APPENDIX D - WILDLIFE BIOLOGICAL EVALUATION

Biological Evaluation
For
Monument EIS
Malheur National Forest
Prairie City Ranger District

Terrestrial Wildlife Species Analysis

Malheur National Forest
Prairie City Ranger District

Reviewed By _____ 02/24/2004
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Summary of Effects Determinations

Species[1]	Alternative 1 No Action	Alternative 2 Proposed Action	Alternative 3	Alternative 4	Alternative 5
Gray Wolf (T) (Canus lupus)	NE	NE	NE	NE	NE
Canada Lynx (T) (Lynx canadensis)	NE	NE	NE	NE	NE
Western Sage Grouse (S) (Centrocercus urophasianus)	NI	NI	NI	NI	NI
Gray Flycatcher (S) (Empidonax wrightii)	NI	MIIH	MIIH	MIIH	NI
California Wolverine (S) (Gulo gulo luteus)	NI	MIIH	MIIH	MIIH	NI
Pacific Fisher (S) (Martes pennanti)	NI	MIIH	MIIH	MIIH	NI

Notes 1) P = *Proposed,* E = *Endangered,* T = *Threatened,* S = *Sensitive*

2) MIIH = may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species; NI = no impact; NE = no effect.

I. Introduction

This BE is prepared in satisfying the requirements of Forest Service Manual 2672.4 that requires the Forest Service to review all its planned, funded, executed or permitted programs and activities for possible effects on proposed, endangered, threatened or sensitive species. The BE process is intended to review the Monument Fire Recovery project in sufficient detail to determine effects of the alternatives on species in this evaluation and to ensure that proposed management actions would not:

1) likely jeopardize the continued existence, or cause adverse modification of habitat, for a species that is proposed (P) or listed as endangered (E) or threatened (T) by the USDI Fish and Wildlife Service or NOAA National Marine Fisheries Service;

or

2) contribute to the loss of viability for species listed as sensitive (S) by USDA Forest Service, Region 6, or any native or desired, non-native species; nor cause any species to move toward federal listing (FSM 2672.4).

The Monument Fire Recovery Project is approximately 8,588 acres within the 24,525-acre Monument Fire of 2002. The project proposes to reduce fuel loads, capture economic value through salvage logging, thin, plant conifers, close, decommission and maintain roads, and designate new dedicated old growth stands. A full description of activities is within Chapter 1 and 2 of the FEIS.

II. Proposed Action and Alternatives Considered

See Chapter 2 description and Chapter 3 description in the Monument Fire Recovery Project final FEIS.

III. Effects on Wildlife Species

A. Prefield Review

The following sources were used during the pre-field review phase to determine the presence or absence of PETS species or their habitats in the Monument project area:

1. Malheur N.F. and Prairie City R.D. GIS databases
2. Regional Forester's (R6) sensitive animal list (1989, updated 11/28/00)
3. ODFW reports
4. Oregon Natural Heritage Program (ORNHP) Rare, Threatened and Endangered Plants and Animals database.
5. Natural Heritage Conservation database (Biosource).

Based on information reviewed during the pre-field review, four sensitive and one federally listed or candidate species of the ten present or suspected on the Forest are present or suspected in the watershed (Tables 1 and 2). Only those species known or suspected to occur or species that have known or potential habitat in the area of influence will be discussed in this biological evaluation.

Table 1. Federally listed species present or suspected in the project area of influence.

Species	Status	Species or Habitat Present In Project Area
Gray Wolf (*Canus lupis*)	Threatened	No
Canada Lynx (*Lynx Canadensis*)	Threatened	Suspected

Table 2. Region 6 sensitive species present or suspected in the project area of influence.

Species	Species or Habitat Present In Planning Area
Western Sage Grouse	Habitat Present
Gray Flycatcher	Suspected
California Wolverine	Suspected
Pacific Fisher	Suspected

B. Proposed, Threatened, and Endangered Wildlife Species

Gray wolf (Threatened)

Distribution

Oregon: Considered extirpated from the State of Oregon. Dispersing individuals from Idaho's experimental population have entered the State.
Malheur National Forest: Considered extirpated from the State of Oregon, however, dispersing individuals have been confirmed on the Forest.
Project Area: No sightings are recorded for the gray wolf in the project area.

Life History and Habitat

Gray wolves are generally described as pack animals. This allows the wolf to effectively hunt larger ungulates it preys upon. Packs consist of varying numbers of individuals. Anywhere from 2-9 individuals may occur. Evidence suggests that availability of food and competition (both intra and inter-specific) for prey influences pack size. Usually, only two individuals within the pack, the alpha (dominant) male and alpha female will mate and produce young. The entire pack contributes to the raising of the litter, including providing food and the "play" that occurs which develops social interactions of the young.

Habitat requirements for the gray wolf are relatively non-descript. Other than isolated denning habitat, free from disturbance by humans or other competing predators, there are few other habitat condition requirements for this species. The availability of prey is likely the most important "habitat" indicator for this species. Gray wolves feed extensively upon large ungulates, including moose, Rocky Mountain elk, and whitetail and mule deer. Seasonally, rodents, such as field mice, are also important prey/forage sources. The location and seasonal movements of the prey they seek often directly influence gray wolf daily and seasonal movements.

The only other real habitat requirement would revolve around the seclusion of gray wolves and associated packs from human disturbances and activity. The greatest threat to individual gray wolves and packs is the adverse interaction between humans and those wolves. Individual wolves and wolf packs are known to prey upon livestock when available, creating an adverse situation for the offending wolf, a situation that could potentially lead to the death of that individual or pack. Other interactions can equally lead to adverse consequences for wolves. Highway systems, railroad systems, human developments, etc. all pose threats to individual wolves and wolf packs.

Source Habitat Trend

Source habitats span a broad elevational range and include all terrestrial community groups except exotic herblands and agricultural (Wisdom et al. 2000).

Source habitats for gray wolf likely occurred throughout the basin historically. The current extent of habitat, albeit largely unoccupied, is similar to the historic distribution except for the Columbia Plateau, Lower Clark Fork, and Upper Clark Fork Ecological Reporting Units, where habitat is more patchily distributed than it was historically. The overall trend in source habitats is neutral.

Affected Environment

The gray wolf historically occupied habitats within the State of Oregon and likely on the Malheur National Forest (Wisdom et al., 2000). Currently, the State of Oregon considers them extirpated from the State. Suitable habitat exists within the State and all of the Monument Project area. Within the project area, primary limiting factors include availability of secluded sites for denning, protection of disturbances and mortalities associated with man, and the abundance of large ungulates as a primary prey source.

In 1999, a collared gray wolf (B-45) was discovered on the Malheur National Forest by monitoring crews working with the experimental, non-essential wolf populations located in Idaho. The individual (a younger female) remained on the forest until it was removed later that spring by United States Fish and Wildlife Service (USFWS) and Oregon Department of Fish and Wildlife (ODFW) officials and returned to the population area in Idaho. Two additional wolves have occupied habitat in the Blue Mountains since that time. It is anticipated that population expansion in Idaho will result in continued dispersal of individual wolves into northeastern Oregon.

The gray wolf was recently down-listed to Threatened in the winter of 2003.

Environmental Consequences

Direct, Indirect and Cumulative Effects

Limiting factors for wolves involve the availability of prey (primarily large ungulates) and adverse interactions with humans. Generally, habitat management actions are compatible with wolf presence, particularly those that enhance prey availability. Human interactions are a concern, particularly around denning and rendezvous sites. Potential habitat exists within the project area. However, it is considered unoccupied. Activities proposed would not preclude future wolf occupation of this habitat. Wild ungulate populations would be maintained and potentially enhanced with the effects of the fire and the other actions that may benefit wild ungulates. Road closures proposed would reduce potential wolf-human conflicts in portions of the project area. Adjacency to the Monument Rock Wilderness enhances habitat suitability through the availability of remote, roadless areas further reducing potential for wolf-human interactions that may be detrimental.

Following a review of the activities listed in the past, ongoing, and foreseeable activities list for the Monument Project there will be no direct, indirect or cumulative effects anticipated with any of the alternatives proposed.

Determination

A **No Effect** determination is reached for the activities proposed in the FEIS. The activities would have no effect upon the gray wolf for the following reasons:

- No populations currently occupy the Malheur National Forest;
- No denning or rendezvous sites are identified on the Malheur National Forest;
- Prey availability is considered abundant and not a limiting factor for presence or habitat occupation and would not be reduced by the activities proposed.

Canada Lynx (Threatened)

Distribution

Oregon: The Canada lynx is considered extirpated from the State of Oregon.
Malheur National Forest: The Canada lynx is suspected on the Malheur National Forest. Although lynx are not confirmed on the Forest, sightings have been reported.
Project Area: One sighting was reported near the southern boundary of the project area.

Life History and Habitat

The Canada lynx is considered a solitary animal, staking out individual territories that range from 10-15 square miles in size. These territories often overlap, particularly between sexes. Following mating, females will retreat to their home ranges and give birth and raise young on their own. Young will usually spend the first year with their mother before dispersing and establishing territories of their own.

The Canada lynx typically inhabits higher elevation boreal or boreal-like forests. Snow depth works to the advantage of this species, as it is adapted to living in deep, soft snow conditions. Prey species is composed primarily of snowshoe hare, though the species will also prey upon other species such as the ruffed grouse, red squirrels, other leporidae species (rabbits and hares), and other rodents. Habitat use is primarily influenced by its primary prey species. Lynx typically spend most of their time associated with the early successional lodgepole pine thickets and hardwood thickets that are heavily used by snowshoe hares. Denning habitats, typically late successional conifer forest (subalpine fir types are most commonly used in the Northern Rocky Mountains zone), with high densities of down wood material, are used for denning purposes. The relative amount of time spent in these habitats is small.

Source Habitat Trend

Basin-wide source habitat was projected to have increased moderately or strongly in 47 percent of the watersheds. The Blue Mountain Ecological Reporting Unit has undergone a positive absolute (+26.93%) and relative (>100%) change in source habitat availability (moderate or strong increases in more than 50% of the watersheds). An increase in Blue Mountains source (denning) habitat was most influenced by an increase in mid- to late-seral montane forest and mid-seral subalpine forests (Wisdom et al., 2000).

Affected Environment

Lynx habitat within the Glacier LAU was reduced by 16% due to the High Roberts and Monument Fires in 2002. A summary of the fire's effects can be found in the project file. None of the activities proposed would occur within identified denning or foraging lynx habitat and will not decrease lynx habitat from its current amount (see Figures 1 and 2). Information from two sources, which represent the latest science information about lynx

habitat and ecology, were utilized in the identification of lynx habitat and evaluation of this project.[1]

Lynx habitat is characterized by higher elevation mixed conifer forests that contain key elements that promote and maintain high populations of their primary prey source, the snowshoe hare. Early seral lodgepole pine habitats provide the primary habitat for the snowshoe hare, and thus the lynx, during winter months (Ruggerio et al., 1999; Ruediger et al., 2000). Riparian and other hardwood producing habitats make up much of their summer habitat. In addition to quality foraging areas, isolated denning sites, which contain an abundance of down wood or other denning site substrate is also important (Ruggerio et al., 1999; Ruediger et al., 2000). Jack-strawed lodgepole pine and/or abundant large wood habitats provide excellent denning sites and protection from potential predators. Relatively dense canopy closures are also favored habitat components in denning areas (Ruggerio et al., 1999). Lynx territories can be relatively large and individuals will travel extensively in search of food or mating interactions (Ruediger et al., 2000).

The Forest participated in the national lynx surveys from 1999 through 2001. No lynx were documented on the Forest during the survey. Areas surveyed included within and adjacent to the Monument Rock Wilderness. Unconfirmed lynx sightings have been reported on and adjacent to the Malheur National Forest. The nearest documented sighting to the project area occurred in October of 1992 when a lynx was reported just south of the project area along Anderson Creek. Following this sighting a lynx was trapped near Drewsey in January of 1993. These individuals are likely to have been dispersing from reproducing populations in Washington or Idaho. It is more likely that sightings on the District represent individuals traveling through the area rather than a reproducing population. Presence of lynx on the Malheur National Forest, and in or adjacent to the Monument Rock Wilderness, is suspected.

Environmental Consequences

Direct, Indirect and Cumulative Effects

There are no proposed activities under any of the action alternatives that would occur in stands with vegetation meeting the definition of lynx habitat. The closest suitable habitat is ¼ mile away from areas with proposed activities.

The activities proposed in each of the alternatives would not affect vegetation meeting the definition of lynx habitat, individual lynx, populations, or dispersal habitat that would limit lynx movements. Activities are south and east of potential dispersal corridors. Harvest will not decrease potential denning, foraging or dispersal habitat. Regrowth in some units will provide foraging habitat for snowshoe hares. Harvest activities will not affect this future habitat or prey for lynx. There would be no direct, indirect, or cumulative effects to the Canada lynx. Cumulatively, the actions as listed in the past, ongoing and foreseeable activities list for the Monument Project were considered and would not alter vegetation meeting the definition of lynx habitat. Harvest on the Wallowa-Whitman Forest within the Monument Fire area will not reduce total suitable habitat for lynx. Most of the habitat within the W-W portion was considered unsuitable/non-habitat before the fire (Wallowa-Whitman DEIS, 2003). Road closures, both on the Prairie City RD and the Wallowa-Whitman N.F. portion of the fire area would reduce potential disturbance from vehicle traffic.

[1] Those sources of information include the Lynx Conservation Assessment and Strategy (LCAS) (Ruediger et al., 2000) and the Ecology and Conservation of Lynx in the United States (Ruggerio et al., 1999).

Determination

A **No Effect** determination is reached for the activities proposed in the FEIS. The activities would have no effect upon the Canada lynx for the following reasons:

- Activities proposed do not occur within vegetation meeting the definition of lynx habitat;
- Activities proposed would not adversely affect potential dispersal habitats or corridors that would allow individual movements and dispersal between vegetation meeting the definition of habitat.

C. Region 6 Sensitive Wildlife Species

Forest Service regulations direct the identification of sensitive species by the Regional Forester (FSM 2670). Species identified, are those whose population viabilities are of concern. General direction is to ensure federal activities do not contribute to the listing of those species identified on the Regional Forester's sensitive species list.

Ten species on the Regional Forester's sensitive species list are documented or suspected to occur on the Malheur National Forest. These species are fully addressed in the Biological Evaluation accompanying the DEIS as an appendices. Please see that document for further information and detailed analysis of effects.

Western Sage Grouse

Distribution

Oregon: The western sage grouse historically occurred through out central and eastern Oregon inhabiting the abundant sagebrush steppe habitats that were present. Agriculture, urban and rural development and the over all conversion of those sagebrush steppe habitats to unsuitable conditions has restricted their range to the south central and south east regions of the State, where the sagebrush steppe habitats are still intact. Estimated populations approach 20,000 birds in the State.

Malheur National Forest: Distribution on the Malheur National Forest is limited to the Prairie City and Emigrant Creek Ranger Districts, with occasional presence on the Blue Mountain Ranger District associated with populations in Bear Valley. Sagebrush steppe habitat on the southern end of the Malheur National Forest supports seasonal use by this species, mostly associated with the raising broods of young birds.

Project Area: Limited habitat is available in the project area, in small, dispersed patches. Herblands/Shrublands and Woodlands, of which the sagebrush plant associations are included in, make up less than 8% of the project area. No sighting records for the project area exist.

Life History and Habitat

The western sage grouse is considered a sagebrush obligate, due to its reliance upon sagebrush habitat for nearly all of its survival needs. Sagebrush habitat provides nesting cover, security cover from predators and is an important forage source year round for this species (USDA, 2001). The greater sage grouse is known to have extensive home ranges, covering thousands to hundreds of thousands of square acres of habitat used through the year (USDA, 2001; USDI, 2000). Populations that exhibit such large home ranges usually demonstrate seasonality in the use of those habitats, with specific areas that are used as

mating/lekking habitat, nesting habitat, brood rearing habitat and wintering habitat, with many of these habitat "components" separated by distances that may exceed 45 miles (USDI, 2000). With these unique habitats, there are specific habitat requirements somewhat specific to their use. The presence of sagebrush is a common denominator. However, differences in canopy densities, presence of different forage species, adjacency to water, etc., play important roles in how each is used (USDA, 2001; USDI, 2000).

Informal communications with biologists from ODFW have indicated that within the analysis area, the sagebrush shrubland habitat, as well as the shrubland component in the juniper woodland habitats, is used primarily as a brooding area for females and their offspring. These birds come up from lower elevation areas located to the south of the analysis area where breeding and nesting activity occurs. Lekking activity has not been identified within the analysis area (Garner, 1998). As such, habitat components important to brooding females and offspring are desirable for the sagebrush shrubland habitats of the analysis area. Brooding females and offspring feed heavily upon specific forbs (dandelion, legumes, yarrow, wild lettuce, Hawk's beard), as well as insects (specifically beetles and ants) (USDA, 2001; USDI, 2000; Fischer et al., 1996). Such habitats are often closely associated with and/or contain riparian/wet meadow habitats which provide a mesic habitat condition later into the warm summer months, providing for lush herbaceous growth and abundant insects (USDI, 2000). Management of sagebrush shrublands to provide optimal brooding habitat for the sage grouse in these areas should be managed for a condition that provides an abundance of these forage sources as well as sufficient sagebrush cover to provide cover from predators (USDA, 2001; USDI, 2000; Fischer et al., 1996).

Source Habitat Trend

The current extent of habitat is similar to the historic distribution, although the abundance of habitat has changed in some areas. Basin-wide, nearly 48 percent of the watersheds showed a moderate or strongly declining trend in habitat, and declines exceeded increases in every ERU. The Blue Mountains ERU has undergone a negative absolute (-11.73% and -12.70%) and relative (-30.14% and -32.78%) change in winter and summer source habitat availability (Wisdom et al. 2000).

Affected Environment

The western sage grouse inhabits the sagebrush steppe habitat of the Interior Columbia Basin and Great Basin regions. All aspects of the species ecology, including breeding and nesting habitat, forage, and winter range/migrational habitat are closely tied to sagebrush habitats. The species is documented on the Prairie City Ranger District. Limited sagebrush habitat exists within the project area, primarily near the Little Malheur River. Habitat is marginal at best, as the individual patches are small and intermixed with ponderosa pine and juniper stringers and patches. The species has not been sighted in the project area.

Environmental Consequences

Direct, Indirect, and Cumulative Effects

Habitat for this species may occur within the project area, though it is likely poorer quality habitat due to the small size of patches of desirable habitat in the project area. Activities proposed will not occur within suitable habitats for the species. The list of activities in the past, ongoing, and foreseeable activities list for the Monument Project will not alter sage grouse habitat. There would be no direct, indirect or cumulative effects of the actions

proposed in the alternatives due to lack of occurrence of activities in suitable habitat. Following a review of the activities listed in the Past, Ongoing and Foreseeable Activities list for the Monument Project there will be no direct, indirect or cumulative effects anticipated with any of the alternatives proposed.

Determination

A **No Impact** determination has been reached for this species based upon the lack of activities occurring within any suitable habitat in the project area for any of the alternatives proposed.

Gray Flycatcher

Distribution
Oregon: The gray flycatcher is distributed throughout eastern Oregon, strongly associated with the dry shrub steppe and juniper woodland habitats of eastern Oregon.
Malheur National Forest: The species is unconfirmed on the Malheur National Forest, however, due to the presence of suitable habitat, is suspected on the Forest.
Project Area: Suitable habitat for the species exists in the project area, however presence has not been confirmed.

Life History and Habitat
The gray flycatcher is commonly associated with dry woodland and shrub-steppe habitats in the interior western states (Sterling, 1999). This species will nest within ponderosa pine, juniper, and large shrubs in this dry habitat. Foraging behavior involves the capture of insects in and around shrub habitat. This species is suspected to occur on the Malheur National Forest. Documentation of presence may be more of an identification issue than whether or not the species is truly present. This species is difficult to identify and differentiate from other empidonax species, such as the dusky flycatcher.

Affected Environment
Habitat for this species likely exists within the project area, particularly in the lower elevation woodlands and juniper habitats on the south end of the project area near the Little Malheur River. There are about 52 acres of juniper woodlands in the project area that would be considered potential habitat.

Population Status and Trend
North American BBS (Breeding Bird Survey) shows a survey-wide significantly increasing trend of 10.2 percent average per year (n = 89) during the 1966-1996 sample period; a nonsignificant decline of -1.0 percent average per year (n = 22) during 1966-1979; and a significant increase from 1980 to 1996 of 10.0 percent average per year (n = 84) (Sauer et al. 1997).

Data for Oregon reflects a strong long-term increase of 7.9 percent average per year (n = 29) during the 1966-1996 period (Sauer et al. 1997).

Environmental Consequences

Direct, Indirect, and Cumulative Effects

No harvest activities would occur in alternatives 1 and 5. As such, there would not be any direct, indirect, or cumulative effect from the activities proposed in any of the alternatives.

An estimate of less than 10 acres exists within units in harvest Alternatives, 2, 3, and 4. Juniper would not be cut in the units. Therefore, nesting trees would continue to exist after harvest. Due to the small amount of potential habitat, the few acres included in harvest units, and no cutting of juniper, there would be little impact if gray flycatchers exist in the area. If gray flycatchers do exist in units where there is potential habitat, individuals or pairs could be disturbed by harvest activities. There would not be the level of disturbance to enough habitat that would affect a population or gray flycatchers as a species. Following a review of the activities listed in the past, ongoing and foreseeable activities list for the Monument Project, there will be no cumulative effects anticipated with any of the alternatives proposed.

Determination

A **No Impact** determination is reached for Alternatives 1 and 5 because no harvest activities or disturbance would occur.

For Alternatives 2, 3, and 4, activities **may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population.**

California Wolverine

Distribution

Oregon: The California wolverine is found in higher elevation areas of Oregon in the Cascade range and including the Blue Mountains.

Malheur National Forest: The presence of wolverine is confirmed on the Malheur National Forest. Several reliable sightings, as well as a carcass of a juvenile wolverine found in the Strawberry Mountain Wilderness, indicate the presence of this species.

Project Area: No sighting data exists within the project area, but there are two sighting reports, rated as fair reliability, in or near the wilderness. The nearby sightings were in 1979 and 1980 and give reason to believe there is habitat in the wilderness. Wolverine are considered suspected within the area of influence of this project.

Life History and Habitat

The California wolverine is a small to medium sized carnivore of the mustelid family. It is the largest of the mustelids. The wolverine generally inhabits high elevation habitats in the alpine and subalpine zones. A mixture of mixed conifer forest, alpine rock and scree slopes, avalanche chutes, and accumulations of dead wood habitats are general habitats used by this species. These areas provide for either rodent and/or ungulate food sources (both live and carrion sources) or denning habitats. Wolverine will also inhabit lower elevation areas during winter periods, following wild ungulates to lower elevation winter ranges where they feed upon carrion.

Wolverine are considered a wide ranging carnivore. This species is known to travel extensively in daily movements, as well as movement between summering and wintering areas. These large movements are based largely on the acquisition of food sources, primarily carrion, though the wolverine will also hunt rodents as well. The individuals typically have large home ranges, ranging from 30 to over 300 square miles in size, depending upon abundance and distribution of prey and forage sources.

Source Habitat Trend

Basin-wide, source habitat was projected to have increased moderately or strongly in 56 percent of the watersheds. The Blue Mountains ERU has undergone a positive absolute (+27.46%) and relative (>100.00%) change in source habitat availability (moderate or strong increases in more than 50 percent of the watersheds). An increase in Blue Mountains source habitat was most influenced by an increase in mid- and late-seral montane community types (Wisdom et al. 2000).

Affected Environment

California wolverine has been confirmed on the Forest in the Strawberry Mountain Wilderness, where a carcass of a juvenile was found in 1992. Sightings since then indicate continued presence. Habitat for the species is expected in the Monument Rock Wilderness, based on sighting reports. In the project area, forested areas are likely dispersal habitat for individuals. However, year-round use of habitat in the project area is possible, given the sizes of home ranges for individuals if they do occur within the Monument Rock Wilderness. The Monument Fire in 2002 and the previous Monument Rock Fire in 1994 affected most of the potential habitat.

Environmental Consequences

Direct, Indirect, and Cumulative Effects

There would be no direct or indirect effects for Alternative 1, the No Action Alternative, or for Alternative 5. Alternative 5, which has no harvest and reduces road density more than the other action alternatives, is not expected to have an impact on wolverine. The road closures are in areas that would not provide habitat for wolverine. Duration of the closures would be short, probably several days to construct gates or earth berms, and the intensity would be low, probably one piece of machinery working on one road closure at a time.

Activities proposed in Alternatives 2, 3, and 4 would not adversely affect habitat condition and potential such that habitat would preclude use by the species. Primary activities of concern would involve the resiliency treatments proposed in Alternatives 2 and 4, where proposed green tree treatments would reduce canopy closures and simplify stand structures. These activities could lead to direct effects of habitat modification. However, due to the location of these areas that would be treated under Alternatives 2 and 4, the level of effect would be minor and would not likely exclude use of those habitats by individuals that may occur in the area. The level of effects is not expected to be significant.

The activities proposed in any of the five action alternatives are not likely to significantly contribute to the cumulative effects of other past, present and reasonably foreseeable federal actions. Activities would not significantly affect habitat availability or use over the larger geographic area, over any significant period. Road closures, both on the Prairie City RD and the Wallowa-Whitman N.F. portion of the fire area would reduce potential disturbance from

vehicle traffic. Planting under Alternatives 2, 3, and 4 on the Prairie City portion of the fire and proposed planting on the Wallowa-Whitman N.F. portion of the fire area would shorten the period for reestablishment of forested cover. These alternatives would also not contribute to a negative trend in suitable habitat availability or the presence of the species across the District, Forest, or Region. Following a review of the activities listed in the past, ongoing and foreseeable activities list for the Monument Project, there will be no cumulative effects anticipated with any of the alternatives proposed.

Determination

A **No Impact** determination is reached for the Alternatives 1 and 5. The Alternative 1 would have no activities and Alternative 5's road closures would be short in duration and low in intensity.

Actions proposed in Alternatives 2, 3, and 4 **may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population.** Short-term disturbance related effects associated with harvest activities could result. However, they are short-term effects that would not affect long-term habitat use. Likewise, changes to vegetative structure conditions in Alternatives 2 and 4 may result in limited short-term effects, however, because they are not primary habitat types nor located in areas considered high quality habitat areas based upon elevation and location, the level of that affect is expected to be minor and immeasurable. Viability would not be affected, as suitable habitat would not be modified or changed, and prey sources would not be reduced.

Pacific Fisher

Distribution

Oregon: The Pacific fisher is rare in the State of Oregon. An introduced population occurs in southwestern Oregon. It is not known to occur anywhere else in the State.
Malheur National Forest: The Pacific fisher is not confirmed on the Malheur National Forest. One sighting report exists on the Prairie City district.
Project Area: No sightings data exists for the presence of the Pacific fisher in the project area.

Life History and Habitat

The fisher is a medium sized carnivore of the family Mustelidae. They average 5 ½ to 6 ½ pounds and average around 30-37 inches long. Coloration varies, though is primarily characterized by a darker brown coat color. Guard hairs around the face, neck, and shoulders will often have golden tips, creating a softer, golden main appearance. Cream patches often cover the chest and lower abdomen.

The species generally uses lower elevation mixed conifer or hardwood habitats that have strongly developed understory vegetation strata. Ground level vegetation and dead wood habitat structure is important and fisher activity is strongly associated with that condition. This is likely a response to a combination of prey species preference as well as security needs for the species. Deep snow is a barrier for the species. Fisher will actively avoid areas where snow depth is relatively high.

The fisher preys and forages on a variety of food sources. Fisher will prey upon snowshoe hares, ground squirrels and other rodents, mice and voles, birds and porcupines. Carrion

from wild ungulates will also be utilized by this species. The fisher will spend considerable time and travel considerable distances to obtain food.

Average home range size for male fisher is around 15 square miles, while a female will only average around 6 square miles. Individual fishers tend to be solitary, with the exception of females and their first year young. Not long after the first year, individual kits will have dispersed to form their own territories.

Source Habitat Trend

Source habitats for fisher are late-seral stages of the montane community group; unmanaged young forests also are source habitats because this structural stage, like late-seral stages, contains sufficient large-diameter snags and logs needed for various life functions of fishers (Wisdom et al. 2000). Managed young-forest stages do not provide source habitat because of the lack of remnant large trees and snags. Additional source habitats are: old-forest multi-storied and unmanaged young-forest stages of aspen and cotton-wood-willow (Wisdom et al. 2000).

Historically, source habitats likely occurred throughout the forested portions of the basin, with some of the greatest concentrations in the western, central, and northern portions of the basin. Basin-wide, there has been moderately or strongly declining habitat trends in nearly 70 percent of watersheds, and neutral or increasing trends in about 30 percent of watersheds (Wisdom et al. 2000).

Affected Environment

Habitat may occur within the project area. Affects of the fire on conifer habitat likely reduced the quality of habitat in the project area. Areas where the fire severity was light may provide suitable habitat, though with the fire and past harvest activities, fragmentation maybe an issue with the suitability of that habitat.

One unconfirmed sighting in 1996 was located about 21 miles west and south of the project area. Two remote cameras were set up in the project area for pine marten surveys in 1994 for the Awake Timber Sale. No fisher were recorded during that survey and no sightings have been reported in the area.

Environmental Consequences

Direct, Indirect, and Cumulative Effects

There would be no direct or indirect effects to the Pacific fisher with the implementation of Alternative 1, the No Action Alternative, or Alternative 5. Alternative 5, which has no harvest but has additional road closures compared to the other action alternatives, is not expected to have an impact on fisher. The road closures are in areas that would not provide habitat due to the open canopy and lack of complex structure on the ground. Duration for the construction of the closures would be short, probably several days to construct gates or earth berms, and the intensity would be low, probably one piece of machinery working on one road closure at a time.

Activities proposed in Alternatives 2, 3, and 4 could potentially result in direct effects to the Pacific fisher and fisher habitat. The resiliency treatments proposed in Alternatives 2 and 4 could result in direct effects through reductions in habitat quality in those light fire severity areas. However, the level of effect would be small, likely immeasurable, do to the existing

habitat condition that is diminished due to the Monument Fire and the fragmented nature of the remaining habitat due to past harvest management and/or effects of the fire. The salvage harvest prescriptions could potentially affect future habitat conditions, as down wood material is an important habitat feature in functioning habitat. The effects of this removal would be measured in the long term, as forested vegetation recovers and develops into stand conditions that provide for the fisher. However, suitable down wood levels would likely be maintained through the retention standards proposed.

Another factor in the consideration of effects is the lack of documented presence of the species on the Malheur. Its presence is unknown, however, multiple years of camera surveys, field reconnaissance and other opportunities for detection have not yielded sightings information. Very few sightings exist elsewhere in the Blue Mountains (Verts and Carraway, 1998). The likelihood of presence within the project area is very low, further reducing the risk of effect to the species and occupied habitat.

Activities proposed in action Alternatives 2, 3, and 4 could result in cumulative effects to fisher habitat in the project area. Incremental modification of existing habitat would occur with the proposed activities, particularly in Alternatives 2 and 4, where green tree treatments would occur. This would be additive to other federal actions, primarily past timber harvest actions and other conifer treatments, that have reduced habitat quality across the project area and larger analysis area.

On a spatial scale, the level of effect of this action cumulatively is low. About 1% of potential habitat in each subwatershed would be affected. In the Swamp Creek subwatershed, this would add incremental levels of effect to other activities that have affected habitat. The Upper Little Malheur River subwatershed would see a more significant incremental effect, as more extensive timber harvest has occurred in much of the subwatershed, coupled with the habitat affected by the Monument Fire.

On a temporal scale, the effect would be expressed in the short to mid-term. Over time, without further management actions, natural regeneration and successional development would develop dense higher quality habitat on the acres treated by the activities proposed.

Relative to trends, activities would continue a trend of habitat reduction, cumulative to past harvest management actions.

The level of effects would be tempered by the unlikely presence of this species in the project and analysis area. Lack of sighting data and other recorded presence information suggests that this species is unlikely to be present in the project area. Following a review of the activities listed in the past, ongoing and foreseeable activities list for the Monument Project there will be no cumulative effects anticipated with any of the alternatives proposed.

Determination

A **No Impact** determination is reached for the No Action Alternative and Alternative 5, as no harvest activities would occur.

Actions proposed in action alternatives 2, 3, and 4 **may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population.** Short-term disturbance related effects associated with harvest activities could result, however, they are short-term effects that would not affect long-term habitat use. Likewise, changes to vegetative structure conditions in alternatives two and four may result

in limited short term effects, however, because they are not primary habitat types nor located in areas considered high quality habitat areas based upon elevation and location, the level of that affect is expected to be minor and immeasurable. Viability would not be affected, as suitable habitat would not be modified or changed, and prey sources would not be reduced.

IV. References

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V. Maps

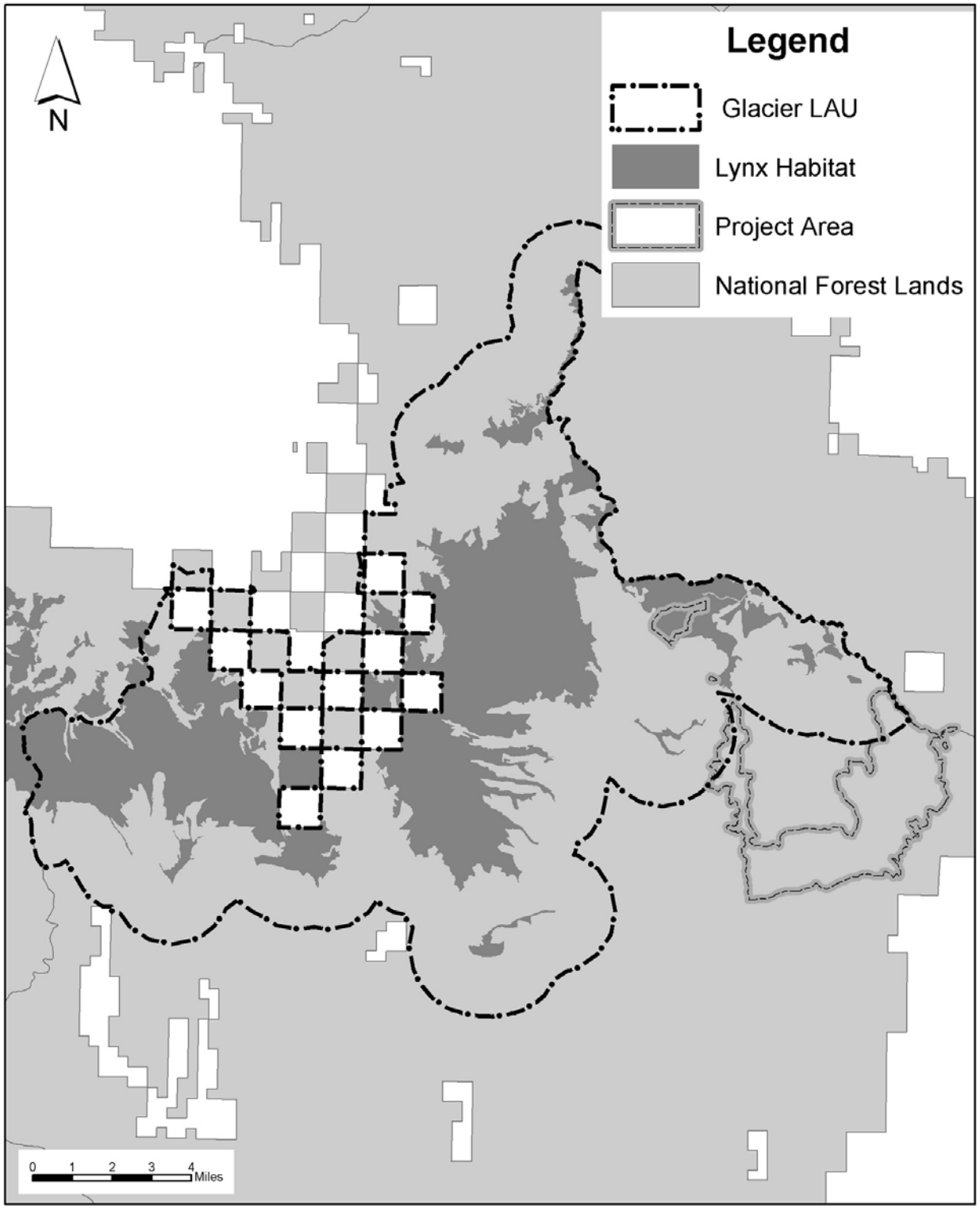
Legend
Glacier LAU
Lynx Habitat
Project Area
National Forest Lands
N
0 1 2 3 4 Miles

Figure 1. Location of the Monument Fire Recovery project in relation to Glacier LAU and lynx habitat.

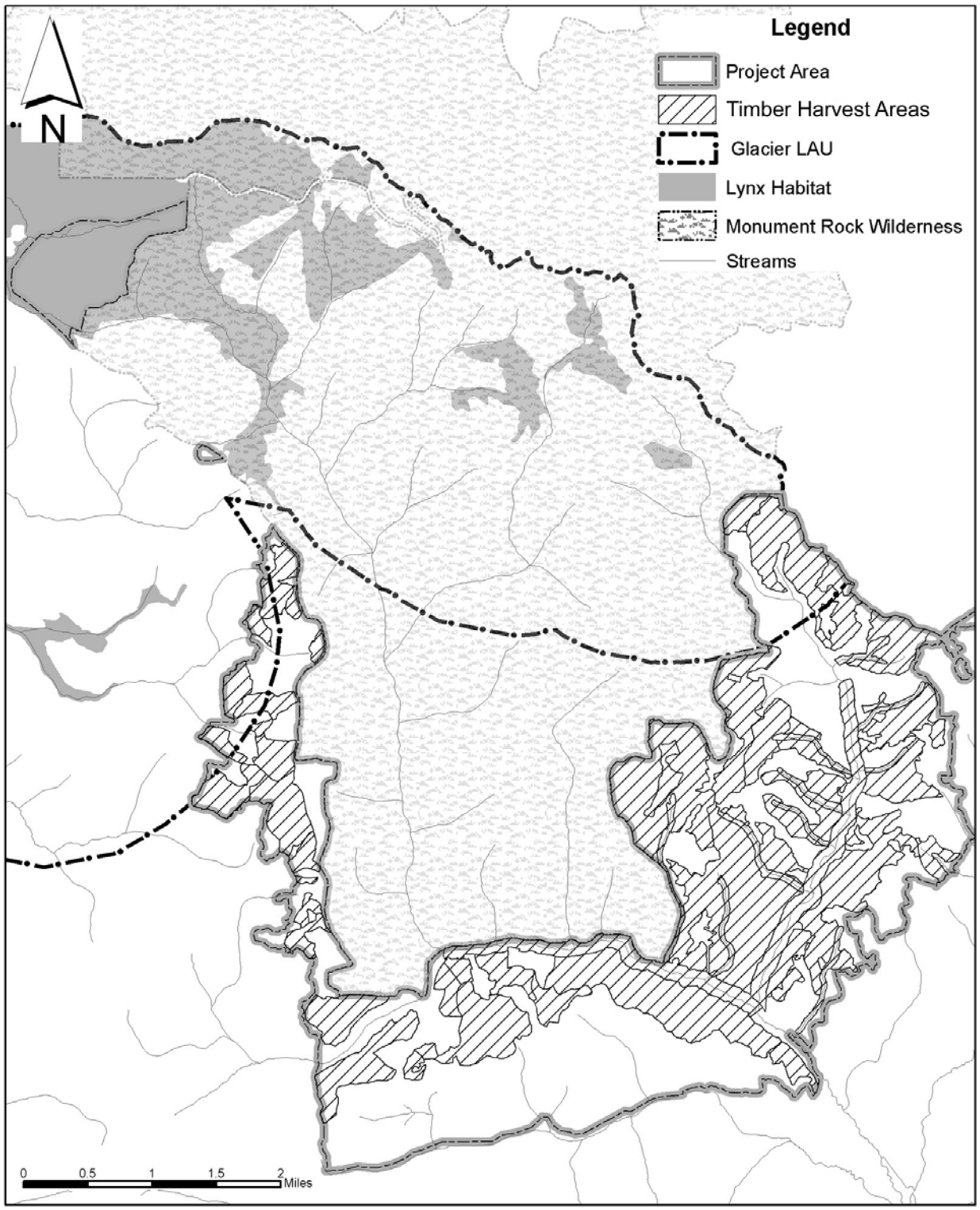

Figure 2. Location of timber harvest (salvage and green tree) units in relation to the Glacier LAU and lynx habitat.