SPECIALIST REPORT – WILDLIFE AND FISH

DNRC/Miller Land Exchange
Ravalli and Lewis & Clark Counties

Prepared for:

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1.0 INTRODUCTION

This specialist report evaluates wildlife and fish on lands affected by the Miller Land Exchange near Sula and Lincoln, Montana. This report is part of an Environmental Assessment (EA) being prepared in compliance with the Montana Environmental Policy Act (MEPA) for the Montana Department of Natural Resources and Conservation (DNRC).

The Miller Land Exchange would trade state-owned land near Sula for privately-owned land near Lincoln. J.R. Miller Ranches, LLC owns the Shining Mountain Ranch located in the French Basin near Sula and owns three parcels of land previously held by The Nature Conservancy (TNC) near Lincoln. In this proposal, the Montana Department of Natural Resources (DNRC) would transfer five land parcels that are adjacent to the Shining Mountain Ranch to private ownership (J.R. Millers). In exchange, the DNRC would acquire the three land parcels near Lincoln that are currently owned by J.R. Miller Ranches LLC.

1.1 Analysis Area Boundary

1.1.1 Lincoln Lands

The project area north of Lincoln, Montana consists of three land parcels located within portions of Sections 1, 2, 3, 9 and 12, T14N, R9W (**Figure 1**). The three parcels proposed for land exchange cover a total of 1,458 acres: Parcel 1 is approximately 730 acres, Parcel 3 is approximately 222 acres, and Parcel 9 is approximately 500 acres. The three parcels are accessed by a network of private and state (DNRC) roads that spur from Sucker Creek Road, Beaver Creek Road, and North Lincoln Gulch Road, and of which all connect to Highway 200. J.R. Miller Ranches LLC recently acquired these parcels from TNC. Walk-in public access and snowmobiles have been allowed on all of the Lincoln Lands. Automobile and truck motorized public access has only been allowed on Parcel 1.

1.1.2 Sula Lands

The project area north of Sula, Montana consists of five parcels of the Sula State Forest located within portions of Sections 15, 16, 21, and 22, T2N, R19W (**Figure 2**). The five parcels proposed for land exchange cover a total of 800 acres: Parcel 1 is approximately 113 acres, Parcel 2 is approximately 170 acres, Parcel 3 is approximately 109 acres, Parcel 4 is approximately 234 acres, and Parcel 5 is approximately 157 acres. The project area also includes three road easements located within portions of Sections 8, 9, and 27, of T2N and R19W (**Figure 2**). Currently, the Sula Lands are under DNRC management as School Trust lands and surround the Shining Mountain Ranch property. The only public access on the Sula Lands has been by walking from nearby State and Federal roads.

Figure 1 goes here

Figure 2 goes here

1.2 Analysis Methods

Location information pertaining to endangered, threatened, and sensitive (TES) animal species in vicinity of the Sula and Lincoln land exchange parcels was obtained from the Montana Natural Heritage Program (MTNHP, 2005). The U.S. Fish and Wildlife Service (USFWS) statewide list by county, which depicts the distribution of listed, proposed, and Category 1 candidate threatened and endangered species in Montana was reviewed. The Department of Natural Resources and Conservation (DNRC) list of TES animals was also reviewed. Information regarding wildlife and fishery resources on the Lincoln Lands was requested and received from The Nature Conservancy (TNC). Biologists from the Montana Fish, Wildlife, and Parks (MFWP), U.S. Forest Service (USFS), and DNRC were consulted regarding fish and wildlife resources in the project areas. Pertinent literature was also reviewed.

A site visit to the proposed Lincoln land exchange parcels was conducted by Andrea Pipp, Land & Water/PBS&J biologist, on May 3, 2005. Ms. Pipp visited the proposed Sula land exchange parcels on May 5, 2005. These site visits consisted of cursory inventories of wetlands, TES animals, vegetation communities and habitats, and wildlife presence and sign (tracks, nests, and scat). In addition, general land use, landscape features, and presence/condition of waterways were noted.

2.0 EXISTING CONDITION

2.1 Lincoln Lands

The Lincoln Lands were originally owned and managed by Champion International and later by the Plum Creek Timber Company (PCTC) (TNC 2004a, DNRC 2005a). In 2004 TNC purchased these parcels and implemented stewardship activities. TNC then sold these parcels to J.R. Miller Ranches, LLC in May of 2005.

2.1.1 Vegetation Types and Land Use

Of the approximate 1,458 acres proposed for land exchange, approximately 65 acres of the Lincoln Lands are considered non-forest with the remaining acres classified as the *Western Montana Ponderosa Pine Forest* vegetation type (DNRC 2005a, Payne 1973). These parcels were heavily logged in the 1980's by Champion International and since 1993 by PCTC using clearcut and commercial thinning prescriptions (Tetra Tech 2003, TNC 2004a). Mature ponderosa pine (*Pinus ponderosa*) and Douglas-fir (*Pseudotsuga menziesii*) were the predominant species removed.

Overall the forest land is generally well stocked with regenerating trees representing a diversity of age and size classes (DNRC 2005a). Upland understory vegetation was fairly consistent and dominant native species were: Oregon grape (*Berberis repens*), elk sedge (*Carex geyeri*), northwestern sedge (*Carex concinnoides*), kinnick-kinnick (*Arctostaphylos uva-ursa*), snowberry (*Symphoricarpos albus*), yarrow (*Achillea millifolium*), pussy-toes (*Antennaria*), arnica (*Arnica*), ninebark (*Physocarpus malvaceus*), and rose (*Rosa*). Dominant stream and wetland vegetation

consisted of: alder (*Alnus*), aster (*Aster*), carex (*Carex*), willow (*Salix*), cottonwood (*Populus balsamifera*), and aspen (*Populus tremuloides*).

Parcel 1 grades from upland forest on steep slopes in the north to riparian and upland forest on gentle slopes in the south. Although harvested, Parcel 1 contains residual and regenerating lodgepole (*Pinus contorta*), Douglas-fir, and ponderosa pine trees. The lowlands are dotted with ephemeral drainages, wetlands, ponds, and are drained by the perennial waters of Liverpool and Park Creeks. About 7.3 miles of mostly open roads traverse this parcel (DNRC 1996). As with all the Lincoln Lands, many barricaded and spur roads are used heavily by off-road vehicles (mostly ATVs). All of Parcel 1 (730 acres) is considered elk (*Cervus elaphus*) calving and winter range and 381 acres are considered white-tailed deer (*Odocoileus virginianus*) winter range (TNC 2004b).

Parcel 3 was commercially thinned and is predominantly regenerating with Douglas-fir mixed with lodgepole and ponderosa pines. Limited wetland habitat exists within Parcel 3. About 1.2 miles of gated roads bisect the parcel (DNRC 1996). The entire parcel (221 acres) is considered elk calving and winter range while mule deer (*Odocoileus hemionus*) and white-tailed deer winter range occupy approximately 580 acres and 52 acres respectively (TNC 2004b). Domestic sheep grazing occurs in Sections 1 and 12 while cattle grazing occurs in Sections 3 and 9 (TNC 2004a).

Parcel 4 is upland forest occupied mostly by regenerating lodgepole, mixed with ponderosa pine, Douglas-fir, and a little Engelmann spruce (*Picea engelmannii*). Along the eastern border and in the southwest corner (at the lower elevations), wetlands and aspen trees intermix with upland forest. About 6.7 miles of closed road traverse the entire parcel (DNRC 1996). Approximately 300 acres of elk calving and winter range occurs in this parcel (TNC 2004b).

2.1.2 Grazing

Some of the Lincoln Lands have been leased for grazing. In Parcel 1, portions of Section 1 (160 acres) and Section 12 (160 acres) have been under the Sieben Lease for sheep grazing (Kloetzel 2005). The remainder of Parcel 1 was leased for grazing in recent years, but is currently not active (Kloetzel 2005). All of Parcel 3 (222 acres of Section 3) and Parcel 4 (500 acres of Section 9) have been under the Fleming Lease for cattle grazing (Kloetzel 2005).

Thorough evaluations of grazing conditions were not done during the May 2005 visit. However, it was observed that while forest regeneration appeared in good shape, range conditions seemed poor. Understory forest productivity seemed to be dominated more by forbs than by grasses. Although native grasses were widespread, native forbs seemed to dominate the forest understory, and exotic and noxious weed species dominated roadsides and more open areas (especially in Parcel 3). In order to promote grass cover and to discourage noxious weeds, a comprehensive and long-term integrated weed management plan is recommended

2.1.3 Wildlife

Although harvested and roaded, the Lincoln Lands are rich in an abundance and diversity of wildlife. Species that occur as residents or transient residents include big game, grizzly bear, Gray wolf, and a large variety of birds. The diversity of habitat, along with a mixture of remnant trees/snags, regenerating trees, small course woody debris, and shrub cover, allows for a diversity and abundance of wildlife species to use the Lincoln Lands. In all the Lincoln Lands, signs and sightings of mule deer, white-tailed deer, and elk were commonly encountered during the May 2005 site visit. Other mammals observed were coyote (*Canis latrans*), red squirrel (*Tamiasciurus hudsonicus*), and ground squirrel (*Spermophilus*). In addition, black bear (*Ursus americanus*) and moose (*Alces alces*) are commonly observed on these parcels (Henderson 2005).

Song birds, birds of prey, and waterfowl are commonly found in forests, wetlands, and/or ponds. During the site visit, commonly-heard or observed bird species were: American kestrel (*Falco sparverius*), Common snipe (*Gallinago gallinago*), woodpecker (*Picoides*), American robin (*Turdus migratorius*), grouse (species unknown), Black-capped chickadee (*Poecile atricapillus*), Bufflehead (*Bucephala albeola*), Ring-necked duck (*Aythya collaris*), and Canada goose (*Branta Canadensis*).

2.1.4 Fish

Within the Lincoln Lands, limited information on fish use and abundance is available. Liverpool and Park Creeks are fish-bearing streams that flow through Sections 1 and 12 of Parcel 1 (MFISH 2005b). Beaver and Stonewall Creeks are fish-bearing streams that flow along side Parcels 9 and 1 (MFISH 2005b). Beaver, Stonewall, Liverpool, Park, and Keep Cool Creeks are rated by MFWP as high-value to outstanding value fisheries (MFISH 2005b).

Westslope cutthroat trout are considered to be rare throughout the Beaver, Stonewall, Park, and Liverpool Creeks (MFISH 2005b). In vicinity of the Lincoln Lands, bull trout are known to occur at the mouths of Beaver and Keep Cool Creeks (tributaries to the Blackfoot River) (Pierce 2005). Beaver Creek is historical habitat for bull trout and current use is unknown (Pierce 2005). In vicinity of the Lincoln Lands, habitat parameters for bull-trout and westslope cutthroat trout have not been assessed, nor have complete fish surveys been conducted for Stonewall, Park, and Liverpool Creeks; this is in part due to the mixed ownership (Pierce 2005).

2.1.5 Threatened, Endangered, and Sensitive Species

Although not directly observed during the May 2005 site visit, 11 Threatened, Endangered, or Sensitive (TES) animal species have been identified as either present, having potential for occurrence, or having potential habitat in or near the Lincoln Lands (**Table 1**).

2.2 Sula Lands

2.2.1 Vegetation Types and Land Use

The Sula Lands are under DNRC management as School Trust Lands in the Sula State Forest. Of the approximate 800 acres proposed for land exchange, approximately 300 acres are classified as an *Intermountain Valley Grassland & Meadow* vegetation type and the remaining acres classified as *Western Montana Ponderosa Pine Forest* vegetation type (Payne 1973, DNRC 2005a).

Prior to the 2000 fires, the forested portion of the Sula Lands was dominated by widely spaced, mature ponderosa pine, with an understory of mostly mixed grasses and forbs. During the summer of 2000, the Sula Lands burned as part of a larger fire complex (DNRC 2005a). The five Sula parcels are very similar in vegetation type and structure, differing mainly in burn intensity. Burn intensity on Parcels 1-3 was greater, with fewer green trees surviving, while burn intensity on Parcels 4 and 5 was patchy, where many green trees survived.

The 2000 fires burned through the narrow riparian habitat in Parcels 1-3. However, streambanks appear to have stabilized and native understory vegetation predominates along the perennial and ephemeral stream channels in all parcels

Selected salvage logging occurred between 2002 and 2004, particularly on Parcels 1-3 (DNRC 2005a). Tree planting by the DNRC has also occurred in Parcels 1-3 (DNRC 2005a). A locked road system extends through the parcels with road densities as follows: 0.7 mile [mi] for Parcel 1, 0.3 mi for Parcel 2, 0.3 mi for Parcel 3, 1.6 mi for Parcel 4, and 1.2 mi for Parcel 5 (DNRC 1996).

2.2.2 Grazing

Grazing leases on the Sula Lands have been deferred as a result of the 2000 fires and subsequent tree planting (Storer 2005). Grazing leases have been held by the Shining Mountain Ranch (680 acres) and another lease-holder (120 acres).

The Shining Mountain Ranch implements on their property a rest-rotation grazing plan in which a portion of their land is rested from grazing for 2-2.5 years (Meyer 2005). Grazing intensity is monitored and modified with the use of electric fences and a dispersed watering system which is designed to prevent livestock from congregating in creek bottoms. In 2004, approximately 320 yearlings grazed on approximately 6,000 acres between late spring and early fall (Meyer 2005).

2.2.3 Wildlife

The French Basin supports healthy populations of mule deer, white-tailed deer, and elk. Big-game use of the French Basin since the 2000 fire has changed little (Vore 2005). All of the Sula Lands are classified as elk winter range (McGrath 2005). In April 2005, Biologist Vore counted from the air 1,185 elk in the French Basin (Vore 2005). Black bear (*Ursus americanus*),

mountain lion (*Felis concolor*), common porcupine (*Erethizon dorsatum*), American badger (*Taxidea taxus*), raptors, ground squirrels, and coyotes commonly occur in the area.

During the May 2005 site visit, elk and deer sign, cottontails, ground squirrels, and tree squirrels were commonly seen. Schoolmarm Lake, located on the Shining Mountain Ranch, is adjacent to Parcel 5 and is the only deep water habitat in the area. Several waterfowl species were observed on the lake: Blue-winged teal (*Anas discors*), Mallard (*Anas platyrhynchos*), Green-winged teal (*Anas crecca*), Cinnamon teal (*Anas cyanoptera*), and Canada goose (*Branta Canadensis*). An immature Bald eagle was observed flying over the lake. In addition, a transitory Common loon (*Gavia immer*) was observed by Biologist Vore (2005). In Parcels 2 and 3, woodpecker and song bird activity was abundant.

2.2.4 Fish

Cameron Creek, a fish-bearing stream, bisects the Shining Mountain Ranch and the tributaries of Cameron Creek bisect Sula Parcels 3, 4, and 5. Cutthroat trout have been found throughout the Cameron drainage system, but are most abundant in the higher reaches (Clancy 2005). In contrast, brook trout, which are also found throughout the drainage, are least abundant in the higher reaches and most abundant in the lower reaches (Sections 6 and 31) (Clancy 2005). In the lower reaches of Cameron Creek, Longnose suckers and whitefish are common (Clancy 2005). Bull trout have not been found during fish surveys (Clancy 2005)

2.2.5 Threatened, Endangered, and Sensitive Species

Analysis of the proposed Sula land exchange parcels indicated that 11 Threatened, Endangered and Sensitive (TES) animal species are either present, have potential for occurrence, or have potential habitat in or near the parcels (**Table 2**).

Table 1 ***Animal TES Species that may Occur in Vicinity of the Proposed Lincoln Land Exchange Parcels***

Animal Species	2004 MTNHP and other Rankings[10]	Potential or Known Occurrence/Habitat in Vicinity of project area	Potential or Known Occurrence/Habitat in project area
Bald Eagle (*Haliaeetus leucocephalus*)	G4, S3B, S3N Threatened (USFWS)	Known nest (Lincoln Territory) on Blackfoot River, at least 2 air-miles south of project area. [1]	No known nest, vital roosting, or concentration areas in or near project area. Use would be transitory, esp. in fall & spring. Foraging habitat considered moderate. [4] Nesting habitat considered poor due to few snags and small streams. [4]
Gray Wolf (*Canis lupus*)	G4, S3 T, XN (USFWS)	Activity commonly documented in Beaver Creek drainage.[5]	Documented wolf activity.[2, 5] Wolf use is transitory; no established packs or denning sites.
Grizzly Bear (*Ursus arctos horribilis*)	G4T3T4, S2S3 Threatened (USFWS)	Within distributional range and just south (outside) of NCDE recovery area.[1, 5] Sightings have been documented. [2]	Documented use of parcels. [2] Portions of Sections 2, 9, and 12 are designated Grizzly Bear Critical Range.[4] Sections 3 and 9 are part of a carcass redistribution program. [4]
Canada Lynx (*Lynx Canadensis)*	G5, S3 Threatened (USFWS)	Within distributional range.[1] Sightings documented in Beaver Creek drainage.[5] Lynx primary habitat in Copper Creek drainage, at least 5 air-miles northeast.[5]	Parcels serve as linkage habitat.[2]
Bull Trout (*Salvelinus confluentus)*	G3, S2 Threatened (USFWS)	Blackfoot River is a major migration corridor for bull trout traveling between North Fork and headwaters.[6] Beaver Creek is historical habitat, but current use is unconfirmed.[6] Keep Cool Creek is habitat.[1] Mouths of Beaver and Keep Cool Creeks support low densities of bull trout.[6]	Beaver Creek is bull trout habitat.[1] Possible presence in creeks flowing next to or into Lincoln Lands, but surveys have not been conducted.[6]
Black-Backed Woodpecker (*Picoides arcticus*)	G5, S2 Sensitive (DNRC)	Historically present (prior to 1996). [7]	Potential habitat low due to lack of fires and age structure of trees.
Pileated Woodpecker (*Dryocopus pileatus*)	Sensitive (DNRC)	Indirect evidence of breeding. [7] Present in vicinity. [7]	Habitat present and probably present. [2]
Flammulated Owl (*Otus flammeolus*)	G4, S3B Sensitive (DNRC)	Potential habitat may be present.	Potential habitat unlikely due to harvesting, forest structure, and/or presence of mesic climate.[1]
Peregrine Falcon (*Falco peregrinus)*	G4, S2B Sensitive (DNRC)	Habitat not present.	Habitat not present.
Fisher (*Martes pennanti*)	G5, S3 Sensitive (DNRC)	Documented use in vicinity. [2]	Habitat present and probable occurrence. [2]
Westslope Cutthroat Trout (*Oncorhynchus clarki lewisi*)	G4T3, S2 Sensitive (DNRC)	Occupied habitat includes Blackfoot River, upper reaches of Stonewall Creek, and Liverpool creek. [1, 4, 6] Occurrence is rare in Stonewall, Park, Liverpool, and Keep Cool Creeks while occurrence is common in Beaver Creek. [9]	Occupied habitat includes Stonewall, Park, and Liverpool Creeks with abundance significantly below potential. [1, 4] Occurrence is rare in Stonewall, Park, Liverpool, and Keep Cool Creeks while occurrence is common in Beaver Creek. [9]

[1] MTNHP 2005a.
[2] Henderson 2005.
[3] McGrath 2005.
[4] TNC 2004a, 2004c, and 2004d.
[5] Shanley 2004.
[6] Pierce 2005.
[7] Lenard 2003.
[8] Clancy 2005.
[9] MFISH 2005b.
[10] See Appendix A for terms and definitions of MTNHP and USFWS rankings.

Table 2 ***Animal TES Species that may Occur in Vicinity of the Proposed Sula Land Exchange Parcels***

Animal Species	2004 MTNHP and other Rankings[11]	Potential or Known Occurrence/Habitat in Vicinity of project area	Potential or Known Occurrence/Habitat in project area
Bald Eagle (*Haliaeetus leucocephalus*)	G4, S3B, S3N Threatened (USFWS)	No known nest, vital roosting, or concentration areas.[1]	No known nest, vital roosting, or concentration areas in or near project area.[1] Immature Bald eagle observed during site visit over Schoolmarm Lake. Use expected to be transitory. [3]
Gray Wolf (*Canis lupus*)	G4, S3 T, XN (USFWS)	Documented wolf activity.[3, 8]	Documented activity of two wolves in parcels.[3, 8] Wolf use currently under investigation by MTFWP. [3, 8]
Grizzly Bear (*Ursus arctos horribilis*)	G4T3T4, S2S3 Threatened (USFWS)	Within distributional range, but outside of Northern Continental Divide Ecosystem (NCDE) recovery area.[1, 3, 8] Documented sighting in 2002/2003 in near confluence of Upper Willow Creek and Rock Creek, at least 10 air-miles northeast of project area.[3, 8]	Habitat present. [3, 8] No documented occurrence in parcels. [3, 8]
Canada Lynx (*Lynx Canadensis)*	G5, S3 Threatened (USFWS)	Within distributional range.[1] Potential denning habitat and foraging habitat for secondary species (ie. red squirrel) occurs in Sections 2, 11, 14 of T 2N and R 19W (within 1-mile NW of project area).[3] Occurrence in upper elevations along the EF Bitterroot Valley.[8]	No documented occurrence; transient occurrence possible No identified potential habitat.
Bull Trout (*Salvelinus confluentus)*	G3, S2 Threatened (USFWS)	East Fork of the Bitterroot is used by bull trout for rearing and migrating. [9] Cameron Creek is habitat.[1] Bull trout occurrence in Cameron Creek is rare.[10]	Habitat for and use by bull trout is unknown.[9]
Black-Backed Woodpecker (*Picoides arcticus*)	G5, S2 Sensitive (DNRC)	Documented occurrences. [3]	Documented occurrence in parcels as a result of the 2000 fires.[3]
Pileated Woodpecker (*Dryocopus pileatus*)	Sensitive (DNRC)	Documented occurrences prior to 2000 burn.[3]	Documented occurrences prior to 2000 burn.[3]
Flammulated Owl (*Otus flammeolus*)	G4, S3B Sensitive (DNRC)	Prior to 2000 fires and salvage logging, some potential habitat identified.	Potential habitat unknown since 2000 fires and salvage logging. No surveys have been conducted.
Peregrine Falcon (*Falco peregrinus)*	G4, S2B Sensitive (DNRC)	Habitat not present.[1]	No habitat.[1]
Fisher (*Martes pennanti*)	G5, S3 Sensitive (DNRC)	No documented occurrences and habitat not present due to 2000 fires.[1, 3]	No documented occurrences and habitat not present due to 2000 fires.[1, 3]
Westslope Cutthroat Trout (*Oncorhynchus clarki lewisi*)	G4T3, S2 Sensitive (DNRC)	Occupied habitat includes Cameron Creek, North Fork, and Doran Creek. [1, 9]	In Cameron Creek, trout are uncommon in Section 27 and abundant in Section 11 and upstream.[1, 9]

[1] MTNHP 2005a.
[2] Henderson 2005.
[3] McGrath 2005.
[4] TNC 2004a, 2004c, and 2004d.
[5] Shanley 2004.
[6] Pierce 2005.
[7] Lenard 2003.
[8] Vore 2005.
[9] Clancy 2005.
[10] MFISH 2005a.
[11] See Appendix A for terms and definitions of MTNHP and USFWS rankings.

3.0 ALTERNATIVES ANALYSIS

3.1 No Action Alternative

3.1.1 Direct and Indirect Effects

3.1.1.1 *Lincoln Lands – General Effects*

Alternative A. No Action Alternative - Under the No Action Alternative, the State of Montana would not exchange State lands located in Sections 15, 16, 21 and 22 of T2N, R19W in Ravalli County of private lands located in Sections 1, 2, 3, 9, and 12 of T14N, R9W in Lewis and Clark County.

Under the No Action Alternative, the Lincoln Lands currently owned by J.R. Miller Ranches, LLC, would be sold back to TNC. The Nature Conservancy would sell the land to private landowners but place a conservation easement on the parcels. A limited number of homes could be built (Sommer 2005). Public access would likely be eliminated as a result of the sale to private parties. Grazing opportunities would be limited to private landowners. Road density, which is already high in many of the parcels, could increase with home development. Road decommissioning or restoration would be unlikely under private ownership.

3.1.1.2 *Sula Lands – General Effects*

Alternative A. No Action Alternative - Under the No Action Alternative, the State of Montana would not exchange State lands located in Sections 15, 16, 21 and 22 of T2N, R19W in Ravalli County of private lands located in Sections 1, 2, 3, 9, and 12 of T14N, R9W in Lewis and Clark County.

Under the No Action Alternative, the Sula Lands would remain under the ownership of the Montana DNRC. These 800 acres would remain as State Trust Land within the Sula State Forest. Management activities typical for the DNRC State Trust Lands would continue.

The DNRC has managed two livestock grazing permits on these parcels. J.R. Miller leases about 650 acres while another private leaseholder has about 120 acres. Because of the 2000 fires and subsequent tree planting, these grazing leases have been deferred, but would most likely be reinstated in the future.

The 2000 fires and subsequent salvage in Parcels 1-3 during 2002 to 2004 will limit future timber harvest on these parcels in the near future. Further timber harvest on Parcels 1-3 would not be anticipated to occur for at least 40 years (DNRC 2005a). DNRC may conduct salvage timber harvest on dead and dying trees within Parcels 4 and 5 (Storer 2005). In all parcels, some commercial thinning may be possible in 40-60 years from the present (DNRC 2005a).

The DNRC would continue to monitor survival and growth of planted tree seedlings and natural regeneration (Storer 2005). Additional tree planting on up to 100 acres where natural regeneration is lacking would most likely be done by the DNRC within Parcels 1-3.

Under the No Action Alternative road Easements 1 – 3 would not be acquired. Road improvement on Easement 3 would not be conducted, unless DNRC requires use of this road for some other purpose. The existing gate at the Miller/DNRC property line on road Easement 3 would remain locked.

3.1.1.3 *Lincoln Lands - Big Game Species*

Under the No Action Alternative, the land would be returned to TNC and would continue to support habitat and populations of mule deer, white-tailed deer, and elk. However, TNC would eventually sell the land to private landholders with conservation easements attached to the properties. Despite the conservation easements and limited degree of home development, negative impacts to big game species would be anticipated. Home development would further fragment the forests and reduce available habitat as homeowners build and landscape with non-native plants and materials. Conflicts between home owners and big game species would increase at a rate higher than if these lands were left as timber producing lands.

Public access would most-likely be eliminated upon the sale to private parties. The number of public-wildlife interactions and hunting mortalities would be reduced under the No Action Alternative.

3.1.1.4 *Sula Lands – Big Game Species*

Under the No Action Alternative, the Sula Lands would remain under the ownership of the Montana DNRC. The Sula Lands would continue to support habitat and large numbers of deer and elk. No changes in public access or hunting activity are anticipated. Management activities typical for the DNRC State Trust Lands would continue.

3.1.1.5 *Bald Eagle*

Under the No Action Alternative, transitory use by the Bald eagle would continue on the Lincoln and Sula Lands, respectively. In the absence of fire and timber harvest, regenerating forest on the Lincoln Lands would continue to mature; thereby, potentially creating future nesting and foraging habitats for the Bald eagle. Potential home development along the large pond in Parcel 1 could discourage use by transitory Bald eagles, though this impact would be very minor.

For the Sula Lands, nesting and foraging habitat would not be expected to improve greatly in the foreseeable future. Thus, no direct or indirect negative effects to the Bald eagle are expected as a result of the No Action Alternative.

3.1.1.6 *Gray Wolf*

Under the No Action Alternative, wolf activity on both Sula and Lincoln Lands would be expected to continue. However, even with limited home development on the Lincoln Lands under conservation easements, there may be a greater potential for conflict between wolves and homeowners, and/or domesticated animals (livestock, horses, dogs, cats, etc.).

On the Sula lands, grazing leases on the DNRC land have been suspended due to impacts by fire and presence of tree planting. It is anticipated that if and when grazing leases are re-instated, potential conflicts between livestock and wolves could occur; though to date none have been identified.

3.1.1.7 *Grizzly Bear*

The Continental Divide Ecosystem (NCDE) Grizzly Bear Recovery Zone encompasses the Lincoln Lands, but does not include the Sula Lands. All of the Sula Lands are considered habitat for grizzly bears, but no use has been documented (McGrath 2005 and Vore 2005). Under the No Action Alternative, the Sula Lands would continue to provide habitat for grizzly bears and potential use by grizzly bear would remain the same.

All 1,458 acres of the Lincoln Lands fall within the Monture Landers Fork Grizzly Bear Management Unit (McGrath 2002). These lands are considered habitat for grizzly bears, and have documented use by grizzly bears (Henderson 2005, TNC 2004a, and TNC 2004c). Near the town of Lincoln, grizzly bears have been trapped and relocated in order to prevent conflicts (Shanley 2004).

Under the No Action Alternative, the Lincoln Lands would be sold with conservation easements to private entities, which would limit the number of homes that could be constructed within each parcel. Although no large-scale developments could occur, even limited home development could discourage bear use and activity and decrease bear habitat through human encroachment, building construction, and presence of domestic animals (livestock, horses, cats, dogs, etc.). Alternatively, home development and elimination of public access could:

- Increase bear use because of increases in attractants, such as garbage, stock feed, pet food, planted fruit trees, and bird feeders; and
- Decrease the number of people recreating on these lands, potentially decreasing human/bear conflicts.

3.1.1.8 *Canada Lynx*

Under the No Action Alternative, both the Lincoln and Sula Lands could continue to serve as linkage habitat and transitory use by lynx could be expected. However, potential transitory use by lynx may be discouraged in areas where human encroachment occurs. No direct or indirect negative effects to the Canada lynx are expected as a result of the No Action Alternative.

3.1.1.9 *Bull Trout*

Under the No Action Alternative, stream habitat conditions on the Lincoln Lands would likely remain unchanged or could deteriorate if streamside land becomes developed by private landowners. Stonewall Creek, Park Creek, Beaver Creek, and Keep Cool Creek would continue to provide habitat or potential habitat and a rare occurrence of bull trout would be expected to continue.

Under the No Action Alternative, it is likely that stream habitat conditions would remain unchanged in vicinity of the Sula Lands.

No direct or indirect negative effects to the bull trout are expected as a result of the No Action Alternative.

3.1.1.10 *Black-backed Woodpecker*

Under the No Action Alternative, Black-backed woodpecker use on the Sula Lands would probably naturally decline as time since the 2000 fires increases. In addition, the DNRC would likely salvage only dead and dying trees in Sula Parcels 4 and 5 in the near future, creating minor impacts to Black-backed woodpeckers by removing alternative food sources.

In the absence of fire and harvest, the Lincoln Lands would continue to provide little habitat for black-backed woodpeckers. No direct or indirect negative effects to the Black-backed woodpecker are expected as a result of the No Action Alternative.

3.1.1.11 *Pileated Woodpecker*

In the absence of fire and harvest, it is anticipated that use by the Pileated Woodpecker would continue to occur in the Lincoln Lands under the No Action Alternative. Pileated woodpecker habitat in the Sula Lands would continue to improve in the long-term future as the forest recovers from the impacts of fire. No direct or indirect negative effects to the Pileated woodpecker are expected as a result of the No Action Alternative.

3.1.1.12 *Flammulated Owl*

Under the No Action Alternative, future potential habitat on both the Sula and Lincoln Lands may continue to develop. No direct or indirect negative effects to the Flammulated owl are expected as a result of the No Action Alternative.

3.1.1.13 *Peregrine Falcon*

Under the No Action Alternative, no future potential Peregrine falcon habitat is anticipated to develop on the Sula and Lincoln Lands. No direct or indirect negative effects to the Peregrine falcon are expected as a result of the No Action Alternative.

3.1.1.14 *Fisher*

Under the No Action Alternative, fisher activity would be anticipated to occur in the Lincoln Lands, whereas future potential habitat may develop over the long-term in the Sula Lands. No direct or indirect negative effects to the fisher are expected as a result of the No Action Alternative.

3.1.1.15 *Westslope Cutthroat Trout*

Under the No Action alternative, it is likely that stream habitat conditions and use by Westslope cutthroat trout would remain unchanged in the Sula Lands.

In vicinity of the Lincoln Lands, Stonewall Creek, Park Creek, Beaver, Keep Cool, Park, and Liverpool Creeks would likely continue to provide habitat or potential habitat for Westslope cutthroat trout. Stream habitat conditions would likely remain unchanged or could deteriorate if streamside land becomes developed by private landowners.

No direct or indirect negative effects to the Westslope cutthroat trout are expected as a result of the No Action Alternative.

3.1.2 Cumulative Effects

3.1.2.1 *Lincoln Lands*

Other projects anticipated within the cumulative effects area for the Lincoln Lands include:

- Continued residential development,
- A Habitat Conservation Plan for TES species, and
- The Blackfoot Community Project.

Residential development within the Lincoln area has escalated in recent years and continues to consume wildlife habitat and pressure TES species. The No Action Alternative, where the Lincoln Lands would transfer to private landowners, would contribute to this trend. However, the amount of development allowed would be limited by conservation easements.

Currently, the DNRC is negotiating with the US Fish and Wildlife Service on a Habitat Conservation Plan that would cover the Lincoln State Forest. Under the No Action Alternative, the Lincoln Lands would not be included within the Habitat Conservation Plan, but the private landowner could voluntarily comply with the provisions of the Habitat Conservation Plan.

The Blackfoot Community project is a partnership between the Blackfoot Challenge (a group of Blackfoot residents) and The Nature Conservancy (TNC) attempting to acquire 88,000 acres of Plum Creek Timberlands in the Blackfoot Watershed for purposes of wildlife habitat conservation, public access retention, and preservation of traditional resource uses. As part of this project, several land exchanges or acquisitions may occur, either into public or private ownership. Any sale into private ownership would have conservation easements attached. The No Action Alternative would not support the goals of the Blackfoot Community Project, which seeks to protect wildlife habitat from development.

For the Lincoln Lands, adverse cumulative effects to TES, fish, or other wildlife species are not anticipated under the No Action Alternative.

3.1.2.2 *Sula Lands*

In the vicinity of the Sula Lands, the DNRC may continue to salvage dead and dying trees affected by the 2000 fires on the Sula State Forest. Under the No Action alternative, the DNRC would likely salvage dead and dying trees in Sula Parcels 4 and 5 in the near future. This could create minor impacts to Black-backed woodpeckers by removing alternative food sources. Salvage timber sales planned for the Bitterroot National Forest near the Sula Lands were determined to have no adverse effects on threatened, endangered or sensitive wildlife species (USDA BNF, 2001). Residential development within Ravalli County has escalated in recent years and continues to consume wildlife habitat and pressure TES species. The No Action Alternative, where the Sula Lands would remain with under State management, would not contribute to this trend.

For the Sula Lands, adverse cumulative effects to TES, fish, or other wildlife species are not anticipated under the No Action Alternative.

3.2 Action Alternative

3.2.1 Direct and Indirect Effects

3.2.1.1 *Lincoln Lands – General Effects*

Alternative B. Proposed Action Alternative – Under the Proposed Action, the State of Montana would exchange State lands located in Sections 15, 16, 21, and 22 of T2N, R19W in Ravalli County for private lands located in Sections 1, 2, 3, 9, and 12 of T14N, R9W in Lewis and Clark County.

For the Lincoln Lands, a transfer to state ownership would link together parcels of state land that are currently isolated, simplifying the management of these lands. DNRC management would take place on the acquired parcels, similar to other lands in the Lincoln State Forest. These activities could include timber sales, changes in grazing leases, road management activities, stream restoration, a potential Habitat Conservation Plan, and weed control.

The State Trust would receive revenue from grazing leases and timber harvest on the Lincoln lands. Grazing leases are expected to increase on the Lincoln lands from 1,042 acres to 1,449 acres (Liane 2005, Kloetzel 2005). The 1,458 acres of Lincoln lands contain 1,440 acres of timber that may be harvestable in 20 or 30 years (DNRC 2005a).

Public access to the Lincoln Lands would be expected to continue. However, by consolidating land parcels, the DNRC would be able to develop a road management plan that integrates with other plans, such as for public access and big game management. Under DNRC management, changes in road closures and road construction could be implemented in the future. No commercial or residential development is planned by the DNRC for the Lincoln Lands at this time. If development is proposed in the future, it would be completed in compliance with the DNRC Real Estate Management Plan (DNRC 2005b), which requires a separate evaluation under MEPA (Montana Environmental Policy Act).

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3.2.1.2 *Sula Lands – General Effects*

Alternative B. Proposed Action Alternative – Under the Proposed Action, the State of Montana would exchange State lands located in Sections 15, 16, 21, and 22 of T2N, R19W in Ravalli County for private lands located in Sections 1, 2, 3, 9, and 12 of T14N, R9W in Lewis and Clark County.

The Proposed Action does not require specific management of the Sula State Lands. However, according to Mark Sommer (2005), future management of the acquired parcels by the SMR is expected to include:

- No subdivisions or sale of the acquired parcels separately from the ranch.
- No hunting by the public would be allowed.
- Continuation of existing grazing and timber harvest practices.
- Fences and gates would be moved to reflect the new land ownership boundary. The current boundary is 6 miles in length, whereas the new boundary would be 5 miles in length, reducing the overall amount of fence by one mile. Existing 7- and 8-strand barb-wire fences would be removed and replaced with more wildlife-friendly 4- or 5-strand barb-wire fences.
- Potential construction of a few ranch-owned residences for ranch guests or management personnel.
- A voluntary donation of a conservation easement on the Sula Lands.
- A voluntary contribution of about $25,000 towards a public access and/or wildlife enhancement project in Ravalli County.

No zoning or development restrictions would be placed on the Sula Lands as a result of the Proposed Action. However, an existing conservation easement on the SMR **limits the amount of development** that can happen on and adjacent to the ranch. Miller cannot grant any road easements through the SMR to adjoining property for the purposes of creating a subdivision on adjacent parcels. Therefore, existing and future owners of SMR are effectively barred from subdividing the Sula Lands, unless access for subdivision and development could be obtained through the Sula State Forest or the Bitterroot National Forest. No vehicle access is available or contemplated through State or Federal lands surrounding the Sula Lands.

Under the Action Alternative, the State would lose grazing leases and future timber revenue on the Sula lands.

3.2.1.3 *Lincoln Lands - Big Game Species*

Under the Action Alternative, consolidation of the Lincoln Lands into state ownership could help preserve big game species habitat (elk, mule deer, white-tailed deer, and moose). Most (1,254 acres) of the Lincoln Lands support calving and serve as wintering range for elk, whereas 433 acres and 193 acres support winter range for white-tailed and mule deer, respectively. Big game populations are healthy, but heavy public use of the area has created problems in controlling access. Under DNRC management, better control on big game species would be possible

(Henderson 2005). By consolidating land parcels into DNRC ownership, a road management plan that integrates with other plans, such as for public access and big game management, could be developed. Under DNRC management, road closures and road construction for timber harvest could be implemented in the future. No commercial or residential development is planned by the DNRC for the Lincoln Lands at this time. If development is proposed in the future, it would be completed in compliance with the DNRC Real Estate Management Plan (DNRC 2005b) which requires a separate evaluation under MEPA (Montana Environmental Policy Act).

3.2.1.4 *Sula Lands - Big Game Species*

Under the Action Alternative, the proposed transfer in ownership from state to private could result in a change of management for deer and elk. Limitations to public access and other proposed management changes are discussed above. The existing conservation easement on the Shining Mountain Ranch property greatly limits access through the ranch to adjoining properties, and therefore prevents subdivision develop on lands adjacent to the ranch. Only limited ranch-related buildings could be constructed on adjacent lands, according to the existing conservation easement. New ranch buildings may displace some of the existing winter range for big game species. However, the number of buildings is expected to be low, and the majority of the Sula Lands are expected to remain undeveloped, preserving existing winter range.

Fences and gates would be moved to reflect the new land ownership. SMR has indicated they would remove some interior fences, overall decreasing the amount of fenced land. To enhance wildlife movement, existing 7- and 8-strand barb-wire fences would be replaced with 4- or 5-strand barb-wire fences along the edge of the Sula Lands. The effectiveness of this mitigation technique would depend on the distance of the wire from the ground surface (Yoakum and others, 1980).

Public hunting access would be lost on the Sula Lands, but the surrounding Sula State Forest and National Forest would remain open to public hunting access. Effects of this management change may include:

- A reduction in the number of big-game killed during the hunting season on the Sula Lands.
- Congregation of animals on the Shining Mountain Ranch, away from public hunting pressure.
- An increase in the size of the big game herds in the French Basin. Big game herds are currently at record levels (Vore 2005).

The Shining Mountain Ranch implements a rest-rotation grazing system with dispersed watering systems, in part due to the recognition that the area is important habitat for big game populations. The Shining Mountain Ranch, up until the 2000 fires, also leased most of these state parcels for grazing. Under the continuation of livestock management, negative impacts to big game would be negligible.

3.2.1.5 *Bald Eagle*

Under the Action Alternative, transitory use by the Bald eagle would be expected to continue on both the Sula and Lincoln Lands. No known Bald eagle nests are located on the Sula and Lincoln Lands. DNRC management of the Lincoln Lands is not expected to adversely affect Bald eagle habitat. Management of the Sula Lands by a private landowner would not impact the Bald eagle, as current habitat conditions are extremely limited. No direct or indirect negative effects to the Bald eagle are expected as a result of the Action Alternative.

3.2.1.6 *Gray Wolf*

Under the Action Alternative, Gray wolf activity would continue to occur on both the Lincoln and Sula Lands. A transfer to state ownership of the Lincoln Lands would partially consolidate existing DNRC land parcels in the Lincoln area. This transfer to state ownership could improve linkage corridors for wolf movement by consolidating land management in the Lincoln area.

A transfer to private ownership of the Sula Lands would enlarge the Shining Mountain Ranch private property along its perimeter. Prior to the fires, the Shining Mountain Ranch leased this DNRC land for cattle grazing. Under the proposed action it is anticipated that pre-fire grazing practices would continue. Although no known wolf/livestock conflicts on the Shining Mountain Ranch property have been identified, potential exists, as wolf activity has been documented on these DNRC parcels.

Under private ownership, potential habitat degradation could come about through building development on the Sula Lands. Although not binding, the Shining Mountain Ranch has indicated a few ranch-owned residences may be built for ranch guests or management personnel. Other large-scale development is not possible under the conservation easement for the Shining Mountain Ranch. The limited home development planned for the Sula Lands may increase the potential for conflict between wolves and homeowners, and/or domesticated animals (livestock, horses, dogs, cats, etc.).

3.2.1.7 *Grizzly Bear*

Under the Action Alternative, a transfer in ownership of the Lincoln Lands would partially consolidate existing DNRC land parcels, improving grizzly bear management. The Lincoln Lands are used by grizzly bears and lie within the grizzly bear recovery zone. The DNRC is expected to implement a Habitat Conservation Plan, providing management direction for the grizzly bear. Continued public access to the Lincoln Lands is expected to maintain the existing level of bear/human interactions. No commercial or residential development is planned by the DNRC for the Lincoln Lands at this time. If development is proposed in the future, it would be completed in compliance with the DNRC Real Estate Management Plan (DNRC 2005b), which requires a separate evaluation under MEPA (Montana Environmental Policy Act).

A transfer to private ownership for the Sula Lands would enlarge the Shining Mountain Ranch property along its perimeter. Although not binding, the intent of the Shining Mountain Ranch management is to continue existing grazing practices on the acquired lands while building a few

ranch-owned buildings for either ranch quests or residents. Building construction could decrease grizzly bear habitat in localized areas; however, grizzly bears have not been documented in the area and any negative impacts would be localized and minor.

3.2.1.8 *Canada Lynx*

Both the Sula and Lincoln Lands do not serve as primary lynx habitat, but may serve as potential linkage habitat between known lynx populations. Under the Action Alternative, a transfer to state ownership for the Lincoln Lands would partially consolidate existing DNRC land parcels, as well as management. This consolidation could improve linkage habitat for lynx moving from a known population north of Highway 200 to a known population south of Highway 200.

A transfer to private ownership of the Sula Lands would enlarge the Shining Mountain Ranch property along its perimeter. Although not binding, the intent of the Shining Mountain Ranch management is to continue existing grazing practices on the acquired lands, while building a few ranch-owned buildings for either ranch quests or residents. Building construction and human activity could discourage potential lynx use in localized areas. However, potential transitory use by the lynx could continue.

Under the Action Alternative, there would be no adverse direct and indirect effects to the Canada lynx on the Sula or Lincoln Lands.

3.2.1.9 *Bull Trout*

Under the Action Alternative, a transfer in ownership of the Lincoln Lands would partially consolidate existing DNRC land parcels, as well as management. In vicinity of the Lincoln Lands, bull trout are known to occur at the mouths of Beaver and Keep Cool Creeks (tributaries to the Blackfoot River) (Pierce 2005). Beaver Creek is historical habitat for bull trout and current use is unknown. Habitat parameters in the vicinity have not been properly assessed, in part due to the mixed ownership. Consolidating ownership could improve bull trout management, making stream habitat assessments more feasible. Under state ownership, better management of roads and access could improve stream conditions.

Adjacent to the Sula Lands, Cameron Creek flows through the central portion of the Shining Mountain Ranch property and is listed as bull trout habitat (MTNHP 2005, MFISH 2005a). However, bull trout have rarely been captured in Cameron Creek (MTNHP 2005, MFISH 2005a). Under the Action Alternative, a transfer in ownership of the Sula Lands would enlarge the Shining Mountain Ranch, which implements a dispersed watering system to discourage livestock grazing in the creek bottoms. Although not binding, the intent of the Shining Mountain Ranch management is to continue existing grazing practices on the acquired lands while building a few ranch-owned buildings for either ranch quests or residents. Building construction could negatively impact fish, their habitat, or water quality if built near stream channels. The severity of such potential impacts would depend upon the size and number of constructed buildings. It is anticipated that constructed buildings would be located outside of stream corridors and that no direct or indirect impacts to bull trout would occur.

Under the Action Alternative, there would be no adverse direct and indirect effects to bull trout on the Sula or Lincoln Lands.

3.2.1.10 *Black-backed Woodpecker*

Under the Action Alternative, Black-backed woodpecker use on the Sula lands would be expected to naturally decline as time since the 2000 fires increases. Under state management and in the absence of fire, the Lincoln Lands would continue to provide little habitat for black-backed woodpeckers. No direct or indirect negative effects to the Black-backed woodpecker would be expected as a result of the Action Alternative.

3.2.1.11 *Pileated Woodpecker*

Under the Action Alternative, it is anticipated that use by the Pileated Woodpecker would continue to occur in the Lincoln Lands under state management and in the absence of fire. Because of the 2000 fires and regardless of ownership, Pileated woodpecker habitat would not be expected to occur on Sula Lands in the foreseeable future. No direct or indirect negative effects to the Pileated woodpecker would be expected as a result of the Action Alternative.

3.2.1.12 *Flammulated Owl*

Under the Action Alternative, future potential habitat on the Sula Lands may continue to slowly develop as the forest regenerates. Parcels adjacent to the Lincoln Lands may contain habitat types conducive to the Flammulated owl, but no occurrence has ever been documented or been suspected (MTNHP 2005). The Lincoln Lands may contain habitat types conducive to Flammulated owls; however, the occurrence of potential habitat would be very limited as the Lincoln Lands have been harvested and may be too mesic for these owls. No direct or indirect negative effects to the Flammulated owl would be expected as a result of the Action Alternative.

3.2.1.13 *Peregrine Falcon*

Under the Action Alternative, no future potential habitat would be anticipated to develop on the Sula and Lincoln Lands. No direct or indirect negative effects to the Peregrine falcon would be expected as a result of the Action Alternative.

3.2.1.14 *Fisher*

Under the Action Alternative and in the absence of development, future potential habitat may develop over the long-term on the Sula Lands. Under transfer to state ownership, habitat and potential use of the Lincoln Lands by fishers would be anticipated to remain. No direct or indirect negative effects to the fisher would be expected as a result of the Action Alternative.

3.2.1.15 *Westslope Cutthroat Trout*

Under the Action Alternative, a transfer to state ownership for the Lincoln Lands would partially consolidate existing DNRC land parcels, as well as management. In vicinity of the Lincoln Lands, Westslope cutthroat trout are known to use Beaver, Keep Cool, Stonewall, Park, and Liverpool Creeks (tributaries to the Blackfoot River) (Pierce 2005, MFISH 2005b); however, abundances are from slightly to significantly below potential (TNC 2004d). Habitat parameters in the vicinity have not been properly assessed, in part due to the mixed ownership (Pierce 2005). Consolidating ownership could improve Westslope cutthroat trout management, making stream habitat assessments more feasible. Under state ownership, better management of roads and access could improve stream conditions.

Cameron Creek flows through the Shining Mountain Ranch and the Sula Lands. Westslope cutthroat trout are abundant in Cameron Creek within and upstream of Section 11, but are uncommon lower down in Section 27. Under private ownership, potential degradation to Westslope cutthroat trout or their habitat could come about through stream corridor activities, such as livestock trampling, land development, de-watering, and road crossings. Although not binding, the intent of the Shining Mountain Ranch management is to maintain grazing practices on the acquired lands and to build a few ranch-owned homes for ranch quests or management personnel. The current conservation easement on the ranch limits access to adjacent lands through the ranch, effectively preventing subdivision development on adjacent lands.

The ranch has implemented a rest-rotation grazing system with a dispersed watering system, in part, to discourage livestock grazing in the creek bottoms. Existing stream crossings on the ranch appeared to be properly designed. The 2000 fires burned through the narrow riparian habitat in Parcels 1-3; however, streambanks appear to have stabilized and native understory vegetation predominates along the perennial and ephemeral stream channels in all parcels.

Building construction could negatively impact fish, their habitat, or water quality if built near stream channels. The severity of such potential impacts would depend upon the size and number of constructed buildings. It is anticipated that constructed buildings would be located outside of stream corridors and that no direct or indirect impacts to Westslope cutthroat trout would occur.

No direct or indirect negative effects to Westslope cutthroat trout are expected as a result of the Action Alternative.

3.2.2 Cumulative Effects

3.2.2.1 *Lincoln Lands*

Other projects anticipated within the cumulative effects area for the Lincoln Lands include:

- Continued residential development,
- A Habitat Conservation Plan for TES species, and
- The Blackfoot Community Project.

Residential development within the Lincoln area has escalated in recent years and continues to consume wildlife habitat and pressure TES species. The Action Alternative, where the Lincoln Lands would transfer from private to State ownership, would not contribute to this trend.

Currently, the DNRC is negotiating with the US Fish and Wildlife Service on a Habitat Conservation Plan that would cover the Lincoln State Forest. Under the Action Alternative, the Lincoln Lands could be included within the Habitat Conservation Plan. This would increase the amount of state land under the proposed HCP; thereby, beneficially protecting habitat for all TES animal species.

The Blackfoot Community project is a partnership between the Blackfoot Challenge (a group of Blackfoot residents) and The Nature Conservancy (TNC) attempting to acquire 88,000 acres of Plum Creek Timberlands in the Blackfoot Watershed for purposes of wildlife habitat conservation, public access retention, and preservation of traditional resource uses. As part of this project, several land exchanges or acquisitions may occur, either into public or private ownership. The Action Alternative would support the goals of the Blackfoot Community Project, which seeks to protect wildlife habitat from development.

For the Lincoln Lands, adverse cumulative effects to TES, fish, or other wildlife species are not anticipated under the Action Alternative.

3.2.2.2 *Sula Lands*

No other state or federal projects in the cumulative effects area are expected to impact wildlife, TES, or fish species.

Residential development within Ravalli County has escalated in recent years and continues to consume wildlife habitat and pressure TES species. The Action Alternative, where the Sula Lands would be placed under private ownership, could contribute to this trend. However, existing conservation easements prohibit access through adjacent private land, essentially limiting the type of development that can occur. No subdivisions or large-scale infill is anticipated as a result of the Proposed Action.

For the Sula Lands, adverse cumulative effects to TES, fish, or other wildlife species are not anticipated under the Action Alternative.

4.0 SUMMARY

A comparison of wildlife and fish impacts under both alternatives is presented in **Table 3.** Resource parameters are discussed after the table in **Sections 4.1 – 4.6.**

Table 3. ***Comparison of Alternatives A and B – Wildlife and Fish***

Resource Parameters	**Alternative A – No Action.** (Sula Lands remain in State Ownership; Lincoln Lands to new private owners)	**Alternative B – Proposed Action.** (Sula Lands convert to private ownership; Lincoln Lands convert to State ownership)
Amount of State Trust Lands	Lincoln Lands: 0 acres Trust Lands. Sula Lands: 800 acres Trust Lands.	Lincoln Lands: 1,458 acres Trust Lands. Sula Lands: 0 acres Trust Lands.
Lands open to public access	Lincoln Lands: 0 acres public access. Sula Lands: 800 acres public access (walk-in only)	Lincoln Lands: 1,458 acres public access (both walk-in and motorized) Sula Lands: 0 acres public access (walk-through easement on Parcel 3 only).
Hunting opportunities	Lincoln Lands: Hunting at discretion of private landowners. Sula Lands: Continued public hunting.	Lincoln Lands: Continued public hunting. Sula Lands: Hunting not allowed by Miller.
Big game	Lincoln Lands: Big-game hunting at discretion of private landowners. Possibility of animal congregation on private land. Sula Lands: Continued public hunting. No changes in big game management planned.	Lincoln Lands: Continued public hunting. No changes in big game management planned. Sula Lands: Public hunting not allowed by Miller. Possibility of animal congregation on private land. Fewer big game mortalities expected on Sula Lands.
Canada lynx, Black-backed woodpecker, Pileated woodpecker, Flammulated owl, Peregrine falcon, Fisher	Lincoln Lands and Sula Lands: No direct or indirect impacts expected.	Lincoln Lands and Sula Lands: No direct or indirect impacts expected.
Gray wolf	Lincoln Lands: Wolves transient residents. Possible wolf/livestock conflicts (but none to date). Possible increase in wolf/private landowner conflicts. Sula Lands: Wolves resident. Possible wolf/livestock conflicts (but none to date).	Lincoln Lands: Wolves transient residents. Possible wolf/livestock conflicts (but none to date). Sula Lands: Wolves resident. Possible wolf/livestock conflicts (but none to date). Possible increase in wolf/private landowner conflicts.
Grizzly bears	Lincoln Lands: Grizzly bears transient residents. Possible construction of ranch buildings may decrease potential habitat. Possible increase in bear/private landowner conflicts, but decrease in public/bear conflicts. Sula Lands: Grizzly bears not present. No changes in management.	Lincoln Lands: Grizzly bears transient residents. Continued public use and continued potential for bear/human conflicts. Management of bear consolidated within Lincoln State Forest. Sula Lands: Grizzly bears not present. Possible construction of ranch buildings may decrease potential habitat.
West-slope cutthroat trout and Bull trout	Lincoln Lands: Stream habitat under private ownership, fragmenting management. Sula Lands: Stream habitat remains under DNRC management.	Lincoln Lands: Stream habitat management further consolidated within DNRC Lincoln State Forest. Sula Lands: Stream habitat under private ownership, consolidated under SMR.
Habitat Conservation Plans (HCP) for Threatened and Endangered Species	Lincoln Lands: HCP voluntary for private landowner. Sula Lands: No current HCP commitment.	Lincoln Lands: State may enter HCP for threatened and endangered species. Sula Lands: No HCP planned.
Fencing (a potential limit to wildlife movement)	Lincoln Lands: Fencing at the discretion of private landowners. Sula Lands: No changes in fencing planned by State.	Lincoln Lands: No changes in fencing contemplated by DNRC. Sula Lands: Existing 7- and 8-strand fences replaced with 4- or 5-strand fences.

4.1 Hunting

Hunting opportunities and impacts to wildlife from hunting would change from the Action and No Action Alternatives. Under the No Action Alternative, hunting would continue along historic trends within the Sula Lands, but historic trends in hunting would likely be altered in the Lincoln Lands. Private landowners would govern hunting activities on the Lincoln Lands under the No Action Alternative.

Public hunting under the Action Alternative would be prohibited within the Sula Lands, but would continue on the Lincoln Lands. Limitations on public hunting on the Sula Lands may encourage big game to congregate there during hunting season.

4.2 Wolves

Under the Action and No Action Alternatives, wolf activity on both Sula and Lincoln Lands is expected to continue. Under the No Action Alternative, limited home development on the Lincoln Lands may increase the potential for conflict between wolves and homeowners, and/or domesticated animals (livestock, horses, dogs, cats, etc.). Existing grazing practices on the Sula Lands would continue and the potential for wolf/livestock conflicts would remain the same as existing conditions.

Under the Action Alternative, a transfer of Lincoln Lands to state ownership could improve linkage corridors for wolf movement by consolidating land management in the Lincoln area. Grazing practices would continue under the Action Alternative on the Sula Lands and the potential for wolf/livestock conflicts would remain. Limited home development on the Sula Lands may increase the potential for conflict between wolves and homeowners, and/or domesticated animals (livestock, horses, dogs, cats, etc.).

4.3 Grizzly Bear

Under the No Action Alternative, the Sula Lands would continue to provide habitat for grizzly bears and potential use by grizzly bear would remain the same. All of the Lincoln Lands are considered habitat for grizzly bears, and have documented use by grizzly bears. Under the No Action Alternative, the Lincoln Lands would be sold with conservation easements to private entities and a limited number of homes could be constructed. Human-bear conflicts increase if home development occurs, but if public access is no longer available on the Lincoln Lands, the number of people recreating on these lands would decrease, potentially decreasing human/bear conflicts.

Under the Action Alternative, a transfer in ownership of the Lincoln Lands would partially consolidate DNRC land parcels, improving grizzly bear management. The DNRC is expected to implement a Habitat Conservation Plan, providing management direction for the grizzly bear. Continued public access to the Lincoln Lands is expected to maintain the existing level of bear/human interactions. The Sula Lands would transfer to private ownership, where grazing practices are expected to continue and limited number of guest houses or ranch buildings may be constructed. Building construction could decrease grizzly bear habitat in localized areas;

however, grizzly bears have not been documented in the area and any negative impacts would be localized and minor.

4.4 Westslope Cutthroat and Bull Trout

Under the No Action Alternative, stream habitat conditions on the Lincoln Lands would likely remain unchanged or could deteriorate if streamside land becomes developed by private landowners. Stonewall Creek, Park Creek, Beaver Creek, and Keep Cool Creek would continue to provide habitat or potential habitat would be expected to continue. For the Sula Lands, it is likely that stream habitat conditions would remain unchanged under the No Action Alternative.

Under the Action Alternative, a transfer in ownership of the Lincoln Lands would partially consolidate existing DNRC land parcels, as well as management. Consolidating ownership could improve trout management, making stream habitat assessments more feasible. Under the Action Alternative, grazing would continue on the Sula Lands and a limited number of homes could be built. Existing grazing practices that discourage livestock impacts on streams are expected to continue. It is anticipated that constructed buildings would be located outside of stream corridors and that no direct or indirect impacts to trout would occur.

4.5 Other TES Species

For the Canada lynx, Black-backed woodpecker, Pileated woodpecker, Flammulated owl, Peregrine falcon, Fisher on the Sula and Lincoln Lands, no adverse impacts have been identified under the Action and No Action Alternatives.

4.6 Cumulative Effects to Wildlife and Fish

4.6.1 Effects of Development

Residential development within the Lincoln and Sula areas has escalated in recent years and continues to consume wildlife habitat and pressure TES species. The No Action Alternative, where Lincoln Lands would convert to individual private owners, would contribute to this trend within Lewis and Clark County. The Action Alternative, where the Sula Lands would transfer from State to private ownership, would contribute to this trend within Ravalli County. No development or home site leases are planned for the Lincoln Lands under DNRC management. If developments are planned in the future, they would be completed in compliance with the Real Estate Management Plan (DNRC 2005b), which requires a separate evaluation under MEPA (Montana Environmental Policy Act).

4.6.2 Habitat Conservation Plan

Currently, the DNRC is negotiating with the US Fish and Wildlife Service on a Habitat Conservation Plan that would cover the Lincoln and Sula State Forests. Under the No Action Alternative, the Lincoln Lands may not be included within the HCP; compliance with the HCP by private landowners would be on a voluntary basis. Under the Action Alternative, the Lincoln Lands could be included within the Habitat Conservation Plan. This would increase the amount

of State land under the proposed HCP; thereby potentially protecting habitat for grizzly bears, West-slope cutthroat trout, and Bull trout.

4.6.3 Blackfoot Community Project

The Blackfoot Community Project (BCP) is attempting to acquire 88,000 acres of Plum Creek Timberlands in the Blackfoot Watershed for purposes of wildlife habitat conservation, public access retention, and preservation of traditional resource uses. As part of the BCP, several land exchanges or acquisitions may occur, either into public or private ownership. The No Action Alternative would not support the goals of the BCP, whereas the Action Alternative would support the goals of the BCP.

4.6.4 Other Land Exchanges

Several other land exchanges are planned in Ravalli County that would increase the amount of State land managed for wildlife, recreation, timber, and grazing. The amount of wildlife habitat within Ravalli County managed by the State would increase because of these exchanges, regardless of the Action and No Action Alternatives.

4.6.5 TES Species

For the Lincoln and Sula Lands, adverse cumulative effects to threatened, endangered, or sensitive species are not anticipated under the No Action or Action Alternative.

5.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

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Andrea Pipp
Land & Water Consulting, A Division of PBSJ

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Appendix A

MTNHP AND USFWS DEFINITIONS FOR SPECIES' RANKINGS

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TERMS AND DEFINITIONS

Montana Natural Heritage Program (MTNHP) Species of Special Concern*

The term "species of special concern" includes taxa that are rare, endemic, disjunct, threatened, or endangered throughout their range or in Montana, vulnerable to extirpation from Montana, or in need of further research. The term also encompasses species that have a special designation by organizations or land management agencies in Montana, including: Bureau of Land Management Special Status and Watch species; U.S. Forest Service Sensitive and Watch species; U.S. Fish and Wildlife Service Threatened, Endangered, and Candidate species.

Heritage Program Ranks*

The international network of Natural heritage Programs employs a standardized ranking system to denote **global** (range-wide) and **state** status (NatureServe 2003). Species are assigned numeric ranks ranging from 1 (critically imperiled) to 5 (demonstrably secure), reflecting the relative degree to which they are "at-risk". A number of factors are considered in assigning ranks: the number, size, and distribution of known "occurrences" or populations, population trends (if known), habitat sensitivity, species' life history, and threat.

RANK	DEFINITION
G1 S1	Critically imperiled because of extreme rarity and/or factors making it highly vulnerable to extinction.
G2 S2	Imperiled because of rarity and/or other factors making it vulnerable to extinction.
G3 S3	Either very rare or local throughout its range, or found locally (even abundantly at some of its locations) in a restricted range, or vulnerable to extinction throughout its range because of other factors.
G4 S4	Apparently secure, though it may be quite rare in parts of its range, especially at the periphery.
G5 S5	Demonstrably secure, though it may be quite rare in parts of its range, especially at the periphery.
GU SU	Possibly imperiled, but status uncertain; more information needed.
GA SA	Rating specific to plants: Native in nearby states, but in Montana believed to be accidentally introduced, deliberately planted, or escaped from plantings.
GH SH	Historical, known only from records over 50 years ago; may be rediscovered.
GX SX	Believed to be extinct; historical records only.
G#G# S#S#	Indicates a range of uncertainty about the rarity of the species.

Other Codes Specific to Plant or Animal Taxa.

CODE	DEFINITION
B	A state rank modifier indicating breeding status for a migratory animal species. Example: S1B, SZN – breeding occurrences for the species are ranked S1 (critically imperiled) in the state, nonbreeding occurrences are not ranked in the state.
E	A state rank modifier indicating a non-native or exotic animal species.
F	A state rank modifier indicating a false report of an animal species.
HYB	Plants that are recurrent hybrids.
M	A state rank modifier indicating migratory stopover status for an animal species. Example S1M – migratory stopover sties are ranked S1 (critically imperiled) in the state.
N	A state rank modifier indicating non-breeding/wintering status for an animal species. Example: S1B, SZN – breeding occurrences for the species are ranked S1 (critically imperiled) in the state, nonbreeding occurrences are not ranked in the state.
Q	Taxonomic questions or problems involved, more information needed; appended to the global rank.
R	Animal species is reported in the state, but lacking documentation that would provide a basis for either accepting or rejecting the report.
SA	Plants native in nearby states, but in Montana believed to be accidentally introduced, deliberately planted, or escaped from plantings.
SR	Plants reported within the state but the documentation has not been confirmed/verified.
T	Rank for a subspecific plant or animal taxon (subspecies, variety, or population); appended to the global rank for the full species.
?	Inexact or uncertain. For numeric ranks, denotes inexactness.

FEDERAL STATUS CODES

U.S. Fish and Wildlife Service (USFWS)*

The symbols below denote the categories defined by the U.S. Fish and Wildlife Service and indicate the status of a taxon under the federal Endangered Species Act of 1973 (16 U.S.C.A. § 1531-1543 (Supp. 1996)).

CODE	DEFINED CATEGORY
E	Listed endangered
T	Listed threatened
PE	Proposed endangered
PT	Proposed threatened
C	Candidate (those species for which the USFWS has sufficient information on biological status and threats to propose to list them as threatened or endangered).

* Montana Natural Heritage Program (MTNHP). 2004. *Montana Animal Species of Concern*. Montana Natural Heritage Program and Montana Fish, Wildlife, and Parks, Helena, Montana. 11 pp.