survival, and this is the reason Phillips County was chosen as Montana's reintroduction area. In 1992, a disease, believed to be sylvatic plague, erupted in the Phillips County area and by 1996, as much as 80 percent of the prairie dog population had been lost. In the past, these prairie dog towns in Phillips County have been an important area to sport shooters. In 1999, because of declines in prairie dogs numbers as a result of disease, BLM issued a shooting closure on prairie dog towns in portions of southern Phillips County.

Although no black-footed ferrets have been released or are known to occur on BLM or NFS lands in the analysis area, BLM lands are in close proximity to occupied habitat on the Fort Belknap Reservation and the UL Bend area of the C.M. Russell National Wildlife Refuge. In addition, BLM lands in Phillips County are still very high priority for reintroduction to aid in the recovery of this species.

Gray Wolf: The recovery plan for this endangered species discussed three areas for wolf recovery, including the Central Idaho Recovery Area, the Northwest Montana Recovery Area, and the Yellowstone Recovery Area (USDI 1987). The goal for delisting was to establish 10 or more packs in each of these three areas. Increases in gray wolf numbers, expansion of the species' occupied range, and progress toward achieving the reclassification and delisting criteria of several approved gray wolf recovery plans have led to a proposed downlisting of this species throughout most of its range, including Montana, North Dakota and South Dakota.

Wolves first expanded down from Canada in northwest Montana and have continued expansion ever since. Recently, successful releases in Yellowstone Park and Central Idaho advanced the process. Key components of wolf habitat include sufficient year-round big game prey base and secluded denning and rendezvous sites with minimal exposure to humans. Riparian and wetland sites are especially important for rendezvous sites, which are specific resting and gathering areas for the packs after the whelping den has been abandoned. Beaver provide an important alternate prey in these areas during ice-free times (USDI 1987).

The Preferred Alternative would lessen the direct and indirect effects associated with motorized wheeled cross-country travel; however, Motorized wheeled cross-country travel could still be allowed under special exceptions. These exceptions include motorized wheeled cross-country travel for: any military, fire, search and rescue, or law enforcement vehicle used for emergency purposes; disabled access per the Rehabilitation Act of 1973; BLM and FS administrative purposes; travel for lessees and permittees limited to the administration of a federal lease or permit; and personal use permits, such as firewood and Christmas tree cutting, which could be allowed at the local level (BLM field office or FS ranger district) in specific areas identified for such use.

Grizzly Bear: The greatest numbers of grizzly bears currently occur in Alaska and Canadian provinces. In the lower 48 states this threatened species occurs in smaller, fragmented populations and the FWS recognizes five recovery areas. The Northern Continental Divide Ecosystem of western Montana, the Yellowstone Ecosystem including southwestern Montana, portions of Wyoming, and Idaho (essentially centered in Yellowstone National Park), the Selkirk-Cabinet-Yaak ecosystem, the North Cascades of Washington, and the Selway-Bitterroot ecosystem of Montana and Idaho. A recent proposal has been made to reintroduce grizzly bears in the Selway-Bitterroot.

Although habitat use and food habits differ among the four currently occupied recovery areas (Joslin and Youmans 1999) grizzlies are opportunistic and omnivorous and will feed on animal or vegetable matter. Herbaceous plants are utilized, as are ground squirrels, carrion, garbage, ungulates, roots, fruits, berries, tubers, fungi, pine nuts, and even tree cambium. Bears occasionally prey on livestock and also are attracted to bone yards and dead livestock. Many bear foods, both animal and vegetable, occur in riparian and wetland areas, with some of the berry-producing shrubs occurring in the uplands.

Den sites are generally at high elevation, on northerly aspects, and most often within subalpine forest and non-forest areas (Joslin and Youmans 1999). Den site selection in the northern Swan Mountains of Montana was found to be similar for all age and sex classes (Mace and Waller 1997). Females were found, on average, to enter dens earlier and leave later.

Breeding season for grizzly bears in the lower 48 states is from late May through mid-July (FWS 1993). Females vary in age from 4.5 to 9.5 years for their first litter and generally have 2 cubs with a breeding interval of 3 years (IGBC 1987). The FWS (1993) reported grizzly bears to have one of the lowest reproductive rates among terrestrial mammals.

Large areas of relatively undisturbed land with food, cover, denning habitat, solitude, and space are important for effective grizzly bear habitat (Interagency Grizzly Bear Committee 1987, Craighead et al. 1982). Recreational activity may diminish the value of habitat for grizzly bears through modification or displacement (Joslin and Youmans 1999). The Grizzly Bear Recovery Plan (USDI 1993) identifies human depredation, competitive use of habitat, and livestock grazing as sources of conflict.

As human populations have grown within and adjacent to grizzly bear areas during the past 20 years, recreational use of public land in grizzly bear habitat has also increased. Substantial improvements to OHV's, including ease of use, reliability, and affordability to a larger segment of the population, have all contributed to the increased use.

Numerous studies have shown that grizzly bears are negatively affected by increased road density or increased use of roads within a bear's home range. Manley and Mace (1992) reported that bear use was significantly less than expected where open road density was >1 mi./mile squared or where total road density was >2mi./mile squared. Further analysis by Mace et al. (1996) showed that changes in habitat use due to roads differed by season and among individual bears. Certain individuals had a higher tolerance for road densities but the probability of occurrence generally decreased as road density increased. Within a 0.5 km buffer around roads, most bears avoided roads with use exceeding 10 vehicles per day.

Although no evidence is available to document the effects from off-road/trail vehicle travel, it is logical to assume that vehicle activity, whether on or off-road, would negatively affect grizzly bears. There should be no negative impacts from the Preferred Alternative, since it is to limit or restrict Motorized wheeled cross-country travel with the possible exception of administrative and permitted uses.

The analysis of effects to grizzly bear habitat includes an assessment of impacts to core (secure) areas. Core areas are partially defined by the lack of open roads. Roads may be present in the core area but they are closed to vehicle traffic. With the addition of this proposed action (Preferred Alternative), motorized vehicle travel would not be permitted in the core areas with the possible exception of very limited administrative use.

Further, road and trail access is managed to conserve grizzly bear habitat outside the core areas. Open and total route densities are limited in these areas to protect grizzly bears. The preferred alternative would restrict all cross-country motorized use to existing roads and trails which will reduce off-road/trail disturbance to grizzly bears. According to IGBC guidance (IGBC 1994, 1998) all roads or

trails receiving motorized use should be counted in open motorized route densities. Therefore, if user-created routes outside core areas exist or are discovered, the FS and BLM would take actions to make such routes inaccessible to motorized use or the routes would be included in access density calculations and thereby subject to appropriate access limitations.

Effects from the Preferred Alternative are not likely to adversely affect the grizzly bear and, in fact, would likely be positive/beneficial as Motorized wheeled cross-country travel would be prohibited or restricted, further protecting grizzly bear habitat from human disturbance.

Canada Lynx: The Canada lynx was recently (July 24, 2000 final rule) listed as threatened. Lynx occur primarily in the boreal, sub-boreal, and western montane forests of North America. In Montana, the western montane forests include spruce/fir, Douglas-fir, and fir-hemlock vegetation types dominated by lodgepole pine, Engelmann spruce, subalpine fir, aspen, and whitebark pine at 1,400-2,700 meters. Snowshoe hares are the primary prey of lynx, although diet can be more varied in the summer than the winter. Fire mosaics contribute to snowshoe hare abundance. Recent studies indicate that lynx show no preference or avoidance of unpaved forest roads, and that road density does not appear to affect lynx habitat selection (McKelvey et al. 2000). Effects from use by OHV's during the non-winter period when snow is not present are insignificant or discountable and probably have very little, if any, effect on lynx.

Effects of the Preferred Alternative

Under the Preferred Alternative, motorized wheeled cross-country travel would be restricted or eliminated with the possible exception of administrative and permitted uses that may continue. These uses would be administered to avoid T&E species and their habitat and **May Affect but Are Not Likely to Adversely Affect** the black-footed ferret, gray wolf, grizzly bear, or Canada lynx within the analysis area.

These threatened and endangered mammals within the analysis area may continue to be impacted by the limited cross-country OHV use, although the likelihood for direct or indirect effects to occur is so unlikely as to be insignificant or discountable. Cumulative effects from this Preferred Alternative, when considered with other known or foreseeable future projects likely to be implemented by private, local, state, or tribal administration, would also be insignificant or discountable and not likely to adversely affect these species.

Effects on Plants

Introduction

Introduction and establishment of weeds can displace native species and plant communities, which results in loss of species diversity and a change in the structure of the plant community (Tyser and Key 1988, Tyser 1992, Rice et. al. 1997). Motorized wheeled cross-country travel is one cause of noxious weed spread. A direct effect to plants is the crushing of individuals or disturbance of populations; however, the amount of area of native plant community directly affected by motorized wheeled cross-country travel is quite small considering the whole analysis area and cannot be measured at the scale of this analysis.

This proposal is programmatic in nature; therefore, the discussion of effects will be general and qualitative rather than quantitative.

Water Howellia: This threatened plant species occurs as a submerged or floating annual associated with lakes and ponds. The surrounding upland vegetation is typically a dense conifer forest. Most of the 106 occurrences on record in Montana are on the Flathead National Forest, all in the Swan Valley (Lake and Missoula Counties). Some of these sites occur in limited access grizzly corridor zones behind locked gates where use is restricted by number of visits per week. The habitat of this plant is not conducive to OHV traffic, and no impacts from motorized wheeled cross-country travel are known or anticipated to occur.

Ute Ladies' Tresses: None of the 11 occurrences in Montana of this threatened plant species are on BLM or NFS lands, although the Butte Field Office was involved in an interagency wetland project at one site that has been opened to hunting and other nonmotorized public use and was identified at one time as a possible land exchange. The habitat for this species includes meandered wetlands and swales in broad, open valleys at margins with calcareous carbonate accumulation. The occurrences are in a four-county area of the Jefferson River and confluent lower reaches of the Beaverhead, Gallatin, Madison and Ruby Rivers. Most Montana occurrences are on private land; a few are on State lands. Surveys for this species were conducted to delimit the range of distribution in Montana, including the most likely BLM and NFS lands. This species was not found on NFS or BLM lands (B. Heidel, pers. comm. 2000); therefore, the likelihood that this species occurs on BLM or NFS lands is low and no impacts from motorized wheeled cross-country travel are known or anticipated to occur.

Western Prairie Fringed Orchid: There are three remaining large populations of this threatened species. One occurs within the analysis area on the Sheyenne National Grass-

land. This species is associated with sedge meadows, primarily within the tallgrass prairie. It occurs in the sandhills habitat association on the Sheyenne National Grassland. Across its range, the species is generally found in fire and grazing adapted grassland communities, most often on unplowed calcareous prairies and sedge meadows. It has also been documented in successional plant communities on disturbed sites. (USDA 1999).

Maintenance of functional, dynamic tallgrass prairie is key to survival of the species. Disturbances such as fire, flooding, and grazing occurred historically and may be important for orchid regeneration. Precipitation and flooding events on the Sheyenne National Grassland influence extinctions and recovery of local orchid populations. (USDA 1999).

The following mitigation measures for the western prairie fringed orchid would apply:

1. Motorized wheeled cross-country travel for FS official administrative business would not be allowed in known western prairie fringed orchid habitat on the Sheyenne National Grassland in eastern North Dakota without prior approval so as to eliminate impacts to occupied habitat.

2. Motorized wheeled cross-country travel for lessees and permittees to administer federal leases or permits would not be allowed in known western prairie fringed orchid habitat on the Sheyenne National Grassland in eastern North Dakota without prior approval so as to eliminate impacts to occupied habitat.

Spalding's Catchfly: Currently proposed as threatened, this species is known from a total of 52 populations distributed across Washington, Oregon, Idaho, Montana, and British Columbia. The habitat is primarily restricted to moist grasslands that make up the Palouse region in southeastern Washington, northwestern Montana and adjacent portions of British Columbia, Idaho and Oregon. Large-scale ecological changes in the Palouse region over the past several decades, including agricultural conversion, changes in fire frequency, and alterations of hydrology have resulted in the decline of Spalding's Catchfly. More than 98 percent of the original Palouse prairie habitat has been lost or modified by agricultural conversion, grazing, invasion of nonnative species, altered fire regimes, and urbanization. In northwest Montana, this open grassland habitat is one of the few habitats conducive to motorized wheeled cross-country travel.

Within the analysis area, none of the known populations of Spalding's catchfly occur on NFS or BLM lands. However, potential habitat exists on the Kootenai, Flathead, and Lolo National Forests. One of the largest populations occurs in Eureka, Montana in close proximity to NFS lands. Other populations in Montana also occur near federal lands; therefore, the probability that this species occurs on federal lands is moderate. Future surveys of potential habitat on NFS and BLM lands will be needed to determine the extent of this species.

Some past surveys for this species have been conducted on the Kootenai and Flathead National Forests without detecting the species. On the Flathead National Forest, small isolated suitable habitats exist along the North Fork of the Flathead River flood plain from the Canadian border to Polebridge; in very small, isolated grasslands in the Swan Valley; and in larger open fescue bunch grass prairies in the South Fork Flathead and Danaher Creek drainages within the Bob Marshall Wilderness. These habitats do not comprise more than 1% of the land base of the Flathead National Forest and most have been surveyed for this species (M. Mantas, per. comm. 2000). On the Kootenai National Forest, potential habitat exists in the Tobacco Valley area around Eureka, Montana where one of the largest known populations occurs. Some of the grazing allotments with suitable habitat have been surveyed for this species, without detecting any populations.

Effects of the Preferred Alternative

Potential habitat for the Spalding's catchfly exists and may continue to be impacted by OHV use. Under the current status as Proposed Threatened we find that the Preferred Alternative **Is Not Likely to Jeopardize the Continued Existence of the Species.** With motorized wheeled cross-country travel restricted under the Preferred Alternative, the likelihood for direct or indirect effects to occur is so low, as to be insignificant or discountable and therefore, if the Spalding's catchfly is federally listed, the Preferred Alternative **May Affect but Is Not Likely to Adversely Affect** the species.

There would be **No Effect** to water howellia due to the habitat of this plant not being conducive to OHV traffic, and that no impacts from motorized wheeled cross-country travel are known or anticipated to occur. There would be **No Effect** to Ute ladies' tresses, as this species is not known to occur on NFS or BLM lands within Montana, although surveys of the most likely federal lands were conducted for this species to delimit its range of distribution (B. Hiedel, pers. comm. 2000).

The direct and indirect effects associated with motorized wheeled cross-country travel would be substantially reduced by implementation of the Preferred Alternative. Motorized wheeled cross-country travel would not be allowed in known western prairie fringed orchid habitat on

the Sheyenne National Grassland in eastern North Dakota without prior approval. This mitigation measure would apply to FS official administrative business, administration of federal leases or permits by lessees and permittees and is written into the Preferred Alternative to be incorporated into the decision. With this mitigation there would be **No Effect** to western prairie fringed orchid.

Summary of Effects to Species

NO EFFECT

Least tern (*Sterna antillarum*), endangered
Whooping crane *(Grus americana*), endangered
Pallid sturgeon (*Scaphirhvnchus albus*), endangered
White sturgeon (*Acipenser transmontanus*), endangered
American burying beetle (*Nicrophorus americanus*), endangered
Water howellia (*Howellia aquatilis*), threatened
Ute ladies' tresses (*Spiranthes diluvialis*), threatened
Western prairie fringed orchid (*Platanthera praeclara*), threatened

MAY AFFECT - NOT LIKELY TO ADVERSELY AFFECT

Black-footed ferret (*Mustela nigripes*), endangered
Gray wolf (*Canis lupus*), endangered
Bald eagle (*Haliaeetus leucocephalus*), threatened
Piping plover (*Charadrius melodus*), threatened
Canada lynx (*Lynx canadensis*), threatened
Grizzly bear (*Ursus arctos horribilis*), threatened
Bull trout (*Salvelinus confluentus*), threatened
Mountain plover (*Charadrius montanus*), proposed as threatened (this determination would be made if the final rule is to list the Mountain plover as threatened)
Spalding's catchfly (*Silene spaldingii*), proposed as threatened (this determination would be made if the final rule is to list Spalding's catchfly as threatened)

NOT LIKELY TO JEOPARDIZE THE CONTINUED EXISTENCE

Mountain plover (*Charadrius montanus*), proposed as threatened
Spalding's catchfly (*Silene spaldingii*), proposed as threatened

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GLOSSARY OF TERMS

Biological Assessment - Information prepared by the action agency to determine whether a proposed action is likely to adversely affect listed species or designated critical habitat.

Consult - As required under Section 7(a)(2) of the Endangered Species Act of 1973, as amended.

Cumulative Effects (ESA) - Those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation (50 CFR 402.02). This definition applies only to section 7 analyses and should not be confused with the broader use of this term in the National Environmental Policy Act or other environmental laws.

Cumulative Effects (NEPA) - The effects that "result from spatial (geographic) and temporal (time) crowding of environmental perturbations" (Council of Environmental Quality, 1997). It is recognized that effects of human activities will accumulate when a second perturbation occurs at a site before the ecosystem can fully rebound from the effect of the first perturbation. Cumulative effects can be either positive or negative. Cumulative effects are analyzed, therefore, by studying the incremental impact of an action when added to other past, present, and reasonable foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taken place over a period of time (40 CFR 1508.7).

Effects - Environmental consequences as a result of the implementation of an action. Effects may be: direct, which are caused by the action and occur at the same time and place; indirect, which are caused by the action and are later in time or farther removed in distance; or cumulative, which results from the incremental impact of the action when added to other actions (see cumulative effects).

Endangered Species - Any species which is in danger of extinction throughout all or a significant portion of its range. [ESA Section 3(6)]

ESA - The Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 *et seq*.

May affect - The conclusion when a proposed action may pose **any** effects on listed species or designated critical habitat.

Mitigation - Actions to avoid, minimize, reduce, eliminate, replace, or rectify the impact of a management practice.

No effect - The appropriate conclusion when a proposed action will not affect a listed species or designated critical habitat.

Noxious weeds - A plant species designated by Federal or State law as generally possessing one or more of the following characteristics: aggressive and difficult to manage; parasitic; a carrier or host of serious insects or disease; or nonnative, new or not common to the United States.

Off-Highway Vehicles - Any motorized wheeled vehicle designed for cross-country travel over any type of terrain.

Preferred Alternative - The agency's preferred alternative, one or more, that is identified in the impact statement (40 CFR 1502.14).

Proposed species - Any species of fish, wildlife, or plant that is proposed in the Federal Register to be listed under Section 4 of the ESA.

Threatened species - Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Viable population - A fish, wildlife or plant population of sufficient size to maintain its existence over time in spite of normal fluctuations in population levels.