

## **Grizzly Bear**

*(Note: the following effects discussion reflects the changes to Alternative 2 described in FEIS Chapter 5 to further address Issue #1, Grizzly Bear Disturbance and Displacement.)*

### **Environmental Consequences – Alternative 2a**

#### *Direct and Indirect Effects*

Alternative 2a includes timber harvest, pre-commercial thinning, weed management, slash disposal and burning, prescribed burning, roadwork and road decommissioning or long-term storage. A small portion of BMU 14 would be affected by this project, and all habitat components in that BMU are maintained above recommended guidelines during project implementation for this BMU (see Table 1 below).

The majority of activities would occur in BMU 11, and special consideration was given to provide adequate displacement habitat for grizzly bears in the BMU. Additional core would be created prior to, and during the project to offer security areas for the grizzly bear. Upon completion of Alternative 2a, an additional 2,700 acres of Core would be designated for BMU 11; which would bring the BMU above the standards for Core, road densities and Habitat Effectiveness.

The most important benefit of Alternative 2a for grizzly bear habitat is the road closures that would link two islands of Core into one block of over 10,200 acres (see Existing and Post Core Map in this appendix). This area of Core would increase grizzly bear security from motorized access in a known bear approach area between BMU 11 and BMUs 13 and 14. This block of Core includes Grizzly Peak and Clark Mountain, known areas of bear activity. Additionally, of the approximate 900 acres of proposed timber harvest, 412 acres would be harvested during the non-bear season (December through March). By timing a large portion of timber activities during the winter season there would be a much smaller area and shorter duration of disturbances to bears during their active period (April 1 to November 30) as compared to Alternatives 2 and 3.

Timber harvest activities and pre-commercial thinning would temporarily affect approximately 280 acres of Core. This is an area that has been core for a minimum of 10 years. These acres would be replaced by approximately 1,000 acres of Core created by the closure of two road systems (902B and 903) and two road segments (6715B and 902). (See Core Map)

All road decommissioning or intermittent storage activities would occur on road prisms that are currently in Core. Many of these roads or spurs north of Burnt Creek are short in length and near existing roads open to motorized access. Approximately 240 acres of Core would temporarily be affected for such activities in the area north of the Burnt Creek Road #472 (refer to Alternative 2a map and Core map). Core acres affected by these short-duration activities are compensated by the acres created at the beginning of the project.

The most extensive decommissioning would occur on an old road system in the upper Burnt Creek area (see Alternative 2a map). The activities would occur on 11 miles of road that are currently in Core (temporarily affecting approximately 2,050 acres). Work would begin at the most remote parts of the road system (the higher elevations) and move downhill, and out of the area. The work contract would employ two excavators in order to accomplish the work in the allotted time. The duration of these activities would

## Appendix 4

---

be restricted to approximately 8 weeks, during July and August. This period was selected to avoid disturbing bears foraging in spring habitat from April through June 15. Additionally, project activities would be required to be completed before the berries of a preferred bear food source (huckleberries (*Vaccinium spp.*)) are ripe and available to bears; which is usually in September. The time frame for road activities would insure that project activities occur during a period of least disturbance to grizzly bear foraging behavior. During implementation of this activity, no other activities in the BMU would be allowed. During the bear year (April 1 to November 30) in which implementation of the upper Burnt Creek decommissioning occurs, no harvest or other decommissioning would occur. This would allow the greater BMU as an area for any potential displacement.

Prior to the road work in the south, a three mile section of Road #902 (west of Clark Mountain) would be bermed. This action would merge the two islands of Core (see Core map) into one large core block, and together with the core created from the 902B, 903, 6715B, and 902 road closures, would create over 2,700 acres of Core. The acreage of new Core would offset the amount of Core that would be temporarily impacted by the watershed decommission work in the southern portion of the project area.

Under Alternative 2A over 100 acres of harvest along the Burnt Dutch road were dropped. Roadside unit 55k is changed from salvage to regeneration due to the amount of dead and dying lodgepole pine, and resulting in a 26-acre opening. Adjacent hiding cover is provided for all units, including Units 55 through 55k, and this harvest would not impede grizzly bear movement in the drainage, or cause long-term avoidance or displacement of bears from the affected area.

All other project activities (pre-commercial thinning, slash and brush disposal, ecosystem burning) would occur near roads that permit motorized access. Wildlife burning is proposed for three units in Core. The burn units would be treated by aerial ignition (use of a helicopter). No more than 2 days of helicopter activity is expected to complete the latter proposal.

Currently, Obermayer Hazardous Fuels Reduction an ongoing project, south of Yaak, is progressing in the northeast corner of BMU 11, and is in the Grizzly Project area. According to the contract, the project could continue during the implementation of the Grizzly project. The remaining activities would consist of timber harvest in 40 acres during the July to December time frame and 125 acres in the non-bear year. None of these activities occur in Core, and no new roads would be constructed to finish the project.

All ongoing and activities proposed in Alternative 2a may disturb and potentially shift bear activities in the affected BMUs. Project activities are not expected to create long-term displacement of grizzly bears. Adequate security habitat and forage would remain for bears in both BMU 11 and 14 during project implementation.

The following summary table (Table 1) shows the changes in habitat components over the life of the project. Not all of the proposed activities would occur at the same time; as timber harvest, prescribed burning, roadwork and decommissioning, and pre-commercial thinning require independent contracts for each activity. The majority of activities would occur over 4 to 5 years with some follow-up work. Analysis of road densities and habitat effectiveness show a range of how the activities would affect a habitat component over the duration of the project (the 'During' column in Table 1). All of the habitat components are either meeting recommended standards, or trending towards the standard. The 52% of Core habitat would not drop below the existing condition during project implementation. As project activities are completed, Core would gradually increase to the post project analysis.

**FEIS Appendix 4, Table 1. Summary table for Alternative 2a: Habitat components before, during, and after project implementation.**

<b>BMU</b>	<b>Habitat Component</b>	<b>Existing</b>	<b>*During</b>	<b>Post</b>
11	Habitat effectiveness (%); Std. $\geq 70\%$	74%	70-72%	74%
	Linear ORD (miles/sq. mile); Std. $\leq 0.75$	0.44	0.58-0.57	0.48
	Core (% of BMU); Std. $\geq 55\%$	52%	52%	56%
	OMRD (% BMU > 1 mi./sq.mi.); Std. $\leq 33\%$	28%	32-31%	28%
	TMRD (% BMU > 2 mi./sq.mi.); Std. $\leq 26\%$	29%	29-27%	25%
14	Habitat effectiveness (%); Std. $\geq 70\%$	76%	76%	76%
	Linear ORD (miles/sq. mile); Std. $\leq 0.75$	0.57	0.58	0.57
	Core (% of BMU); Std. $\geq 55\%$	56%	55%	56%
	OMRD (% BMU > 1 mi./sq.mi.); Std. $\leq 33\%$	28%	29%	28%
	TMRD (% BMU > 2 mi./sq.mi.); Std. $\leq 26\%$	26%	26%	26%

\*The range of values in the 'During' column apply to BMU 11 analysis. The ranges, except Core, show the variation of road densities and habitat effectiveness over the life of Alternative 2a.

**Objective 1. Provide adequate space to meet the spatial requirements of a recovered grizzly bear population.**

**A. Habitat Effectiveness:** *Habitat effectiveness (HE) should be maintained equal to or greater than 70 percent of the BMU. Habitat effectiveness is calculated as a percentage of the BMU: the total BMU acres minus MS-3 lands (areas where grizzly bear habitat maintenance and improvement are not management considerations) and all land further than 1/4 mile from open roads and major activities.*

**BMU's 11 & 14:** Habitat effectiveness for both BMUs is currently above the recommended 70 percent, and would not drop below the threshold during the implementation of Alternative 2a. For BMU 14 there is no change in HE during all stages of the proposed project. Since most of the activities in this project are in BMU 11, HE would be affected and drops from 74% to 70-72 % in the phases of implementation (refer to Table 14).

The existing condition is 74% HE in BMU 11: better than the 70% standard. During the period of activities north of Burnt Creek, HE would decrease to 70% (which is still meeting standard). During the period of road work in the southern portion of the project area, HE would temporarily increase to 72%. Post project, HE would return to 74%.

**B. Core Areas:** *The requirements of a core area include: no motorized access (roads or trails) during the active bear season, and be at least 0.3 miles from open or gated roads. The goal is that federal agencies will work toward attaining a core area of at least 55% in the BMU. Another goal is that no net loss of core area will occur on federal ownership within the BMU. Core changes are shown in Table 1. Core habitat blocks function as displacement areas.*

**BMU 14:** During project activities, Core would decrease to the 55% standard due to timber harvest activities. Post project, Core would then increase to 56% (Table 1). Approximately 250 acres of ecosystem burning would occur. These units are clustered in the southeast corner of the BMU, and adjacent to gated and open roads. About 35-40 acres, (portions of Units B and C) would be part of the ecosystem burns, and lie in Core (no previous activities have occurred in this core block within 10 years). During the burning event, bears and other animals may be temporarily displaced by the activities. Once the fire has burned out and new growth is evident on plants, bears and other big game would return to forage in the affected acres.

## Appendix 4

---

**BMU 11:** The existing Core is at 52%, below the recommended standard of 55% for the BMU. During project implementation, Core would not drop below 52%, as newly created Core areas would offset those areas that are temporarily impacted by project activities. Analysis of Core during implementation of Alternative 2a shows all proposed activities occurring simultaneously. In reality, this would not happen. The road decommissioning work south of Burnt Creek Road would occur in an isolated geographical area and time frame (eight weeks; not during spring bear season; completed before huckleberry fruit is available to bears). The affected roads would be hydrologically stabilized (removal of culvert pipes, recontouring roads to blend with slopes, and so on) to reduce the effects of erosion and sediment delivery into streams. Once completed, returning vegetation would provide forage and hiding cover to the grizzly bear. No other project activities would be allowed during the implementation of this road decommissioning. During the the entire bear year (April 1 through November 30) in which the upper Burnt Creek decommissioning occurs, no harvest or other decommissioning would be allowed.

Timber harvest activities would temporarily affect less than 300 acres in of Core, which are compensated for by new Core created from road closures. Similar compensation for temporarily affected Core applies for road decommissioning work above the Burnt Creek Road. As described in the 'Direct and Indirect Effects,' all of the Alternative 2a activities in Core would be offset by the creation of new Core to mitigate potential and temporary displacement affects to the grizzly bear. The new Core created by this project would offer habitat security and forage for any bear(s) that may be temporarily displaced from the activities.

Three wildlife burns are planned for this alternative. Approximately 470 acres would be burned to reduce the tree overstory and promote regeneration of grizzly bear forage. The burn units lie in Core, and would be burned by aerial ignition (helicopter). This activity is expected to last no more than 2 days. Grizzly bears in the area may be temporarily disturbed or avoid the area until the fires have burned out. Prescribed burns, accomplished by helicopters in a short time frame are generally considered as not likely to adversely affect grizzly bears (Montana/Northern Idaho Level 1 Team 2006).

The southern portion of BMU 11, from the Roderick Mountain ridgeline to the south, is outside the project area and would remain undisturbed from any project activities. This area offers good bear habitat and would be a large area for any bear displacement during project activities (see Core map).

Post project, Core would increase to 56%, exceeding the recommended standard for this BMU. The newly created Core resulting from Alternative 2a would expand and merge two blocks of core by over 2,700 acres. The new core occurs along a ridge between two drainages, and near an approach area for wildlife movement across the Yaak River. Project activities may temporarily disturb or displace grizzly bears due to the noise and movement of machinery and humans.

**C. OMRD:** *Open Motorized Route Density (OMRD) is calculated on a BMU basis using moving window analysis. The goal is for no net increase in OMRD on National Forest lands within the BMU. See Table 1 for the summary analysis.*

The existing OMRD for both BMU 11 and 14 meets standard ( $\leq 33\%$ ) during all activities of Alternative 2a. OMRD would slightly increase during project activities, then return to the existing level of 28% for both BMUs. No net increase in OMRD will result from the implementation of Alternative 2a.

**D. TMRD:** *Total Motorized Route Density is calculated on a BMU basis using moving window analysis. The goal is for no net increase in TMRD on National Forest lands within the BMU. Please refer to Table 1 for showing the results of this analysis.*

The TMRD in BMU 14 remains consistent across the different stages of Alternative 2a. The roads opened for timber harvest and hauling in Units 1- 4 are offset by the closure of another road in the BMU (#6840B). TMRD is 26%, which is the standard for this BMU.

The existing TMRD in BMU 11 is 29%. During the project activities for Alternative 2a, TMRD would gradually decrease from 29% to 27% as the road decommissioning projects are completed. Post project, TMRD would decrease to 25%, which is an improvement over the standard of 26% for this BMU.

Research conducted by Wakkinen and Kasworm (1997) in the Selkirk and Cabinet-Yaak Ecosystem (SCYE) that examined the concepts of OMRD, TMRD and core habitat is considered “best science” applicable to this area, as supported by Johnson (2007).

**E. Linear Open Road Density:** *Linear road density is calculated on Management Situation 1 (MS-1; highest management priority for grizzly bear needs and habitat) lands for the BMU and should not exceed 0.75 miles per square mile. The linear open road density (ORD) in BMUs 11 and 14 are displayed in Table 1.*

In Alternative 2a, no increase in BMU 14’s linear ORD would occur during project activities. Post project, the ORD in this BMU actually decreases. For BMU 11, ORD increases due to the roads used for timber hauling or the 11 miles of roads that will be temporarily opened for decommissioning activities south of Burnt Creek. The ORD level during project activities would continue to meet the standard. The effect to grizzly bears may be disturbance or temporary displacement due to human presence or project activities. Upon completion ORD drops to 0.48. For both BMUs, and in all stages of Alternative 2a, ORD levels are well below the recommended maximum of 0.75 miles/square mile of open roads for BMUs.

**Objective 2. Manage for an adequate distribution of bears across the ecosystem.**

**A. Opening size:** *Proposed timber harvest units, either individually or in combination with existing unrecovered units should normally be designed to be less than or equal to 40 acres.*

Past harvests in the project area did contain some regeneration units greater than 40 acres. All of those areas that were harvested 15 or more years ago would now contain hiding cover and forage habitat for bears. None of the units proposed in this project are located adjacent to a stand that lacks hiding cover for bears and other big game.

Five units in this project are at or larger than 40 acres. Approximately 240 acres would be intermediate harvested; which would leave some hiding cover for bears inside the units. Two areas with adjacent units are proposed for clearcutting, which would create openings over 40 acres. Units 45 and 45a are adjacent and the timber harvest would create a combined acreage of 52 acres. Units 49, 50 and 50a would create an opening of 74 acres. Both areas of combined units are located in stands of blowdown, dying or mature lodgepole pine. All units are adjacent to timbered stands that provide hiding cover for bears and big game. Some of these units have leave islands of vegetation and snags that would not be harvested. Project design criteria leaves riparian areas and ridgelines intact, and other topography would also provide some cover due to the rolling/broken nature of the land.

## Appendix 4

---

**B. Movement corridors:** *Unharvested corridors >600 feet in width should be maintained between proposed harvest units and/or unrecovered harvest units that are currently not providing hiding cover for bears.*

Project design for all units insures that unharvested corridors or timbered areas providing hiding cover are available to grizzly bears. These corridors are usually greater than 600 feet and would be maintained between proposed harvest units.

**C. Seasonal components:** *In areas with important seasonal components such as spring range, the guideline is to schedule proposed timber harvest activities to avoid known spring habitats during the spring use period (April 1 to June 15) and known denning habitats during the winter (October 15 to April 15).*

Den sites are not known to exist within the analysis area. All proposed project activities that take place in spring bear range would avoid the spring bear use period (4/1-6/15).

**D. Road density and displacement (core) areas:** These are discussed under Objectives 1 and 6.

### ***Objective 3. Manage for an acceptable level of mortality risk.***

Most human-caused grizzly bear mortalities on the Kootenai National Forest have resulted from interactions between bears and big game hunters (Kasworm and Manley 1988). Grizzly bear vulnerability to human-caused mortality is partially a function of habitat security. Therefore, mortality risk can be partially assessed by the use of habitat factors that maintain or enhance habitat security.

**A. Opening size.** See Objective 2.

**B. Movement corridors.** See Objective 2.

**C. Road density.** See Objective 1 and 6.

**D. Displacement.** See Objective 1 and 6.

**E. Attractants.** Timber and road contract provisions for sanitation and waste disposal have been prescribed for this project to reduce the potential for human-bear conflicts. The seed mix for erosion control and road mix no longer contains clover. Alternative 2a is not expected to create any attractants such as garbage sources that increase the risk of conflict with humans.

Taking into consideration the status of the habitat components listed above, mortality risk to the bear is generally low throughout most of project area. It is important to note that human-caused grizzly bear mortality is also a function of other factors, such as the regulation of big game hunting, which are beyond the authority of the Forest Service to control. Regulation of hunting is the responsibility of the State of Montana. Cumulatively, risk of mortality would not change appreciably due to implementing this project.

## ***Objective 4. Maintain/improve habitat suitability with respect to bear food production.***

Timber harvest and post-harvest treatments such as prescribed burning, when conducted within Forest Plan standards, would generally have a positive effect on the growth of forage plants important to bears. Wildlife and ecosystem burns would return fire to areas that historically produced forage for bears. Grapple piling planned under Alternative 2a would have effects on huckleberry plants similar to those stated for Alternative 3 in the DEIS pg. 123.

Riparian habitats are generally considered to be valuable feeding sites. The proposed timber harvests do not include any riparian harvest and would follow other Kootenai Forest riparian management guidelines, Montana Streamside Management Act (HB 731), and INFS guidelines. Adherence to riparian area standards would ensure protection of the food resources in this important zone.

## ***Objective 5. Meet the management direction outlined in the Interagency Grizzly Bear Guidelines (51 Federal Register 42863) for management situations 1, 2, and 3.***

Meeting Objectives 1-4 has been determined to meet the intent of the Interagency Grizzly Bear Guidelines (Buterbaugh 1991). Please refer to Table 1 for the following summary. Project activities in BMU 11 would lower HE during implementation of operations, but not below the 70% standard. Post project HE would return to the 74% existing level. HE would remain unchanged during activities in BMU 14. Some units in BMU 11 would exceed 40 acres in size, but hiding cover would remain from intermediate harvest, vegetated islands excluded from timber harvest, or in stands adjacent to the affected areas. Harvest units were designed to maintain movement corridors with hiding cover. The project complies with the other objectives.

## **Objective 6. Meet the interim management direction specified in the July 27, 1995, Incidental Take Statement (McMaster 1995).**

**A. Open Road Density.** Manage the density of open roads within the Forest Plan standard. See objective 1 for details. ORD remains well below the threshold in all stages of the proposed project in both BMUs.

**B. Open Motorized Trail Density.** Do not increase the existing density of open motorized trails in the affected BMU(s). Alternative 2a would have no effect on existing motorized trail density.

**C. Total Motorized Access Route Density (TMARD).** Manage all motorized access routes (open and restricted roads and motorized trails) in the affected BMU to avoid a net increase over the existing density. See objective 1 for details.

**D. Existing Core Area Size.** Manage the amount of Existing Core Area in the affected BMU to avoid a net decrease. See Objective 1.

## **Cumulative Effects**

The Grizzly analysis area has had management activities in the last 40 years. The result of such management is a landscape containing a mosaic of various stages of vegetative succession. In addition to the harvested areas, there are unharvested stands including roadless areas and areas that have had natural disturbances like insect and disease infestations, and blowdown. Past harvests have provided a variety of age classes and successional stages across the project area, and include habitat conditions favorable for grizzly bear and its forage, such as huckleberries, and big game. Timber harvests prior to 1995 now provide hiding cover for bears and other big game.

## Appendix 4

---

Recent timber harvests (2000-2006) have consisted of small timber and salvage operations on approximately 389 acres, while pre-commercial thinning occurred on 291 acres. These activities are finished. An ongoing fuels project (Obermayer Hazardous Fuels Reduction) continues in the north end of the Grizzly PSU. The harvest began in 2007, with some underburning in the early summer. As of March 2009, approximately 165 acres are left to be harvested of the 1,000-acre project. All operations for this project appear to be on schedule. A small portion of this project would overlap the time frame anticipated for Alternative 2a. The remaining activities would consist of timber harvest in 40 acres during the July to December time frame and 125 acres in the non-bear year. None of these activities occur in Core, and no new roads would be constructed to finish the project.

Since 2000, fire events included 848 acres of wildfire and 447 acres of prescribed burns. Over 100 acres of prescribed burning occurred as post timber harvest treatments for slash and big game forage production. These past actions and other natural events have created much of the existing habitat conditions found within the project area.

During project implementation, no activities would occur during the spring grizzly bear season. All recommended standards of Core, HE and road densities would be met in BMU 14 during and after Alternative 2a. BMU 11 conditions begin with Core and TMRD not meeting standards. During project implementation, the mentioned habitat components gradually improve toward standards. BMU 11 would continue to meet standards in ORD, HE and OMRD (see Table 1). Post project, all standards of Core and road densities would meet recommended standards for both BMUs. BMU 11 would increase Core by nearly 2,700 acres, moving Core from 52% to the 56%, (better than the 55% standard).

Alternative 2a would occur in a small southern portion of BMU 14, and in about one half of BMU 11. The undisturbed areas of both BMUs would provide displacement areas for bears throughout project activities. For BMU 11, many of the timber harvest activities would occur during the winter (the non-bear season). It is estimated that the timber harvest activities may take up to four years (with a fifth year to be negotiated, if needed) to implement and finish. Some burning and clean up activities may follow in the harvest treated units. The road work south of Burnt Creek would occur during a short period that is planned to begin and finish between periods of optimal forage opportunities for the grizzly bear. The short duration and small scale disturbance of activity is not expected to create any long-term displacement of a bear or family group. Additionally, no other activities would be occurring during this work. The removal of the road system would decrease erosion and support a more diverse forage habitat for bears.

The food attractant situation would not change with implementation of the proposed action, and no expected increase in grizzly bear mortality is expected from the proposed activities.

Basic road maintenance, mushroom picking, prescribed burning, timber hauling, wildlife habitat improvement projects and various recreational uses are additional activities that have occurred and will continue to occur within the project area. These activities are generally not considered to have adverse impacts on wildlife species. These activities may incidentally affect wildlife use within some areas on a temporary basis, but are not likely to affect the viability of this species.

## Regulatory Consistency – Alternative 2a

**Forest Plan:** Management Area 14 (manages for grizzly bears and timber harvest) includes guidelines for use of displacement areas, road closures, burning for site preparation (where favorable) and maintenance of corridors (600') between cutting units. For all MAs Alternative 2a provides adequate displacement area, meets or exceeds road density standards, includes underburning wherever feasible, and maintains corridors between cutting units as explained above.

**Endangered Species Act :** This project complies with the ESA. Project design meets the intent of all terms and conditions established by the USFWS in the Interim Guidelines for grizzly bear habitat management.

## Statement of Findings

The proposed action *may affect, but is not likely to adversely affect* the grizzly bear. This determination is based on:

1. The Grizzly Project would increase Core by approximately 2,700 acres in BMU 11.
2. Current Core and TMRD levels are not meeting recommended standards for the grizzly bear in BMU 11. During implementation of the Alternative, Project design maintains some levels at their existing condition (such as Core and TMRD in BMU 11) and all other road densities, Core or HE meet recommended standards (see Table 1). Post project, both BMUs would meet or exceed standards for Core, HE and road densities.
3. Grizzly bears may be disturbed or temporarily displaced from project activities, however, Alternative 2a has been designed to concentrate and complete activities in small areas before moving to another area. Adequate core is provided.
4. No project activities would occur during spring bear season (4/1 – 6/15).
5. No expected increase in bear attractants or mortality risk would result from implementing this project.

## Canada Lynx

The final rule for designating critical habitat for the Canada lynx was recently published in February 2009. The updated lynx analysis presented below for the action alternatives complies with this rule. Revised direction for Canada lynx critical habitat (50 CFR Part 17, Feb. 2008) required habitat surveys for winter snowshoe hare. The required surveys were conducted in the action alternative harvest units that are located in a Lynx Analysis Unit (LAU) and shown in this updated analysis. This species section follows the hierarchy for analyzing effects on lynx habitat as found in Attachment 1 of the NRLMD ROD (USDA Forest Service, 2007). Under the DEIS, denning habitat was modeled as a percentage in the affected Lynx Analysis Units (LAUs), whereas current analysis does not model for denning habitat. The finding of “*may affect, but is not likely to adversely affect*” does not change.

### Data Sources, Methods, Assumptions, Bounds of Analysis (update to page 127 of the DEIS)

Lynx population ecology, biology, and habitat description and relationships are described in Ruggiero et al. (2000) and Ruediger et al. (2000). That information is incorporated by reference. In addition, the final lynx listing rule (Clark 2000) gives population and habitat status on a national scale. The lynx distinct population segment status is found in the Biological Opinion on the effects of the Northern Rocky Mountains NRLMD (USFWS 2007c). The USDI FWS published revised critical habitat for the U.S. lynx population (50 CFR Part 17, February 2008) which led to a northern Rockies Lynx management direction (USFS 2008). In February 2009, the USFWS published its Final Rule on the revised designation of critical habitat for Canada lynx populations in the U.S. (USFWS 2009). The Lynx occurrence data comes from Forest historical records (NRIS Fauna), and other agencies (MNHP, MFWP, USFWS).

The Final EIS for the Northern Rockies Lynx Management Direction (NRLMD) was completed in March 2007 with the ROD signed March 23, 2007. This decision amends the 1987 Kootenai Forest Plan by providing lynx habitat management objectives, standards and guidelines. The decision replaces the interim application of the Lynx Conservation Assessment and Strategy (LCAS). The direction provided in the NRLMD is applied to lynx habitat at the lynx analysis unit (LAU) scale. The KNF has delineated 47 LAUs which approximate a lynx home range size. Forest-wide lynx habitat has been updated to reflect the lynx habitat terminology from the NRLMD.

The effects analysis follows the standards and guidelines established in the NRLMD. Lynx habitat, in the affected LAUs, was mapped using the timber stand database version of the Kootenai National Forest model. Connectivity was evaluated by visually examining lynx habitat and past management activities to determine possible movement areas and potential areas where lynx travel may be hindered. Ridge lines and draws were considered high value movement areas.

The scale for direct effects analysis is the impacted Lynx Analysis Unit(s) (LAU) and for indirect effects it is the impacted LAUs, and adjacent LAUs for connectivity (see DEIS LAU map, M-5).

### Affected Environment/Existing Condition (update to page 129 of the DEIS)

On March 24, 2000 the U.S. Fish and Wildlife Service listed the contiguous U.S. distinct population segment of the Canada lynx as Threatened (Clark 2000). National population and habitat status descriptions in that document are incorporated by reference. There are five occurrences of lynx sign or observations found in the historical records that are within the Grizzly planning sub-unit (PSU). Most were in the 1980's, and the most recent was in 1997.

On February 25, 2009 the U.S. Fish and Wildlife Service issued the final rule revising critical lynx habitat. This project area is located in critical lynx habitat. Currently, all LAUs meet the NRLMD standards (USDA Forest Service 2008).

Lynx habitat in the impacted LAU(s) was modeled in terms consistent with the NRLMD. Table 2 displays the current lynx habitat conditions in the PSU.

**FEIS Appendix 4, Table 2. Lynx Habitat by LAU in the Affected PSUs - replaces DEIS Table 40.**

LAU	Total Lynx Habitat In LAU Acres	Unsuitable Habitat Acres (%) <sup>\1</sup>	Habitat Changed to Unsuitable Over past 10 years by timber management with regeneration harvests Acres (%) <sup>\2</sup>	Number of adjacent LAUs that exceed 30% lynx habitat in an unsuitable condition
14405-Skookum	38,015	1,259 (3%)	Approximately 500 acres (1.3%)	0
14403-Baldy	32,265	463 (1.4%)	0 (0%)	0

<sup>\1</sup>- these acres are in lynx habitat that currently does not provide sufficient vegetation quantity or quality to be used by snowshoe hare. No additional regeneration harvest allowed if more than 30% of lynx habitat in an LAU is in a stand initiation structural stage that does not provide winter snowshoe hare habitat.

<sup>\2</sup>- percent is the percent of total LAU acres that provide lynx habitat (suitable + unsuitable acres). No more than 15% of lynx habitat on NFS lands in an LAU may be changed by regeneration harvest in a 10 year period.

There are no linkage zones for lynx in this project area. A linkage zone is an area that provides habitat for genetic exchange between subpopulations of a species. This project area does provide an identified approach area (USDA Forest Service 2004) located along Highway 508, between Spread Creek and Pheasant Creek . This area lies in the Yaak drainage between both of the LAUs shown in FEIS Appendix 4, Table 2. An approach area provides habitat that offers security for an animal to cross a major fracture zone (highway, river, etc.). The goal for an approach area is to manage for adequate habitat security for wildlife to transit the fracture zone with a minimal risk of mortality.

**Environmental Consequences – All Action Alternatives (update to pages 129-130 of the DEIS)**

*Direct and Indirect Effects*

***Objectives, Standards and Guidelines applicable to ALL management projects in lynx habitat***

**Objective ALL 01:** Maintain or restore lynx habitat connectivity in and between LAUs and in linkage areas.

There are no linkage zones in the project area. In the action alternatives there are five units located in the Spread Creek/ Pheasant Creek approach area proposed for timber harvest. The total area affected would be 82 acres. None of these units are located next to Highway 508 or large open areas. All units are 20 acres or less. Adjacent stands contain seral stages of tree and shrub species that would provide hiding cover for lynx movement. The action alternatives propose to burn approximately 250 acres as ecosystem burns in the Baldy LAU. Such burns would vary in fire intensity, and are planned to create mosaics of vegetation openings. All of these acres would occur in the Highway 508- Spread/Pheasant Creek approach area. Portions of two burn units overlap onto the Baldy LAU. An estimated 15 acres would burn across lynx habitat and non-habitat. The burning would reduce fuels, and stimulate growth of understory vegetation. Both live and dead trees would remain, providing hiding cover for lynx movement. In time, the snags created from the burns would fall to the ground and add to the amount of horizontal cover in these areas. The action alternatives would maintain hiding cover for lynx movement in the approach area.

**Standard ALL S1:** New or expanded permanent development and vegetation management projects must maintain habitat connectivity in an LAU and/or linkage area.

This standard is met because vegetation would remain in riparian areas and all other forested stands not affected by timber harvest or prescribed burning in the action alternatives. Habitat connectivity within the impacted LAUs is generally good except for open rocky slopes, or where cover is restricted to narrow

## Appendix 4

---

corridors created by the effects of fire and harvest activities. Connectivity of the affected LAUs with adjacent LAUs is mostly good; as LAUs are either adjoining, or in close proximity to the affected LAUs.

**Guideline ALL G1:** Methods to avoid or reduce effects on lynx should be used when constructing or reconstructing highways or forest highways across federal land. Methods could include fencing, underpasses or overpasses.

No highway construction or expansions are planned; therefore this guideline is not applicable.

**Standard LAU S1:** Changes in LAU boundaries shall be based on site-specific habitat information and after review by the Forest Service Regional Office.

There will be no changes in LAU boundaries; therefore this standard is not applicable.

### ***Objectives, Standards and Guidelines applicable to vegetation management projects in lynx habitat within LAUs.***

**Objectives VEG 01, 02, 03, 04:** The action alternatives meet all objectives. No snowshoe hare winter habitat is currently available in the units proposed for timber harvest that lie in Skookum LAU. These units were analyzed according to the latest protocol (Bertram and Claar 2008) for determining if an area provides winter snowshoe hare habitat. Post treatment, normal plant succession would provide winter hare habitat in an estimated 10-30 years. Vegetation would remain in all areas adjacent to harvest units, thereby providing foraging habitat and movement corridors for the lynx and other wildlife.

Three wildlife burns are proposed for stimulating huckleberry and other bear forage in the Skookum LAU. The units comprise approximately 470 acres of lynx mid-successional habitat. These burns would be less intense than the ecosystem burns, as the goal is to stimulate, not kill, huckleberry plants (*Vaccinium spp.*) and other shrubs for grizzly bear forage. Similar to ecosystem burns, a mosaic of burned and unburned areas would be the result of these burns. Fewer trees are anticipated to be killed or damaged in this type of burn as opposed to the ecosystem burns. Habitat for lynx would still be available, and winter snowshoe hare habitat may develop in one or two decades.

**Standard VEG S1:** If more than 30 percent of the lynx habitat in an LAU is currently in a stand initiation structural stage that does not yet provide winter snowshoe hare habitat, no additional habitat may be regenerated by vegetation management projects. Exception: Fuel treatment projects in the WUI, as defined by HFRA, subject to the following limitation – fuel treatment projects in the WUI that do not meet Standards VEG S1, S2, S5 and S6 shall occur on no more than 6 percent (cumulatively) of lynx habitat on each National Forest. In addition, fuel treatment projects may not result in more than three adjacent LAUs exceeding this standard. For fuel treatment projects in the WUI, see guideline VEG G10.

The proposed activities would not increase the existing level of lynx habitat lacking snowshoe hare winter habitat in both LAUs. No timber harvest activities would occur in Baldy LAU. The ecosystem burns would affect an estimated 15 acres in this LAU. These acres are spread out in areas of lynx habitat and non-habitat. Alternatives 2 and 2A would conduct timber harvest, burning and brush disposal in 145 acres located within Skookum LAU (Alternative 3 is 33 acres). Surveys for winter snowshoe hare habitat were conducted in all of the units where the 145 acres occurred. All units were analyzed and found to be lacking snowshoe hare winter habitat (all units were below the threshold percentage). Implementation of the action alternatives would not affect the existing snowshoe hare habitat in Skookum LAU. Therefore, this project meets the standard.

Fuels management is part of this project’s purpose and need. Six units (containing 105 acres) in the Skookum LAU also lie in the WUI, and are proposed for timber harvest and burning. All units meet the Vegetation Standards, and the proposed treatments would not contribute to the 6% of cumulative habitat affected in the Forest’s WUI. Currently, the Kootenai NF has 0.7% of lynx habitat that has been treated in the WUI over a 10-year period. Both LAUs adjacent to the Skookum LAU are meeting the standard of containing less than 30% of lynx habitat that does not provided winter snowshoe hare habitat. The proposed units meet the VEG S1, S2, S5 and S6.

**Standard VEG S2:** Timber management projects shall not regenerate more than 15 percent of lynx habitat on NFS lands within a LAU within a 10-year period. The same exception described in standard VEG 01 for fuels projects in the WUI applies to this standard.

The action alternatives comply with this standard (see Table 3).

**FEIS Appendix 4, Table 3: Regeneration Harvest in Lynx Habitat in the last 10 years in Impacted LAUs**

LAU	Existing Condition Acres (%)	Alternatives 2 & 2A Acres	Alternative 3 Acres	Post Condition Acres (%)
Baldy	0 (0)	0	0	0 (0)
Skookum	500 (1.3)	145	88	645 (1.7)

**Standard VEG S5:** Pre-commercial thinning projects. This standard does not apply since no pre-commercial thinning is proposed in lynx habitat.

**Standard VEG S6:** Vegetation management projects that reduce snowshoe hare habitat in multi-story mature or late successional forests may occur only:

1. Within 200 feet of administrative sites, dwellings, outbuildings, recreation sites, and special use permit improvements, including infrastructure within permitted ski area boundaries; or
2. For research studies or genetic tests evaluating genetically improved reforestation stock; or
3. For incidental removal during salvage harvest (e.g. removal due to location of skid trails).

Exceptions 2 and 3 shall only be utilized in LAUs where standard VEG S1 is met.

Note: Timber harvest is allowed in areas that have potential to improve winter snowshoe hare habitat but presently have poorly developed under stories that lack dense horizontal cover (e.g. uneven aged management systems could be used to create openings where there is little under story so that new forage can grow).

All proposed units in an LAU meet standards. The 40-acre stand (Unit 60) lies outside the WUI and inside Skookum LAU. Unit 60 is dropped under Alternative 3. The unit was surveyed according to the protocol for horizontal cover for winter snowshoe hare habitat (Bertram and Claar 2008) and found as not providing such habitat. This standard is being met as are no activities proposed in multi-story or late succession forests that provide snowshoe hare habitat.

**Guidelines VEG G1, G4, G5, G10 and G11**

Describe how the proposed vegetation management activities comply or do not comply (and why) with guidelines VEG G1, G4, G5, G10 and G11 (found in NRLMD ROD 2007b).

VEG G1 would be met by replacing the current units (that are not providing snowshoe hare winter habitat) with an even-aged stand. Approximately 10-30 years after this treatment, the units would offer foraging habitat for the lynx. The G5 guideline is met as habitat for the lynx’s alternate prey species (red squirrel) would be maintained in units adjacent to the proposed harvest units. Fire activities in the action alternatives would not create permanent travel routes that facilitate snow compaction, or create long-term

## Appendix 4

---

firebreaks on ridges or saddles. Thus, the project complies with VEG G4. Additionally, fuel treatment projects within the WUI comply with VEG G10 (refer to **Standard VEG S1**). Finally, the action alternatives would not affect any lynx denning habitat: denning habitat is not considered to be a limiting factor in Montana (50 CFR Part 17, 2/25/2009).

### *Objectives and Guidelines applicable to livestock management projects in lynx habitat within LAUs*

The project does not include livestock management activities. The objective and guidelines do not apply.

### *Objectives and Guidelines applicable to human use projects in lynx habitat within LAUs*

**Objectives HU 01, 02, 03, 04, 05, and 06:** Describe how the proposed human use project moves or does not move (and why) lynx habitat toward the desired conditions that are described in objective HU 01, 02, 03, 04, 05, and 06 (found in NRLMD ROD).

The action alternatives do not propose any activities that may increase the following human activities or effects in lynx habitat: snow compaction, recreational activities, new developed areas, mineral or energy exploration or development, and utility transmission corridors. No reduction in winter snowshoe hare habitat is expected. Finally, no increase in lynx mortality is anticipated. These objectives are met by this project.

**Guidelines HU G1 through G12:** Describe how the proposed human use project complies or does not comply (and why) with guidelines HU G1 through G12 (found in NRLMD ROD).

The following guidelines do not apply to this project: G1 through G5, G7, G8, and G10 through G12. The project complies with Guidelines HU G6 and G9 with the following: no new permanent roads would be built or modifications of forest roads that would allow increased vehicle speed or traffic; and all temporary roads restrict public motorized access and will be decommissioned upon project completion.

### *Objectives, standard, and guidelines applicable to ALL projects in linkage areas, subject to existing rights.*

**Objectives LINK 01:** This objective does not apply to the action alternatives, as project activities would only occur on public land.

**Standard LINK S1:** When highway or forest highway construction or reconstruction is proposed in linkage areas, identify potential highway crossings.

The project does not involve construction or reconstruction of a highway or forest road, therefore this standard does not apply.

**Guidelines LINK G1 and G2:** The project does not involve the sale or exchange of NFS lands, therefore, guideline LINK G1 does not apply. Neither does it involve livestock grazing in shrub-steppe habitats, so guideline LINK G2 does not apply.

## **Cumulative Effects – (update to page 130 of the DEIS)**

Approximately 500 acres of previous regeneration harvest occurred in the Skookum LAU within the past 10 years. Alternatives 2 and 2A would convert an additional 145 acres of lynx habitat into temporary unsuitable habitat by regeneration harvest. Effects for Alternative 3 would be the same or less. All of the affected acres would be replanted with trees and would provide some winter foraging habitat in 15 to 30 years for the snowshoe hare. All of these units would provide lynx habitat in about 10-30 years after timber harvest.

Vegetation for lynx hiding cover would continue to be maintained in the approach area between the two affected LAUs. None of the five units located in this area are larger than 20 acres, and habitat security for big game and lynx would remain adjacent to the proposed harvest areas. The ecosystem burns planned for the project lie in the approach area, with a slight overlap into the Baldy LAU. The wildlife burns are located in the Skookum LAU. Both types of burns are not anticipated to create unsuitable habitat for lynx. The burn prescriptions would create a mosaic of openings and unburned areas, consisting of dead and live trees that would continue to offer hiding cover for lynx movement. Both types of prescribed burns would encourage some aspen regeneration. Motorized access to this area would remain closed to the public both during and after the burns.

Project activities that involve road storage or decommissioning may remove some trees growing in the road prism. Though these old roads are in modeled lynx habitat, some vegetation would be removed for motorized equipment access to conduct activities of removing culverts, or recontouring the road prism. The result would be a narrow corridor absent of trees for a few years. The affected roads would remain closed to public motorized access, and in 15-20 years would provide hiding cover for lynx and potentially some forage for snowshoe hares.

There are no foreseeable actions for either of the affected LAUs outside of this project. Lynx habitat may be affected due to natural events such as wildfire, blowdown from wind events, insect and disease occurrences, etc.

Cumulatively, the action alternatives would temporarily increase the amount of unsuitable habitat by 0.4% in the Skookum LAU. Post project treatments would bring the unsuitable habitat in the LAU to less than 4%, which is well below the 30% threshold recommended by the NLRMD standards. The Alternative would not affect lynx habitat in the Baldy LAU. The affected LAUs would continue to meet the NLRMD standards and guidelines.

## **Regulatory Consistency (update to DEIS page 131)**

**Forest Plan:** This project would comply with the Forest Plan direction on T&E species (pp. II-1 #7; II-22). The project meets NLRMD standards, and complies with USFWS direction on critical habitat for the Canada lynx.

**Endangered Species Act:** The project is consistent with the Endangered Species Act.

## **Statement of Findings**

The proposed action *may affect, but is not likely to adversely affect* the lynx or its proposed critical habitat. This determination is based on:

- 1) A slight increase (0.4%) in unsuitable lynx habitat would occur. This would be temporary, and plant succession would change the affected units to lynx habitat in 15-30 years.

## Appendix 4

---

- 2) All proposed activities comply with the NRMLD standards.
- 3) No increase in lynx mortality is anticipated from activities proposed in Alternative 2a.
- 4) In addition, the project activities are not likely to result in the destruction or adverse modification of proposed critical habitat.

### Gray Wolf

This FEIS analysis corrects wolf pack information in the project area as discussed in the affected environment section, and updates the cumulative effects section. The ESA listing of the gray wolf has changed several times in recent years with court opinions and updated direction. Currently, and for purposes of this FEIS analysis, the gray wolf is considered as listed. The finding of “*may affect, but is not likely to adversely affect*” does not change.

#### Data Sources, Methods, Assumptions, Bounds of Analysis (addition to page 131 of the DEIS)

Strategies to protect and manage the recovered wolf populations in Montana, as well as the ecology, biology and habitat descriptions are outlined in the Northern Rocky Mountain Wolf Recovery Plan (USDI 1987). The Montana Gray Wolf Conservation and Management Plan FEIS (MFWP 2003) provides additional management considerations. The Northwest Montana (NWMT) Recovery area is one of three wolf recovery areas identified for the Northern Rocky Mountain wolf population (USFWS et al. 2006). The USFWS final rule removing this population segment of the gray wolf from the federal list of endangered and threatened wildlife species was released February 27, 2008 (Federal Register 2/27/2008). The U.S. District Court (Montana District, Missoula Division) reinstated the endangered status on 7/18/2008. As of March 2009, the new Secretary of the Interior decided to remove the gray wolf from the threatened and endangered list in Montana. Due to the numerous changes over the past couple of years, the analysis of the gray wolf has been updated for the FEIS, and will remain in this document.

The Kootenai National Forest is within the NWMT Recovery Area. Information for this population segment is provided by the Rocky Mountain Wolf Recovery Annual Reports. Wolf occurrence data comes from recent District wildlife observation records, Forest historical data (NRIS FAUNA), and other agencies (USFWS, MFWP).

The analysis boundary for all effects to the wolf and their habitat is the Grizzly and Buckhorn Planning Subunits (PSUs). Measurement indicators for this wolf analysis include the following key habitat components:

**1) Sufficient, year-round prey base for big game or alternate prey:** This component can be measured by adhering to Forest Plan big game management recommendations. For this planning area, both whitetail deer and elk management recommendations were applied by analyzing big game habitat. They include cover/forage ratios; road densities; key habitat features; movement areas; habitat effectiveness levels, and security levels. Additional empirical knowledge on game abundance will be supplied.

**2) Suitable and somewhat secluded denning and rendezvous sites:** Sensitivity to disturbance at den sites and subsequent abandonment varies greatly among individual wolves. One incident of human disturbance at the den may cause abandonment for some wolves, while other wolves will tolerate some human disturbance (Thiel et al. 1998) and may not abandon dens unless there are repeated or severe incidents of disturbance (Claar et al. 1999). One recommendation for protection of den sites from human disturbance includes restricting human access within a 1.5 mi. radius of an occupied den from 4 weeks prior to whelping to the end of denning activity. Closure area should be irregular in shape to avoid pinpointing den locations. Rendezvous sites should be similarly protected (Frederick 1991). MFWP encourages land management agencies to consider the locations of wolf den and rendezvous sites and

habitat security in their future planning activities in the same context as considering the locations of ungulate winter range (Sime 2002). Assumptions with this method would include maintaining the habitat integrity of the denning and rendezvous sites.

**3) Sufficient space with minimal exposure to humans:** This component is associated with reducing the risk of human-caused mortality to wolves. Human disturbance and accessibility of wolf habitats (i.e. road densities) are the principle factors limiting wolf recovery in most areas (Leirfallom 1970, US Fish and Wildlife Service 1978 and 1987 all in Frederick, 1991, Thiel 1978). These components can be generally measured by maintaining open road density standards required by the Forest Plan as well as maintaining any security habitat recommended in the big game habitat recommendations.

### **Affected Environment/Existing Condition (update to page 132 of the DEIS)**

At the end of 2007, there were 73 wolf packs in all of Montana, with 39 meeting breeding pair criteria. These packs contained a minimum estimate of 422 wolves (Sime et al. 2008). This area includes the Kootenai National Forest. There are currently 12 packs (5 breeding packs) using the KNF for all or part of their territories. These packs had a total 39 wolves at the end of 2007 (ibid). There were 4 known mortalities (two by control purposes) in the KNF packs this past year.

The Candy Mountain pack has been observed in these PSUs as a portion of their home range. Since the pack was established in 2003, there have been no known depredations on livestock attributed to this pack, and one known wolf mortality (USDI et al. 2006). Currently, the pack includes two adults and two pups with none of the pack members radio-collared (Sime et al. 2008). The pack is considered a non-breeding pack, since the radio collar is missing on the female.

**Prey Base:** Both of the PSUs support year round habitat for most big game species. Whitetail deer are the most abundant big game species found within the PSU, but elk, moose and mule deer also occupy both PSUs. This mix of big game species provides a good year-round prey base for wolves. The whitetail deer was chosen as the MIS species the southern portion of the project area, while the elk was selected as the MIS for the northern segment. The elk herd is considered stable in this elk management unit (MFWP 2004). Whitetail deer numbers have been up since 2006, and the state has issued additional doe tags for whitetail deer harvest for three consecutive years, 2006-2008. Current cover/forage ratio for both elk and deer habitat shows a higher percentage of cover; which means managing for more forage is suggested. The existing habitat security, open road density and movement corridors are meeting forest plan standards.

**Den and Rendezvous Sites:** There are no known den sites or rendezvous sites in the affected PSUs.

**Sufficient Space with Minimal Exposure to Humans:** Open road densities by Management Area (MA) currently meet Forest Plan Standards within the PSUs. Security habitat recommendations for elk are above the recommended levels. Fifty-two percent of the project area provides elk security habitat, which would also provide secure habitat for wolves.

## Appendix 4

---

### Environmental Consequences – All Action Alternatives (update to page 133 of the DEIS)

#### *Direct and Indirect Effects*

**Prey Base:** Project activities from the action alternatives would increase forage for big game; trending the cover-to-forage ratio towards the desired conditions for elk and whitetail deer in the PSUs. Habitat security for elk would remain above minimum levels throughout the project, and open road densities meet management recommendations for both ungulates. All of these habitat elements that favor big game are also good for wolves. Therefore, prey conditions for wolves are likely to be maintained or improved with the action alternatives.

**Denning/Rendezvous Sites:** There are no known den sites or rendezvous sites within the Planning Area. Suitable habitat for dens or rendezvous sites would remain available following all activities.

**Sufficient Space with Minimal Exposure to Humans:** Open road densities would continue to meet Forest Plan Standards in the action alternatives. Most of the gated roads used for timber hauling, fire access and road storage or decommissioning work would remain gated (closed) to public motorized access. Wolves may be temporarily disturbed by project activities, but there is no anticipated increased risk of mortality. Wolves may avoid areas of disturbance, but other past projects showed records (district records) of wolf presence during timber harvest and road decommissioning activities.

#### *Cumulative Effects (update to page 133-134 of the DEIS)*

Since 2000, approximately 1,900 acres of forested habitat in the project area have been modified by fire or timber harvest. Past fire events included 848 acres of wildfire and 447 acres of prescribed burns. Over 100 acres of prescribed burning occurred as post timber harvest treatments for slash and big game forage production. Timber and salvage harvest affected 389 acres, while pre-commercial thinning occurred on 291 acres. These past actions and other natural events have created much of the existing habitat conditions found within the PSUs.

An ongoing fuels project continues in the north end of the Grizzly PSU. The harvest began in 2007, with some underburning in the early summer. Most of the 1,000-acre project is complete. Harvest will continue in 2009 and all operations appear to be on schedule for completion within the contracts' time frames.

**Prey Base:** The Candy Mountain pack's territory covers portions of the Grizzly and Buckhorn PSUs. Past analyses (over the last 10 years) in these PSUs show that big game habitat management directions are being met. The elk population appears to be stable (MTFWP 2004), and whitetail deer populations appear to be increasing, due to the state expanding deer hunting tags in this hunting district (the hunting district includes the entire Yaak River drainage located in the USA).

**Denning/Rendezvous Sites:** There are no known dens or rendezvous sites in either of the affected PSUs.

**Sufficient Space with Minimal Exposure to Humans:** Upon the project completion, all road densities would be at or better than standards set in the (Kootenai) National Forest Plan, grizzly bear guidelines and state recommendations for elk and whitetail deer. This should benefit the wolf as well.

**Roads:** No new roads have been built in the PSUs in the past 10 years. A new bridge over Burnt Creek was constructed in 2008. This included less than one-mile of road improvement on public property. Upon completion of the action alternatives, road densities would decrease (refer to the grizzly bear portion of this BA). Lower road densities are considered favorable for habitat security for the grizzly bear, big game and the gray wolf. Additionally, about 15 miles of old road beds would be decommissioned in the action

alternatives. Such activities would permanently remove these roads from the Kootenai NF infrastructure, thereby creating long-term habitat security for the wolf and other animals.

Most of the private lands are located along the Yaak River or the edges of the affected PSUs (see Alternative 2a map). Some home building may occur, but there would be no new increase of private acreage. Depending on the magnitude, type and location of developments, these activities can have varied effects, including the loss of hiding cover and localized disturbance on wolves and their prey species. Past trends in land development here would suggest that development would continue to occur at a low rate and would have minor impacts on wolves and their prey species within the analysis area over the next ten years. There are no state or timber company holdings in the project area.

**Hunting:** Ongoing hunting activities are regulated by the MTFWP. The Forest Service influences hunter access through road management. Hunting activities within the PSU will cumulatively contribute to minor short term effects (during the general hunting season) to habitat security. Affects from hunting vary with activity levels and can include short-term disturbance. Mortality risk to the wolf is increased through hunting. The level of hunting within the analysis area is not expected to change due to the proposed action.

Regulatory Consistency (update to page 134 of the DEIS)

**Forest Plan:**

The project would comply with Kootenai Forest Plan direction that applies to the gray wolf (pp. II-1 #5, II-23) and their prey base (pp. II-1 #3, #7, #12; II-7, II-22,23).

The project-level habitat impacts would contribute to improving overall Forestwide trends in gray wolf habitat as discussed in the cumulative effects section. Populations are expected to continue to increase.

**Endangered Species Act:**

The project is consistent with the Endangered Species Act.

**Statement of Findings (update to page 134 of the DEIS)**

The proposed action *may affect, but is not likely to adversely affect* the gray wolf or its habitat based on:

The prey base is stable or increasing.

1. No known dens or rendezvous sites are in the project area. Suitable habitat for such would not be affected by the action alternatives.
2. Project activities may create a short-term avoidance in affected areas.
3. Habitat security and road density standards are met for big game and wolf.
4. Mortality risk to the wolf is not expected to measurably increase during proposed activities, and would decrease slightly after post sale activities are completed.

### **SENSITIVE SPECIES, MANAGEMENT INDICATOR SPECIES, AND NEOTROPICAL MIGRATORY BIRDS**

*(Note: the following discussion of effects is based on the discussion of the direct and indirect effects of Alternatives 2 and 3 on sensitive species, management indicator species, and neotropical migratory birds which is found on pages 137 through 173 of the DEIS. Updates to the effects discussion reflect the proposed activities under Alternative 2a).*

#### **Alternative 2a - Environmental Consequences for Sensitive Species, Management Indicator Species, and Neotropical Migratory Birds**

##### *Direct and Indirect Effects*

The direct, indirect, and cumulative effects for Alternative 2a to Forest sensitive species, management indicator species (MIS), and neotropical migratory birds are similar and within the scope of effects displayed in the DEIS for Alternatives 2 and 3. Under Alternative 2a Unit 15 has been dropped and the number of winter harvest units is increased, so the following items are particularly noted.

**Fisher pg. 145.** An additional 6 winter units (2, 3, 4, 11, 12a, and 17) are located near or in potential fisher habitat. As with most of the winter units in Alternatives 2 and 3, these units are not in primary fisher habitat (mature cedar). In this and other respects the fisher analysis for Alternative 2a is the same as the action alternatives analysis described in the DEIS.

**Wolverine, pg. 156.** Wolverines den at higher elevations during the winter than fishers. The winter harvest units are at lower elevations and near roads that provide public motorized access. A wolverine would be unlikely to wander into these areas during winter.

**Elk, pg. 160-163 and White-tailed Deer, pgs. 166-169.** Under Alternative 2a, ten additional timber harvest units would be winter harvest rather than summer as analyzed under Alternatives 2 and 3. Six of those units or portions of such (units 11, 12a, 13, 13a, 17, and 32) are located in MA-12 (big game summer range). By conducting harvest activities in the winter, the potential for displacing big game species on this summer range is greatly reduced. The other four units (about 80 acres) lie in winter range, and would be harvested in the winter season. This would minimize the potential for weed spread on winter range and provide needed forage for big game in an area that is currently low in such. Some disturbance to big game is anticipated, however, many winter logging operations attract big game.

The shape, size or layout of units would maintain vegetative movement corridors and hiding cover for grizzly bear, elk, deer and other big game. In some cases, vegetative islands were designed to be retained within units. Changes were made to Units 45 (32 acres), 45a (20 acres), 49 (22 acres), 50 (15 acres), and 50a (37 acres) to address public concerns on unit opening size and proximity to cover for wildlife. Vegetative corridors would be maintained in Alternative 2a. Units 49 and 50 have been reduced in acreage, and the boundaries modified to accommodate cover for big game and grizzly bear movement and hiding cover.

In Alternative 2a, no Forest Plan amendment is necessary for exceeding ORD recommendations in MA-12 (summer range) due to: 1) unit 17 would be harvested during winter season, which does not require roads to be open in the summer; and 2) there would be no increase in open roads for public motorized access in Alternative 2a. Therefore, the open road density in MA-12 would remain at 0.62 miles/sq.mile which meets the Forest Plan standard of  $\leq 0.75$  mi./sq.mi. Roads that are currently gated in MA 12 would

remain closed to public motorized access. Project design requires the contractor to close and lock the gate at the close of business and over weekends.

Alternatives 2 and 3 included a design feature that harvest and related activities would not commence in Units 15, 17, 18 and 20 until one year after all activities in the Obermayer project are completed to provide for big game displacement (DEIS pg. 16). The Obermayer harvest began in 2007, with some underburning in the early summer. As of March 2009, approximately 165 acres are left to be harvested of the 1,000-acre fuels project. The remaining activities would consist of timber harvest in 40 acres during the July to December timeframe and 125 acres in the non-bear year (winter season). No new roads would be constructed to finish the project. In the Obermayer Fuels Decision Memo subdivisions were identified, allowing for big game winter range areas with no disturbance. A small portion the Obermayer Project may be active once the Grizzly project begins in late 2009. Under Alternative 2a, all of the units in the Grizzly project (Units 11, 12a, 13, 13a, 17, 18 and 20) that are near the Obermayer project would be harvested in the winter season. Though these units are not in winter range (see DEIS map M-6), design criteria for Alternative 2a would require that Units 17, 18, and 20 would only occur after completion of Units 11, 12a, 13 and 13a to provide big game displacement area. No increased displacement to big game is expected from this minor overlap in the timing of the two projects.

### **Additional Wildlife References:**

#### *Grizzly Bear:*

- Buterbaugh, G.L. 1991. Biological Opinion on Grouse-Keeler Timber Sale. USDA Kootenai National Forest, Libby, MT.
- Harms, D. 1990. Summary of Interagency biologist meeting of February 22, 1990: Grizzly bear standards and guidelines. Unpublished meeting notes. U.S. Fish and Wildlife Service, Helena, MT. 20 pp.
- Kasworm, W.F., H. Carriles, T.G. Radant, and C. Servheen. 2007. Cabinet-Yaak Grizzly Bear Recovery Area 2006 Research and Monitoring Progress Report. USFWS, Missoula, MT. 69 pp
- Kasworm, Wayne and Timothy Manley. 1988. Grizzly Bear and Black Bear Ecology in the Cabinet Mountains of Northwest Montana. MDFWP, Helena, MT. 122 pp.
- McMaster, Kemper 1995. Amended Biological Opinion on Kootenai Forest Plan to include an Incidental Take Statement. U.S. Fish and Wildlife Service, Helena, MT. 15pp.
- Montana/Northern Idaho Level 1 Team. 2006. Guide to effects analysis of helicopter use in grizzly bear habitat. 6 pp.
- Summerfield, B., W. Johnson, and D. Roberts. 2004. Trends in road development and access management in the Cabinet-Yaak and Selkirk grizzly bear recovery zones. *Ursus* 15(1); Workshop Suppl. 115-122.
- USDI US Fish and Wildlife Service. 1993. Grizzly bear recovery plan. Missoula, MT. 181 pp.
- Wakkinen, Wayne L. and Wayne F. Kasworm. 1997. Grizzly bear and road density relationships in the Selkirk and Cabinet-Yaak recovery zones. USFWS, Missoula, MT. 28 pp.

#### *Gray Wolf:*

- Fish and Wildlife Service, Nez Perce Tribe, National Park Service, and USDA Wildlife Services. 2006. Rocky Mountain Wolf Recovery 2005 Annual Report. C. Sime and E. Bangs, editors. USFWS, Ecological Services, 585 Shepard Way, Helena, MT. 149 pp.
- Leirfallom, J. 1970. Wolf management in Minnesota. In: Jorgensen, S.E., L.E. Faulkner, and L.D. Mech (eds.), Proceedings symposium on wolf management in selected areas of North America. USDI Fish and Wildlife Service. pp 9-14.
- MWFP (Montana Fish Wildlife & Parks). 2003. Montana gray wolf conservation and management plan. Helena, MT.
- Sime, Carolyn A., V. Asher, L. Bradley, K. Laudon, M. Ross, J. Trapp, M. Atkinson, and J. Steuber. 2008. Montana gray wolf conservation and management 2007 annual report. Montana Fish, Wildlife & Parks. Helena, Montana. 137 pp
- Thiel, R.P. 1978. The status of the timber wolf in Wisconsin, 1975. Wisconsin Academy of Sciences, Arts and Letters. 66: 186-194.
- U.S. Fish and Wildlife Service, Nez Perce Tribe, National Park Service, Montana Fish, Wildlife & Parks, Idaho Fish and Game, and USDA Wildlife Services. 2007. Rocky Mountain Wolf Recovery 2006 Annual Report. C.A. Sime and E.E. Bangs, eds. USFWS, Ecological Services, 585 Shepard Way, Helena, Montana. 59601.
- U. S. Fish and Wildlife Service. 1978. Recovery plan for the eastern timber wolf. U.S. Gov. Printing Office, Wash. D.C. 79 pp.

## Appendix 4

---

### *Canada Lynx:*

- Bertram, Tim, and Jim Claar. 2008. Horizontal cover- interim guidance for assessing multi-storied stands within lynx habitat. USDA Forest Service Region 1, Missoula, MT. 3 pp.
- Clark, Jaimie Rappaport. 2000. Endangered and Threatened Wildlife and Plants: Determination of threatened status for the contiguous U.S. distinct population segment of the Canada Lynx and related rule; Final Rule. UDSI FWS. Federal Register March 24, 2000. Vol. 65 No. 58. pp 16051-16086.
- KNF Lynx Taskforce. 1997. Lynx Conservation Strategy Kootenai National Forest. USDA Forest Service Libby, MT. 6 pp plus appendices.
- USDA Forest Service. 2004. Draft Environmental Impact Statement Northern Rockies Lynx Amendment National Forests in Montana, parts of Idaho, Wyoming and Utah Bureau of Land Management units in Idaho and parts of Utah. USDA Forest Service, USDI Bureau of Land Management. Northern Region, Missoula, MT 416 pp.
- USDA Forest Service. 2007a. Northern Rockies Lynx Management Direction, FEIS. USDA Forest Service Region 1. Missoula, MT. 600 pp.
- USDA Forest Service. 2007b. Northern Rockies Lynx Management Direction, ROD. USDA Forest Service Region 1. Missoula, MT. 68 pp.
- USDA Forest Service. 2008. Forest plan monitoring and evaluation report fiscal year 2007. USDA Forest Service, Kootenai National Forest. 82 pp.
- USFWS. 2009. Endangered and threatened wildlife and plants; revised designation of critical habitat for the contiguous United States distinct population segment of the Canada lynx; final rule. 50 CFR Part 17 pp. 8616-8702.