

Response to DEIS Public Comments

Public comments identify distinct concepts that people want addressed. This document organizes these topics into a condensed format to facilitate issue identification and the response to each comment. To develop a public concern, the team evaluated the public comments, selected quotations that are representative of key ideas, and distilled these key ideas into statements that summarized the respondents' sentiments. The public concerns are organized by topic area. Each public concern also cross-references the letter(s) from which that concern was derived. The following public concerns are addressed in the FEIS.

Decision making

PC #14: The agency should not play to special interest groups that would put everything into preservation. Proposed actions, void of scientific data, create an environment where one side or the other benefits from lack of information. (Ltr #4, 8, 12, 21, 27, 34, 44, 134, 193, 199, 519)

PC #15: The agency should not play to the timber, recreation, mining and grazing industries, or to the administration. (Ltr #4, 28, 59, 68, 75, 130, 141, 149, 157, 161, 166, 175, 182, 385, 403, 429, 486, 513, 4536)

Response to PC 14 and 15: The goal of the proposal is to conserve and promote the recovery of Canada lynx. As discussed in the Purpose and Need (FEIS, p. 1), the USDI Fish and Wildlife Service (FWS) proposed to list Canada lynx as a threatened species under the Endangered Species Act (ESA) on July 8, 1998. The USDA Forest Service and USDI Bureau of Land Management (BLM)

responded to the declining status of lynx in 1998 by establishing a team of international experts in lynx ecology to collect and summarize scientific data. This resulted in the publication *Ecology and Conservation of Lynx in the United States* (Ruggiero et al. 2000a). Based on this information, an interagency team of biologists developed the *Lynx Conservation Assessment and Strategy* (Ruediger et al. 2000) (LCAS). These documents and their recommendations are based on the best available science.

The Proposed Action was based on the conservation measures recommended in the LCAS (FEIS p. 8). The Proposed Action was scoped for 90 days in the fall of 2001. Based on comments five primary issues were identified. They reflect conflicts between lynx conservation and alternative uses of natural resources. The primary issues were used to develop alternatives to the Proposed Action. The DEIS was released in January 2004; and the Preferred Alternative was Alternative E. Based on comments received on the DEIS a new alternative was developed, Alternative F.

Alternative F does not include Standard ALL S2 because it may lead to cumulative adverse effects to lynx, and because measures to conserve lynx may be less consistently interpreted and applied throughout the planning area under Standard ALL S2. Alternative F adds Standard VEG S2 back and Alternative F provides more specific criteria on where lynx standards apply in regards to fuel treatment projects (See Standards VEG S1, S2, S5, and S6). Alternative E did not apply the vegetation standards to fuel treatment projects that were identified through a process such as that described in *A Collaborative Approach for Reducing Wildland*

Fire Risks to Communities and the Environment 10-Year Comprehensive Strategy Implementation Plan (Standard VEG S3). Under Alternative E some fuel treatment projects could have occurred outside the wildland urban interface (WUI). Standard VEG S3 was removed under Alternative F. Instead, Alternative F would apply the vegetation standards to fuel treatment project outside the WUI; and limits the amount of fuel treatment projects that do not meet standards within the WUI to ensure the conservation of lynx.

Public involvement

Clarity

PC #17: The agency should better clarify the distinction between the proposed action and preferred alternative. (Ltr # 105, 334, 365)

Response to PC 17: In the FEIS we did a better job of distinguishing between the proposed action and the preferred alternative. In the cover letter that went out with the DEIS, in the DEIS abstract, and in the description of the alternatives we did discuss the difference between the proposed action and the preferred alternative. However, we should have noted in the summary of the DEIS that Alternative E was the preferred alternative. In the FEIS Alternative B still remains the proposed action, but Alternative F is now the Preferred Alternative.

PC #108: The agency should continue to use tables such as DEIS Table 2-1 which compares alternatives and the Table in Appendix A which compares the differences between the LCAS and proposed action. (Ltr #334, 365)

Response to PC 108: We are glad they were helpful. Table 2-1, Appendix A, and a variety of other tables are included in the

FEIS. They have been updated to reflect the new Preferred Alternative, Alternative F.

PC #491: The discussion and information in the Chapter 2 Sections on "Management direction considered, but not in detail," and "Other concerns," and Tables 2-2 through 2-6 with alternatives comparisons were appreciated. This discussion and information and the tables improve public understanding, and facilitate comparative evaluation of alternatives, define issues, and help provide a clearer basis of choice among options for the decision-maker and the public in accordance with NEPA. (Ltr #296)

Response to PC 491: We are glad they were helpful. We believe the discussions in Chapter 2 help disclose what we considered and why we considered it. We added more discussion in those portions of Chapter 2 based on the comments we received on the DEIS. We modified the section "*Management direction considered, but not in detail*" to "*Management direction considered*". We did this to describe our considerations in the development of management direction, including why some direction was included and why other direction was not included.

PC #434: The agency should add some simple tables to help compare alternatives and improve the readability of the EIS. A table showing the habitat crosswalk of lynx – affected in the natural landscape by landscape level variables – to species affected more by gap dynamics (i.e., a kinglet) would help the reader who appreciates and understands the science of ecosystems – that being their hierarchical nature and the inability to aggregate across scales such as landscape versus gap. (Ltr #492)

Response to PC 434: The FEIS contains numerous tables that compare various aspects of the alternatives. This FEIS is programmatic in scope and is not designed

or intended to address multi-species landscape scale issues within the planning area.

PC #517: The agency should highlight the subtle differences in the alternatives. The document is misleading because there are significant differences in changes in wording between alternatives. (Ltr # 23)

Response to PC 517: We are being as forthright as possible concerning the differences among the alternatives because we want the public and the deciding officials to understand the environmental consequences of the decision. The Section *Alternatives Described in Detail* provides a specific description of the difference between each alternative and Alternative B, the Proposed Action. Table 2.1 identifies the differences among the alternatives. Table 2.2 compares how the alternatives address the issues, Table 2.3 compares how management concerns are addressed by the alternatives, Table 2.4 compares how the LCAS risk factors are addressed by the alternatives, Table 2.5 compares how the alternative affect lynx, and Table 2.6 compares how the alternative affect other resources. Chapter 3 of the FEIS discusses the effects of the differences among the alternatives.

PC #19: The agency should define what it means by a form letter. If there are different kinds of form letters and different form sources, then the agency should explain and quantify these differences to the public. (Ltr #334, 365)

Response to PC 19: A form letter is identified when five or more responses with identical text from different people are received. A numerical form number is assigned to each specific type of form. We received three separate form letters on the DEIS (See the Introduction section of this volume).

PC #269: The agency should modify HU S1 to specify that "play areas" are "designated play areas". (Ltr #495)

Response to PC 269: The wording in HU S1 for Alternatives B, C, and D, and in Guideline HU G11 for Alternative E implies that "play areas" are "designated play areas". In Alternative F, Standard HU S1 has also been changed to Guideline HU G11. In order to be more explicit in Alternative F, the term "play areas" has been changed to "designated play areas" (see Table 2-1, FEIS, p 60).

PC #408: The agency should not use "logging" terminology in the EIS. The agency should use only professional wildlife management, biological terms. (Ltr #226)

Response to PC 408: NEPA implementing regulations at 1502.8 says environmental impact statements shall be written in plain language. The use of "logging", (e.g. forestry) terminology is appropriate when describing forestry practices or in response to a particular comment.

PC #505: The agency should replace the DEIS wording to say: "The U.S. Fish and Wildlife Service has no information to indicate that grazing or snowtrail compaction is a threat to lynx at this time." While the best scientific and commercial data available does not indicate that grazing or snow compaction are threats to lynx conservation and recovery at this time, adverse effects to individual lynx could result from these activities if the guideline is not always followed. (Ltr #5326)

Response to PC 505: Thank you for clarifying this. The lynx effects analysis recognizes that guidelines may adversely affect individual lynx if not followed (FEIS, Lynx section).

PC #511: The agency should modify Alternative E, VEG G1 by adding "for lynx or their prey" at the end of first sentence. (Ltr #5326)

Response to PC 511: This change has been made in Alternative F (See Table 2-1, FEIS, p. 50).

Definitions

PC #107: The agency should redefine standards as "Standards are important to provide clear management direction that reflects the best scientific information available, which can be changed as new scientific information becomes available". (Ltr #334, 365)

Response to PC 107: In the DEIS (p. 283) and FEIS (p. 376) a standard is defined as "a required action in a land management plan specifying how to achieve an objective or under what circumstances to refrain from taking action. A plan must be amended to deviate from a standard." We believe this is the appropriate definition because the intent of standards is to place sideboards on our management actions, in this case, sideboards for activities that may affect lynx. The standards are used in those cases where the best scientific information available indicates a strong need for sideboards. We agree that standards may be changed as new scientific information comes available, but those changes would be made with full public participation and disclosure.

PC #493: The agency should include definitions for high density and low density snowshoe hare habitat in the glossary to facilitate public understanding. (Ltr #296)

Response to PC 493: We discussed high and low density snowshoe habitat in the FEIS, pp. 149-153. Figures 3-3 and 3-4 indicate that young high density regenerating forests are 5,000 + trees per

acre, and high density undergrowth in multistoried forest are 2,500 + trees per acre. Less than that would be low density.

PC #531: The agency should define critical habitat in the glossary. (Ltr #226)

Response to PC 531: We added the definition of critical habitat to the FEIS (FEIS, p. 4). The term "critical habitat" for a threatened or endangered species means: (i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of the ESA, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the ESA, upon a determination by the Secretary that such areas are essential for the conservation of the species (Endangered Species Act of 1973, Sec. 3(5)(A)). It is the responsibility of the Secretary of Interior to designate critical habitat (ESA, Sec. 4(b)(2)).

PC #70: The management direction should use clear definitions that comply with everyday usage and vocabulary, and that are not confusing. (Ltr #456)

Response to PC 70: We tried to use definitions that are consistent with terms used in the respective resource areas. In some cases these terms are not in everyday usage, but they are necessary to the discussion and have very specific meanings. In these cases, we defined them in the glossary to help the general public. For example, the term "stand initiation structural stage" has been published in a peer-reviewed book (Oliver and Larson, 1996) and has a very specific meaning in silviculture and ecology. Its meaning can be found in the glossary (FEIS, p. 376).

PC #71: The management direction should define "play areas" more clearly. (Ltr # 202, 457, 458, 465)

Response to PC 71: We modified the definition of "designated play areas" to more clearly describe what they include (FEIS, p. 367). "Designated play areas" are places identified for winter recreation, such as inner tubing or snowmobiling, but which are not ski areas. They are areas where use is encouraged, either by on-the-ground marking or by publication in brochures, recreation opportunity guides, maps (other than travel maps), or in electronic media produced or approved by the media. They do not include areas just open for winter travel. There are only four designated play areas in the planning area. There are two each on the Helena National Forest and the Lewis and Clark National Forest (FEIS, Appendix K, Table 8).

PC #105: The agency should reevaluate the term "to maintain" as it is very misleading. It appears that it means that habitat and lynx populations can be reduced down to a level that is a minimum for viability. It is unlikely that a minimum level can be determined. (Ltr #1, 3, 67)

Response to PC 105: It does not mean to reduce to minimum level for viability. In the context of this proposal "to maintain" means to provide enough lynx habitat to conserve lynx (FEIS, pp. 66 and 371). However, it does not mean to keep the status quo. The American Heritage dictionary defines "maintain" as: 1) to continue, carry on, keep up; 2) to preserve or retain; 3) to keep in a condition of good repair or efficiency; 4) to provide for, to keep in existence, to sustain; etc.

We used the word "maintain" in the standards because habitat conditions change, trees grow and die; the habitat is not static. For example, Standard ALL S1

says "New or expanded permanent developments and vegetation management projects must maintain habitat connectivity." Some habitat connectivity can be removed or affected as long as there is enough connectivity for lynx to move through an area.

Appendices

PC #215: The agency should include the 10-Year Comprehensive Strategy as an Appendix in the FEIS. (Ltr #495)

Response to PC 215: The 10-Year Comprehensive Strategy was not included as an appendix because it is not the only management direction related to fire management. To include all the documents would have made the FEIS too large; however we have included the 10-Year Comprehensive Strategy as well as the following documents on the Northern Rockies Lynx website at

<http://www.fs.fed.us/r1/planning/lynx.html>. Documents include: *A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment – 10 Year Comprehensive Strategy*; Federal Register Notices that identify the *Urban Wildland Interface Communities Within the Vicinity of Federal Lands that are a High Risk of Wildfires*, (January 4, 2001 and August 17, 2001), and *The Healthy Forests Restoration Act 16 U.S.C Chapter 84*.

PC #216: The agency should include the Remand Notice as an appendix in the FEIS. (Ltr #495)

Response to PC 216: FEIS Appendix O includes a copy of the listing decision of March 24, 2000. The Remand Notice of July 2, 2003 is located in the FEIS, Appendix P.

General edits

PC #102: The agency should consider the following edits to the summary document:

- A) Guideline HU G7 states, "New trails should be situated away from forested stringers." Suggest changing the guideline to, "New roads and trails should be located to avoid critical lynx habitat."**

Response to PC 102, A: The FWS designates critical habitat. It has a specific technical definition under the ESA (FEIS, 4). The intent of Guideline HU G7 is not about avoiding critical habitat, but rather it is about not impacting potential connections between blocks of lynx habitat. Therefore, the wording has not been changed.

- B) Page 73, Alternative B: Delete "except additional grooming limited on designated" This statement doesn't add anything meaningful to the alternative comparison.**

Response to PC 102, B: This change has been made in the FEIS (p. 107).

- C) Page 73, Alternative B: Change "exists today" to "exists in 2003." If a baseline is established it should have a date.**

Response to PC 102, C: We made the change to say "exists in 2000" because 2000 is the baseline year (p. 107).

- D) Page 73, Alternative B: The second bullet under "Ability to expand designated routes" states that one of the effects on outfitter-guide permits would be to limit "changes in season". Why would over-the-snow permittees want to change season? This doesn't make sense.**

Response to PC 102, D: Standard HU S1 could affect an outfitter's ability to expand an operation. A decade ago there was very little outfitted use during winter. Traditionally outfitters offered hunting

trips. Over the past five to ten years, public demands for family oriented vacations have increased. Outfitters responded by diversifying their business and changing their season-of-use in their permits from fall to winter. Alternative B would not allow a change in the season of use if it results in an increase in designated over-the-snow route in lynx habitat.

- E) Page 73, Alternative B, last bullet: Why would the permitting process limit expansion; and how does this relate to effects of the preferred alternative?**

Response to PC 102, E: The permitting process is a complex process, is based on existing land management plan direction and takes considerable time to complete. Over the past decade the number of outfitter and guide permits and their level of use have remained relatively steady. Generally, new permits or increases in service-days have been issued only when existing permits terminate, or when other outfitters decrease their permitted service-days. The point of this bullet is that the permitting process already constrains the number of outfitter and guidelines, and Alternative B really does not change that condition.

- F) Page 74, Alternative B, 2nd bullet: Describe what the user experience will change to. More crowded? Less safe?**

Response to PC 102, F: We changed Table 2-2 in the FEIS to explain that for those users who desire more solitude the quality of the experience may decrease due to increased crowding, and there would also be safety issues.

- G) Page 84, Alternative B, Winter Recreation: The first bullet states, "Standard HU S1 says no net increase in groomed or designated over-the-snow routes?" On page 44, the HU S1 standard states, "Allow no net increase**

**in designated over-the-snow routes?"
Please clarify. (Ltr# 497)**

Response to PC 102, G: Table 2-4 on page 84 was attempting to paraphrase Standard HU S1 in order to identify the differences between Alternatives B and Alternatives C. Table 2-1, page 44 correctly states the standard language: "Allow no net increase in designated over-the-snow routes or play areas...". We changed the wording in Table 2-4.

PC #432: The agency should fix the following typos or errors found in the DEIS:

- P. 143, typo, right column, 4th last line;
- p. 144, right column, 3rd line, 'reduce' should probably be 'increase';
- P. 148- TEP Birds- states that the Mexican Spotted Owl is located on the Ashley National Forest. The USFWS maps on the range of the Mexican Spotted Owl do not connect to the Ashley National Forest;
- p. 150, left col. 'martin' should be 'marten';
- p. 348, Gallatin FP now expected to start revision in 2006, Custer also;
- p. 364, boreal owl is no longer listed as sensitive on the Gallatin;
- Relook at appendix H, sensitive species list is being updated. (Ltr #11, 356, 495)

Response to PC 432: Thank you. The typographical errors noted above have been corrected.

On the DEIS page 144, *reduce* was the appropriate word because Alternative E reduces risks to lynx by adding some management direction in existing plans for grazing, minerals and roads.

The Mexican Spotted Owl has been removed from the species list.

The analysis for sensitive species has been updated to correspond to the Northern Region's updated sensitive species list (USDA Forest Service 2004e and 2005d); the Intermountain Regions updated list (USDA Forest Service 2004a) and the Rocky Mountain Regions updated list (USDA Forest Service 2006d).

At this time, the Gallatin and Custer National Forests do not have a scheduled revision date as of September 2006 (USDA Forest Service 2006e). The schedule for revising plans (FEIS, Appendix D, and Table D-1) has been updated for all the plans.

PC #498: The agency should consider the following edits/corrections:

- The mountain plover is no longer a proposed species and the TEP section should be revised accordingly (page 146).
- The Colorado squawfish should be changed to Colorado pike minnow (pages 89, 146).
- A section on "Candidate species" should be considered for the Chapter 3 "Other wildlife & fish" section to provide a heads up on species that may be proposed or listed in the future. This would include the boreal toad and the Arctic grayling among other species.
- Arctic is misspelled in Table 2-6, and 3-20.
- The Ute ladies'-tresses (a threatened plant species) occurs in Montana and Idaho (page 195), but while occurring in these States it is not clear whether they occur in the actual planning area. One population also is found in Daggett County, Utah. If there is any physical disturbance of lands where the Ute ladies'-tresses occur, the conclusion in Table 2-6 that all alternatives will have either a

beneficial or no effect to plant species may need revision.

- **Is slender moonwort a candidate species rather than a proposed species (page 195, Appendix J)? (Ltr #296)**

Response to PC 498: Thank you. The above edits have been made to the FEIS. Boreal toad and arctic grayling were considered in the FEIS (see Appendix I) because they are on the Forest Service Sensitive Species list. This list does provide a “head-up” on species where their continued viability is a concern.

We added Utah to the list of states where Ute ladies'-tresses can be found. The analysis of effects is based on what the implementation of the standards and guidelines would do to a species. Regardless of whether or not there is a disturbance to the lands where Ute ladies'-tresses occurs, implementation of any of the action alternatives would have either a beneficial or no effect to the plant since there would be additional protections to the habitat. Yes, slender moonwort (*Botrychium lineare*) is a candidate species. That change has been made in the FEIS, p. 264 and in Appendix J.

Scoping

PC #18: The agency should address comments brought up in scoping, including:

- **Discussion of the relative advantage or disadvantage of the use of models instead of data;**
- **Contribution of human activities to various risk factors;**
- **Availability of boreal forest habitat available to the lynx;**
- **Disclosure of the lack of empirical data regarding conclusions about over-the-snow recreation.**

- **Plans generally direct an aggressive fire suppression strategy within developmental land allocations**
- **Plans may risk adversely affecting lynx foraging habitat by allowing type conversions and because of limited direction pertaining to precommercial thinning.**
- **Plans are weak in providing guidance for new or existing recreation developments.**
- **Plans allow both mechanized and non-mechanized recreation that may contribute to a risk of adverse effects to lynx;**
- **Plans allow levels of human access via forest roads that may present a risk of incidental trapping or shooting of lynx or access by other competing carnivores;**
- **Management has reduced the area where natural ecological processes were historically allowed to occur, thereby increasing the area affected by known risk factors to lynx. The plans also have continued the process of fragmenting habitat and reducing its quality and quantity. Consequently, the Plans may contribute to a reduction in the geographic range of lynx;**
- **Plans fail to provide direction for monitoring lynx, snowshoe hares and their habitats. (Ltr #1, 3, 67, 360)**

Response to PC 18: Comments received during scoping were addressed in a variety of ways. Some comments were used to identify issues and develop alternatives, including management direction not considered in detail. Other comments were used to help determine the scope, that is, the level of detail of the analysis. Other comments were outside the scope of the proposed action, but were still addressed in the Draft and Final EIS because of public concern (see Chapter 2, Other Concerns).

The following summarizes how these specific comments were considered.

Chapter 3 (pp. 138-139) describes analysis tools used to evaluate effects. One coarse scale analysis tool was used to evaluate snowshoe hare habitat using (Forest Inventory and Analysis (FIA) data for Montana. Additional information on the use of FIA data is found in the FEIS p. 150.

In many cases the risk factor is entirely attributable to humans. The lynx analysis (FEIS, pp. 153-201) is based on the impact each alternative would have on the various risk factors to lynx, regardless of the amount of human contribution to those factors.

There is no true boreal forest (taiga) in the Northern Rockies Lynx planning area. The subalpine fir series, spruce fir vegetation type closely resembles the boreal forest found in Canada and Alaska, and has many characteristics in common with the taiga. The subalpine fir/spruce fir forests are sometimes referred to as western boreal forests due to their similarity to taiga. This similarity is the reason why we find snowshoe hare and lynx using our subalpine fir/spruce fir forests. For a more in depth discussion see Ruggiero et al, 2000a, Chapter 3.

There is little data on the effect of over-the-snow recreation on lynx. That is why in the Remand Notice (Appendix O) the FWS stated, "Because no evidence has been provided that packed snowtrails facilitate competition to a level that negatively affects lynx, we do not consider packed snowtrails to be a threat to lynx at this time." Since then two additional studies have been released (Bunnell 2006 and Kolbe 2005). The FEIS pp. 90-93 discusses the information available regarding snow compaction and how that information was considered in the development of management direction.

The LCAS recognized that wildland fire management is a risk factor for lynx (LCAS, p. 2-5). The FEIS considered management direction for wildland fire use (FEIS p. 88). Objective VEG O3 says to conduct fire use activities to restore ecological processes and maintain or improve lynx habitat. Changing plans to allow natural fires would require evaluating each area to see where, when, and under what conditions natural fires should be allowed. This would expand the scope of the Purpose and Need, Proposed Action, and alternatives.

The ID team decided the decision about where to let natural fires burn would be best evaluated at the local level, so local conditions could be considered. The existing alternatives encourage using natural fire, but leave the decision about when and where to the responsible local officials.

The ID team discussed the need for management direction related to type conversion (FEIS, p. 75) and determined no specific direction was warranted because: (1) the action alternatives include objectives that describe the desired condition of lynx habitat; (2) vegetative management projects should be designed to meet or move toward meeting the objectives; and (3) such language was not included in the LCAS and no new information has been found indicating additional direction is necessary.

The LCAS recognized that precommercial thinning is a risk factor for lynx (LCAS, p. 2-4). The FEIS considered precommercial thinning as one of the primary issues (FEIS, Chapter 2, pp. 33). The FEIS discusses management direction considerations regarding precommercial thinning (FEIS pp. 76-78). Chapter 3 Lynx section evaluates the effects of precommercial thinning on lynx habitat FEIS pp. 153-172 and 187-199).

The LCAS recognized that developed recreation, and mechanized and non-

mechanized recreation are risk factors for lynx (LCAS, p. 2-8). The FEIS discusses these types of recreation in the Lynx and Recreation sections (FEIS, Chapter 3, pp. 175-185 and 279-293). Alternative F, the FEIS preferred alternative, provides the amount of management direction necessary to conserve lynx, while still allowing for recreational activities to continue on public lands.

The LCAS recognized that forest roads are a risk factor for lynx (LCAS, p. 2-12). The FEIS discusses transportation and impacts to lynx (FEIS, Chapter 3, pp. 181-185), as well as shooting, trapping, and competing carnivores (FEIS, p. 180). Alternative F, the FEIS preferred alternative, provides the amount of management direction for forest roads that is necessary to conserve lynx, while still allowing for access to public lands.

The agency is well aware of the impact the existing plans have on lynx. In the listing decision FWS stated, "We conclude that the single factor threatening the contiguous United States distinct population segment of lynx is the lack of guidance for conservation of lynx and snowshoe hare habitat in National Forest Land and Resource Plans and BLM Land Use Plans" (FEIS, p. 2, and Appendix O). That is why the Forest Service has decided to incorporate management direction that would conserve lynx (FEIS, p. 1). The standards and guidelines being incorporated into the plans by this decision address fire and fuel reduction (FEIS, p. 120), precommercial thinning and timber harvest (FEIS, p. 117-119), recreation (FEIS, pp. 120-121), and forest roads and highways (FEIS, pp. 122-123). This proposal does not impose standard and guidelines on wildfire suppression efforts. However, the management direction does include an objective regarding fire use.

We are requiring monitoring of snow compacting activities, vegetation management in snowshoe hare habitat, and fuel treatment of lynx habitat in the wildland-urban interface (see FEIS, Table 2-1, pp. 62-63).

Open houses

PC #20: The agency should have had open house meetings in Spokane, WA; Priest River, ID; and Salt Lake City, UT. (Ltr #91, 202, 433)

Response to PC 20: We offered 25 open houses in four states during the comment period on the DEIS. We had only one request for a meeting in Spokane and Salt Lake City. We determined that meetings in Coeur d'Alene, Idaho (30 miles from Spokane) and in Vernal, Utah (170 miles away from Salt Lake City) were more central to the communities affected by this proposal. We had several requests to have a meeting in Priest River, instead of Priest Lake (30 miles from Priest River). We considered that request; however, the Idaho Panhandle National Forest sponsored two meetings, one in Coeur d'Alene and one in Priest Lake because these locations were more central to all the communities affected

Collaboration with other government entities

PC #22: The agency should outline the role of the FWS once the process is completed. If the FWS issues an opinion on the management direction, then it seems appropriate that when projects are planned in compliance with the standards and guidelines, the FWS should concur and not introduce new requirements or require additional consultation. (Ltr #455)

Response to PC 22: Once this planning process is complete, lynx would still remain

listed and therefore FWSs role would continue according to regulations at 50 CFR 402. If a project is determined by the biologist to have no effect on lynx we are not required to consult with FWS.

Typically our projects are in compliance with existing plan standards and guidelines and we determine the project would not likely adversely affect a listed species. We would therefore consult with FWS. In this case FWS typically concurs with the 'not likely to affect' determination, and they are unlikely to require additional mitigation for those projects. However, in some unique cases, based on site specific circumstances, additional requirements may be warranted.

In the situation where a project may adversely affect a listed species FWS may identify reasonable and prudent measures to be taken by Forest Service. If reasonable and prudent measures are identified by FWS, they also set out specific terms and conditions by which the measures are to be accomplished. The agency would be required to follow these requirements.

PC #23: The Valley Board of Commissioners should be involved in the planning process. The standard and guidelines should recognize the direct or indirect effect on lands within Valley County, Idaho. (Ltr #6)

Response to PC 23: We welcome the Valley Board of Commissioners' involvement in this planning process. We mailed a DEIS to the Board (See list on p. 262 of the DEIS). The Board commented on the DEIS (see summary of DEIS public comments). We responded to their comments (See PC 48, 393, 438, 445, and 464). The effects analysis (Chapter 3 of the FEIS) displays the direct and indirect effects to all lands within the planning area, including Valley County, Idaho. The economic and social effects are displayed in the FEIS by state because the data was collected at the state level. To

divide out the effects of the standards and guidelines county-by-county across the planning area would not further inform the decision makers on the environmental, social, or economic consequences of their decision because of the uncertainty associated with the location of the effects within each state.

Use of science in decision making

General

PC #48: The lynx should not have been listed as a threatened species. ESA decisions should be made based on sound science. (Ltr #6, 13, 48, 366, 517, 523)

Response to PC 48: This comment is addressed in the FEIS, p. 103. In summary, the Listing Decision is not the responsibility of the Forest Service. FWS is the agency responsible for listing decisions, which are made based on several criteria in ESA. Lynx were listed on March 24, 2000. In July 2004, the FWS reaffirmed their decision to list the lynx as a threatened species (Appendices O and P).

PC #6: The agency should provide adequate guidance at the regional level in order to reduce costs at the project level. Failure to fully address all the threats to lynx identified in the LCAS indicates that consultation must be initiated with the FWS for all project-level decisions that may affect lynx to provide additional guidance needed to ensure these projects promote lynx restoration, an approach that is much more costly and probably less effective than providing adequate guidance at the regional level. (Ltr # 334, 365)

PC #51: The agency should take a conservative approach and assume for

activities, with limited data, they will threaten the long-term viability of the lynx. (Ltr #174, 300, 378)

Response to PC 6 and 51: We are basing our analysis of impacts on the best available science, as required by ESA § 7(a)(2). The management direction developed for Alternative F (preferred alternative) was based upon: (1) addressing risks to lynx that were identified in the LCAS; and (2) through the FWS Remand Notice. Some activities such as grazing and forest roads are not considered to be factors that affect lynx populations. Limited data for some activities does not necessarily equate to a threat to the long term viability to lynx. All relevant effects to lynx were addressed in the effects analysis section of the FEIS. The most current data would be used during project planning to evaluate effects at the project level.

Regardless of the amount of guidance supplied at the regional level or in plans, any project that “may affect” a threatened or endangered species is required to go through consultation with FWS. Typically consultation is faster and less expensive if guidance is already in place. That is one of the reasons we pursued this FEIS.

PC #37: The agency should disclose the basis for management direction, including what scientific studies indicate that certain management direction are threats to lynx. (Ltr #4)

Response to PC 37: The FEIS describes lynx risk factors in Chapter 2 “*Management direction considered*” and Chapter 3, “*Lynx*”. These sections include discussions about the science and uncertainty regarding each factor, with supporting references. The risk factors are primarily based on *the Lynx Conservation Assessment and Strategy* (Ruediger et al., 2000), *Ecology and Conservation of Lynx in the United States*

(Ruggiero, et al. 2000a), and the FWS listing decisions (Appendices O and P).

PC #520: The agency should assess the essential nature of the proposed activities. (Ltr #33)

Response to PC 520: This decision does not propose any management activities. Rather, this decision is programmatic in nature consisting of direction that would be applied to future management activities. The Proposed Action was based on management recommendations in the LCAS. In July 2003 the FWS issued a *Notice of Remanded Determination of Status for the Contiguous United States Distinct Population Segment of the Canada Lynx “Remand Notice”*. The remand notice said that for several risk factors identified in the LCAS, no evidence exists that they pose threats to lynx populations (Appendix O).

Based on the remand notice, an issue was added to the DEIS regarding what level of management direction should be applied to activities the FWS remand notice found were not a threat to lynx populations. The alternatives address this issue by providing varying levels of management direction for the risk factors that are not a threat to lynx populations. The FEIS evaluates the effects on lynx based on this information.

Alternative F, the preferred alternative provides some level of management direction, even for those risk factors not found to be a threat to lynx populations. The management direction is in the form of guidelines which units should follow when evaluating projects. Standards were applied to those risk factors where stronger sideboards were warranted.

PC #56: The agency should use the best available scientific information to restore, protect, and maintain lynx habitat. Many recommendations in Ruggiero et al. 2000 were ignored. (Ltr 354)

PC #25: The agency should base the management direction on science, not politics and potential litigation. (Ltr #337)

PC #546: The agency should 1) use "best science" 2) present opposing but responsible views of science relative to an issue, and 3) make sure the data and analysis are transparent such that a qualified third party could repeat the process. (Ltr #492)

Response to PC 56, 25, and 546: During development of the Draft and Final EISs the ID team met with the researchers, LCAS biology team, and FWS to ensure they had a complete understanding of lynx, lynx habitat needs, and risk factors. This information was used to refine management direction. In fact, based on discussions with the researchers it became apparent that multistory forests were more important than previously recognized in the LCAS; therefore the team added multistory forests as an issue (Chapter 2, Issue #3) and developed additional management direction to manage risk factors associated with multistory forests. We presented opposing, but responsible views of science. In particular we discuss this in Chapter 2, *Management direction considered*. In that section we discuss options the public wanted us to consider, what the science says, and what it does not say; and how we took opposing views into consideration.

PC #44: The agency should describe population data. The agency should not rely on theory and estimates. (Ltr #7, 27)

Response to PC 44: Studies of lynx in the North Cascades of Washington began in 1990 (Koehler) and studies on lynx continue there today. Squires began studying lynx demography and population dynamics in the Seeley, MT area in 1998 and that work is continuing. Information to date that has been available to us in a published or unpublished format has been assessed and

used where appropriate in the FEIS. We have a good understanding of the history and distribution of lynx in the contiguous United States (Ruggiero et al. 2000a, Chapter 8), and we know the ecology of lynx (Ruggiero et al. 2000a, Chapters 9, 10, 13, and 14) and snowshoe hare (Ruggiero et al. 2000a, Chapters 6 and 7). The life history, distribution, and ecology information is the important information we need to assess the impact the management direction would have on lynx and their habitat.

PC #39: The agency should get with the researchers and gain information to make good management decisions based on sound science. (Ltr #221)

PC #43: The agency should obtain field data, such as historical critical, biological lynx data for the species population dynamics, to evaluate direct, indirect, and cumulative effects on lynx. (Ltr #226)

Response to PC 39 and 43: As noted in response to PC 44 (above) we have had continuing interaction with lynx researchers from a variety of sources (academic institutions, State agencies, USFS) regarding new information pertinent to the management of lynx and lynx habitat. As a result of new information we incorporated management direction for older, multistoried stands and modified management direction for denning habitat. As noted in response to PC 56, 25, and 546 (above), we worked with the researchers to ensure we understand risks to lynx so we can provide the appropriate level of management direction based on the risk factors. We also reviewed any new information that has come out between Draft and Final EISs.

PC #100: The agency should include research in Canada (past and ongoing) in the table that summarizes lynx research (Appendix F). (Ltr #303)

Response to PC 100: As noted in the DEIS p. 104 and FEIS p. 145 a considerable amount of research has been conducted in Alaska and Canada. Much of this research was used as a basis to understand lynx and is summarized in *The Ecology and Conservation of Lynx* (Ruggiero et al. 2000a). In addition, the reference section of the Draft and Final EISs lists several other research reports from Canada. While the intent of Appendix F was to display what lynx research is being done specific to the U.S., applicable Canadian research has been used in the FEIS effects analysis and is cited in the section References Used.

PC #41: The agency should address the need for additional studies and research to fill critical information gaps. Some of these studies should be done in designated wilderness, lands and ecological communities that are near natural condition so they can serve as a baseline. (Ltr #25, 29, 30, 69, 226, 312, 338)

Response to PC 41: The LCAS, Chapter 8 identified additional research needs and the *Ecology and Conservation of Lynx in the United States* (Ruggiero et al. 2000a) identified research needs in Chapter 17. The Interagency Lynx Steering committee is responsible for coordinating research across the United States; therefore the specific approach to lynx research is being addressed outside of the planning process.

PC #537: The agency should disclose the limitations of the database habitat information it used. "Habitat modeling based on the timber stand database has its limitations: the data are, on average, 15 years old; canopy closure estimates are inaccurate; and data do not exist for the

abundance or distribution of snags or down woody material?" (Ltr #354)

Response to PC 537: FIA plots were used to examine the number of acres of National Forest System (NFS) lands in Montana that have high density of trees in young regenerating forests, and the number of acres with multistory forests that may provide the horizontal cover needed by snowshoe hares. As noted in the DEIS, pages 98 to 99 and FEIS, pp. 138-139; using the FIA data to identify lynx habitat in certain conditions has its limitations because the data cannot consider all the factors that may play a role. However, this is the best data available; especially over such a large area. It is better than satellite imagery which can not distinguish the density of forests. In addition, the data is collected on a grid, every ten years.

Generally, it takes around 15 years for a forest to begin to provide winter snowshoe hare habitat (Ruediger, et al, 2000). Information from Timber Stand Data base (TSMRS) was used to identify how much of the area was in this very young stage. We evaluated the amount of habitat in very young regenerating stands so we could determine how hard it would be to meet Standards VEG S1 and S2. TSMRS is a data base used to track vegetation management activities by stand. It is particularly useful in tracking regeneration harvest because we use that information to determine where we need to plant trees and ensure reforestation; therefore the degree of accuracy is good (Hillis et al. 2003). We evaluated the number of acres and percent of an LAU that had been regenerated between 1986 and 2000 to determine the relative amount of area that had been converted from older forests to young regenerating forests. We did not use TSMRS to estimate canopy closure, or the amount and distribution of snags or downed woody material.

Remand notice

PC #7: The agency should not continue to implement the restrictions in the LCAS that are not supported by the Remand Notice. This "just in case" management is unsupported considering the negative impacts to forest resources (Ltr #358)

PC #12: The agency should provide scientific evidence that grazing, roads, mining and over-the-snow recreation are not threats to lynx. In cases where actions that harm to individual lynx are numerous and widespread, and/or in cases where there are very few lynx in a population, common sense indicates those actions surely harm the lynx population. Thirteen scientists said we should take a precautionary approach to these activities based on extrapolations as at to the potential effects of these activities. (Ltr #33, 74, 103, 334, 365, 378)

PC #13: The agency should not prematurely adopt management constraints on a species for which there is little scientific information. (Ltr # 73, 196, 399, 402, 408)

PC #45: The agency should not reduce standards in the LCAS based on preliminary research - which is what appears to have happened regarding information in the Remand Notice. (Ltr #103, 319, 514)

PC #55: The agency should use the best available science and only rely on published, peer-reviewed data. It is inappropriate to use information such as the Remand Notice, Roe et al. 2000, Creel et al. 2003). The Remand Notice was not published in a peer reviewed scientific journal. The agency should provide reasoning why it favors the Remand Notice, written by one author, over the LCAS, co-authored by 13 leading lynx biologists. (Ltr # 334, 365, 378)

PC #109: The agency should drop all standards and guidelines for those actions found not to be a threat to lynx populations in the FWS Remand Notice. (Ltr #304, 313, 341, 357, 372, 455)

PC #300: The agency should focus on the FWS Biological Opinion, instead of the FWS Remand Notice, because the Biological Opinion is the document that upholds and enforces a regional lynx conservation strategy. Departure from the terms and conditions established in the FWS biological opinion requires re-initiation of formal consultation between the two agencies on this proposal. A major advantage of implementing our "strengthened Alternative B" is that it would considerably reduce the need for future project-level consultations across the region. (Ltr #334, 365)

PC #302: The agency should recognize the Remand Notice supports full implementation of the LCAS (Alternative B). (Ltr #334, 365)

PC #488: The agency should disclose whether or not lynx research and studies that have occurred meet the research needs identified in the Oct. 25, 2000 biological opinion. Have Appendix F lynx research and studies provided adequate information and data to draw conclusions that activities damaging to individual lynx and their habitat do not pose threats to overall lynx populations? The FS and BLM are proposing to change some Standards to discretionary Guidelines where research and monitoring information regarding effects to the lynx are limited. The agency should not change standards to guidelines until biologists on the interagency lynx team agreed that adequate research and monitoring information and data was available to support conversion. If the agency proceeds with the proposal to change management direction to discretionary

Guidelines where information is lacking, we suggest that at a minimum a monitoring requirement should be included to report deviations from the Guidelines. (Ltr #296)

Response to PC 7, 12, 13, 45, 55, 109, 300, 302, and 488: On July 3, 2003, the FWS published in the *Federal Register* a response to the December 26, 2002, memorandum opinion and order of the United States District Court for the District of Columbia, in the case of *Defenders of Wildlife v. Norton* (Civil Action No. 00-2996 (GK)). This is referred to as the “Remand Notice”. Pursuant to the Endangered Species Act of 1973, as amended (ESA or Act), the Remand Notice provided clarification to the findings the FWS made in support of the final rule that listed Canada lynx as threatened. The Remand Notice revisited the five factors that were used to determine whether lynx should be listed as threatened or endangered, and reassessed the magnitude of the threats to lynx. The reassessment was based on new information available as a result of ongoing research, and new information submitted during the public comment period on the Remand Notice (Appendix O). As such, the Remand Notice is an important part of the lynx listing procedure that the FEIS must address and consider.

In the Remand Notice the FWS also addressed risk factors that were listed in the LCAS. They stated, “Because no evidence has been provided that packed snowtrails facilitate competition to a level that negatively affects lynx, we do not consider packed snowtrails to be a threat to lynx at this time” (p. 40098). FWS also stated, “...we found the threat to lynx by some of these activities, such as fire suppression, is low. We found no evidence that some activities, such as forest roads, pose a threat to lynx. Some of the activities suggested, such as mining and grazing, were not

specifically addressed because we have no information to indicate they pose threats to lynx” (p. 40083). In addition, some factors were not found as risks in the *Ecology and Conservation of Lynx in the United States* (Ruggiero et al. 2000a). For example, grazing is not even mentioned in the book. We also analyzed and discussed the risks these activities might have to lynx under the various alternatives (FEIS, pp. 145-199). We found that imposing requirements in the form of standards for these risk factors where there is little evidence of threats to lynx are not necessary to conserve lynx.

PC #4: The agency should reevaluate how they considered information in the FWS Remand Notice. The agency inappropriately used the Remand Notice to reduce standards to guidelines. The Remand Notice assumed the agency was complying with the LCAS when it determined there were no threats to lynx. (Ltr #103, 309, 319, 334, 365, 378, 514)

Response to PC 4: The LCAS is not plan direction that we are required to follow. Deciding on plan direction to conserve lynx is the point of this FEIS and ROD. The Conservation Agreements the agency signed with FWS say we would **review and consider** the LCAS as well as other relevant information about impacts to lynx when analyzing project impacts. If the project evaluation indicates an activity is likely to adversely affect lynx we would revise the project considering the recommendation in the LCAS so the project is not likely to adversely affect lynx.

We reviewed the Remand Notice again. In fact, the Remand Notice did not determine there are no threats to lynx. It did, however, reassess the level of threat to lynx from the various listing factors (ESA § 4(a)(1)). The factors are: A) The presence or threatened destruction, modification, or curtailment of its habitat or range; B) Over

utilization for commercial, recreational, scientific, or education purposes; C) Disease or predation; D) Inadequacy of existing regulatory mechanisms; and E) Other natural or manmade factors affecting its continued existence.

Depending on the region of the country and the five listing factors, FWS determined the magnitude of risk to lynx ranged from “not a threat” to “moderate” (see Remand Notice, Table 2, Appendix P in the FEIS). The reassessment in the Remand Notice was based on new information available as a result of ongoing research, and new information submitted during the public comment period on the Remand Notice.

Based on new information about the risks to lynx from various activities, as first described in the LCAS, we appropriately changed some standards to guidelines in the different alternatives (see our response to comment 7 (above) and a complete discussion on the rationale for the various alternatives in Chapter 2 of the FEIS).

Basis for standards

PC #118: The agency should describe the scientific information that says timber management and wildland fire management is a risk factor to lynx. (Ltr #375)

Response to PC 118: The FEIS discusses risk factors to lynx (pp. 145, 153-154, 173, 176-177, 180-183) citing the scientific information the analysis is relying on, including Ruggiero et al, 2000, the LCAS. In addition, Chapter 2, *Management direction considered* discusses the risk factors and the basis for the management direction. The LCAS recognizes that research on the effects of forest management on lynx is limited (LCAS, p. 2-2). However the LCAS uses that research in conjunction with the knowledge the authors have about lynx use of the landscape and how timber

management and wildland fire management affect the landscape to determine the risk that those activities pose to lynx. The research the authors of the LCAS used is cited in the LCAS. Two of the research papers the authors repeatedly cite with regard to this comment are: Koehler, 1990, *Population and habitat characteristics of lynx and snowshoe hares in north central Washington*, published in the Canadian Journal of Zoology; and Koehler & Brittell, 1990, *Managing spruce-fir habitat for lynx and snowshoe hares*, published in the Journal of Forestry.

PC #358: The agency should explain what research supports that 10 percent denning habitat on the landscape is enough to ensure viability of lynx. The agency should also provide more detail on the definition of denning habitat; almost any forest could be determined to qualify if the need arose. (Ltr #1, 3, 67)

Response to PC 358: The LCAS recommended retaining 10 percent denning habitat based on a publication that discussed maintaining lynx habitat over time (Brittel et al. 1989). Brittel recommended a balance of conditions – 30 percent forage, 30 percent unsuitable habitat that would grow into forage habitat, 30 percent travel, and ten percent denning. The ten percent denning habitat was generally based on providing 10 percent old growth habitat.

Ongoing research since 1989 has shown that lynx dens are often found under large logs in mature forest stands, but dens have been located in smaller diameter “jack-strawed” piles as well as in rock piles in a variety of structural stages from young regenerating forests to old forests.

The integral component of lynx den sites appears to be the amount of downed, woody debris, not the age of the forest stand (Mowat, et al. 2000). Lynx den sites

are found in both mature and younger forests that have a large amount of cover and downed, large woody debris. The structural component of lynx den sites are common features in managed (logged) and unmanaged (e.g. insect damaged, wind-throw) stands. Based on 40 den sites studied by Squires et al. (in prep) denning habitat is found in a variety of forest conditions and is not a limiting factor for lynx. Indeed, lynx have used all kinds of deadfall for den sites, so it is likely almost any forest **does** supply denning habitat.

Based on this information, the ID team developed Alternative F which consolidates all the denning requirements into one Guideline; Guideline VEG 11. The research does not indicate a certain minimum amount of denning habitat is required for lynx. The research does indicate that pockets of large amounts of down wood, root wads, or large piles of small wind thrown trees provide denning habitat; and that these pockets should be distributed across an LAU. In general, most forests have some pockets of down trees that would be adequate denning habitat. However, under Guideline VEG G11 if denning habitat appears to be lacking in an LAU, then projects should be designed to retain coarse woody debris, piles, or residual trees to provide future denning habitat.

PC #152: The agency should not use the 30 percent and 15 percent standards because they are not based on science. The recommendations in the LCAS were not based on science. The LCAS made an arbitrary assumption that 30 percent of the landscape can be unsuitable lynx habitat without any effects on lynx viability. (Ltr #1, 3, 67, 105)

PC #522: The agency should base Standard VEG S2 on sound science and not an arbitrary number or best guess

scenario. Through Friends of Loomis Forest survey efforts, they have found 2/3 of the Central LAU incapable of maintaining lynx persistence when the decadal removal of lynx habitat came close to 15 percent. The area had been shown to be such good forage in recent times to have supported both a mom with 3 kittens and 1 kitten in the same winter. This 15 percent removal of lynx habitat needs serious scientific credence to become "standard" under any scenario as it would with the adoption of Alternative B. (Ltr #105)

Response to PC 152 and 522: The 15 and 30 percent levels were estimates of the amount of lynx habitat that could be rendered unsuitable at any one time but still provide for the amount of lynx habitat that would likely sustain a reproducing female lynx. (Note: the term *unsuitable* in this context means those forests in a young, regenerating condition where the trees at the present time are too short to stand above the snow level and therefore do not provide winter snowshoe hare habitat.)

Although research is currently ongoing that would aid in answering this question, no research to date has been completed and published in the western U. S. or Canada that provides any quantification of the amount of habitat in a young forest condition is necessary to sustain a reproducing female lynx. The LCAS recommended not exceeding the 30 percent unsuitable habitat condition based on Brittel et al. (1989) in order to maintain lynx habitat over time. The research paper recommended a balance of conditions – 30 percent forage, 30 percent unsuitable habitat that would grow into forage habitat, 30 percent travel, and ten percent denning.

As discussed in the FEIS Chapter 2, *Management direction considered* (FEIS, p. 72) the purpose of the 30 percent level in Standard VEG S1 is to ensure blocks of

quality lynx habitat are maintained in each LAU. Snowshoe hare are the primary prey of lynx. Snowshoe hare habitat consists of places where high horizontal cover is provided by habitat structures (trees, shrubs, herbaceous vegetation, etc.) that extend to the ground or snow. This is often found in young regenerating forests but is also found in mature and older multi-layer stands providing there is dense horizontal cover. During winter, hare forage is limited to twigs and stems that protrude above the snow and the hares can reach. Snowshoe hare forage is more limited during the winter because there is less vegetation accessible to snowshoe hare. Therefore, the intent of Standard VEG S1 is to ensure the availability (“even flow”) of snowshoe hare habitat over time. We do not want to convert all of an LAU to a young forest at one time – but rather want to have a portion of an LAU in young regenerating forests so we can have those forests grow to where they provide habitat in the winter. We also want to retain the option of regeneration harvesting because it can be designed in a manner that promotes good snowshoe hare habitat.

Standard VEG S2 was designed to limit the amount of regeneration harvest per decade so all of the forage is not one age class, with an allowance for natural disturbances to occur, without changing the entire habitat to young forest at one time.

PC #34: The agency should base management direction on best science. Management direction should not be based on conjecture, hypothesis, and theory. This has not been done, especially in regard to management direction regarding over-the-snow recreation. (Ltr #35, 312, 313, 349, 364, 386, 399, 402, 408)

PC #306: The agency should have credible evidence before they establish standards to preclude winter recreation.

The snow compaction link appears to reflect conjecture rather than measurement based science. (Ltr #12, 24, 35, 104, 313, 390)

Response to PC 34 and 306: The LCAS (p. 2-6) indicates “very few studies have investigated the complex interactions between humans and wildlife.” The FWS stated in the Remand Notice, “Because no evidence has been provided that packed snowtrails facilitate competition to a level that negatively affects lynx, we do not consider packed snowtrails to be a threat to lynx at this time” (Appendix P, p. 40098). Additional research has occurred in northwest Montana and in Utah since the Remand Notice was published.

Within lynx habitat in northwestern Montana, twelve radio-collared coyotes were monitored over three winter seasons to assess how coyotes interacted with compacted snowmobile trails (Kolbe 2005). Coyotes remained in lynx habitat having deep snow conditions and traveled on compacted snowmobile trails more than expected by random chance. However, coyotes used compacted snowmobile trails for less than 8 percent of their travel and used compacted and uncompacted roads similarly (Kolbe 2005). Coyotes did strongly select for shallower and more supportive snow surfaces when traveling off of compacted trails. In this same study coyotes primarily scavenged ungulate carrion that was readily available while snowshoe hare kills comprised only 3 percent of coyote feeding sites (Kolbe 2005).

Within mapped lynx habitat in northern Utah coyotes accessed deep snow habitats that would otherwise be unavailable to them (K. Bunnell, 2006). In the Uinta Mountains of NE Utah and three comparative study areas (Bear River range in Utah and Idaho, Targhee NF in Idaho, and Bighorn NF in Wyoming) Bunnell (2006) found that the presence of

snowmobile trails was a highly significant predictor of coyote activity in deep snow areas. From track surveys it was determined that the vast majority of coyotes (90 percent) stayed within 350 meters of a compacted trail and that snow depth and prey density estimates (snowshoe hares and red squirrels) were the most significant variable in determining whether a coyote returned to a snowmobile trail (Bunnell, 2006). Based on these studies there is no conclusive evidence regarding the effects of winter over-the-snow use on snowshoe hare or lynx.

The standards developed in Alternatives B, C, and D for human uses (the HU standards) do not preclude winter recreation, but rather maintain the status quo. Alternatives E and F change the standards to guidelines to allow for more consideration based on site specific situations. In addition, including the direction as a guideline still provides the option for any more definitive site specific management direction at the project level. If it is found that lynx and coyotes are competing in a particular area due to snow-compacting activities then the guideline would be followed; and if not then the guideline need not be followed.

PC #40: The agency should recognize the study Roe, Poole and Day, Final Report, IRIS Systems that reviewed the effects of ski areas on lynx. (Ltr #303)

Response to PC 40: This report was considered in the LCAS (p. 2-6) and the FEIS (pp. 76, 97, 182), and included in the *References Used* section of the FEIS, p. 390.

PC #410: The agency should use the best scientific information regarding linkages, corridors, and connectivity. These terms are used without definition or scientific support. Clear "rules" exist in the application of the corridor concept,

linkages and "connectivity". Failure to pay attention to such rules has lead to withdraw/confusion along corridors in FWS actions to conserve the endangered Florida panther. If the same science-based criteria used to evaluate panther conservation/corridors are applied to the lynx DEIS, the DEIS will fail and fail quickly. Use of best science is the law. Moreover, simply saying it will be handled project by project does not avoid the need to use the "best science" and to bring responsible but opposing scientific viewpoints into the DEIS. (Ltr #492)

Response to PC 410: The FEIS does not use the term *corridor*. The FEIS uses and defines the terms *linkage area* (FEIS, pp. 66, 181 and 370) and *connectivity*. A linkage area provides connectivity between blocks of lynx habitat. Linkage areas occur both within and between geographic areas, where basins, valleys or agricultural lands separate blocks of lynx habitat, or where lynx habitat naturally narrows between blocks.

Connectivity is the linkage of similar but separated vegetation stands by patches or "stepping stones" of like vegetation. This term can also refer to the degree to which similar habitats are linked.

The identification of lynx linkage areas was not done as part of this planning process. It was initiated and completed separately through an interagency, intergovernmental effort throughout the four state area. Site specific information regarding the value and use of these areas to facilitate lynx movement is limited and it was decided that specific management direction is best developed at the local level.

We used the best available science in the FEIS and considered responsible opposing scientific viewpoints. At this time the best available science is the *Ecology and Conservation of Lynx in the United States* (Ruggiero, et al. 2000a), the literature cited

in the *Canada Lynx Conservation Assessment and Strategy* (Literature cited, pp. 1 to 11), and the completed and ongoing lynx research listed in the FEIS (Appendix F, pp. 457-464).

PC #374: The agency should disclose the scientific data that shows that lynx move from country to country or state to state. What scientific evidence shows that lynx need corridors in which to travel or that they migrate from season to season? (Ltr #375)

Response to PC 374: The LCAS discusses lynx movement and dispersal (pp. 1-11 to 1-12). It cites various authors of scientific literature on the subject, including travel distances of up to 600 miles including Slough and Mowat (1996). The FEIS also discusses lynx movement, and cited Koehler (1990), Staples (1995), and Ruggiero (2000). This research indicates lynx are known to regularly explore from nine to 25 miles beyond their home ranges, and to make long-distance mover of up to 600 miles when prey is scarce.

Recent genetic work has shown that lynx throughout western North America are closely related, indicating population have been well enough connected to maintain close kinship. This high degree of genetic similarity among all lynx sampled from Canada and the U. S. indicates that lynx movement throughout the area has been regularly occurring. Data from various research studies (see FEIS, Appendix F) documented that lynx do make long-range movements. These movements may be part of a regular seasonal pattern or made during times of food scarcity or highs in the population cycle. Some of the literature cited in the LCAS (including Ruediger 1996) discusses the use of travel corridors by wildlife.

Agency organization & funding

PC #16: The agency should involve a non-agency person on the planning group who has a feeling of public needs in the long term. This person should be someone who is not affected by past and future personal goals with the agency. (Ltr #4)

Response to PC 16: The ID Team may not include non-agency personnel because it would not be consistent with the Federal Advisory Committee Act of 1972 (5 USC 86 stat. 770; USDA Departmental Regulation 1041-1, 11/13/89). However, we sought and used public input at various times in the NEPA process to determine what the public wants and needs (see FEIS, Chapter 2, Public Participation, pp. 18-19).

PC #38: The agency should include a silviculturist on the ID team. None of the silviculturists on the forests were involved. (Ltr #221)

Response to PC 38: Bill Terrill, Silviculturist on the Idaho Panhandle National Forest was a member of the ID team. Bill has since retired. Barry Bollenbacher, Regional Silviculturist in Region 1 is providing support in this role during development of the FEIS. In addition, all the units, including silviculturists, had opportunity to provide input during scoping and during development of the alternatives. Each of the Silviculturists were also used for advice and council during the analysis process.

Specific standards

General

PC #11: Since the Northern Rockies region is the most important area for the conservation of lynx in the United States, the management direction should

maintain strong protections. (Ltr #319, 378)

PC #24: The agency should protect the lynx. (Ltr #2, 16, 22, 28, 38, 52, 59, 69, 75, 78, 79, 81, 83, 86, 88, 91, 95, 98, 107, 130, 157, 159, 177, 180, 182, 184, 185, 188, 189, 190, 207, 211, 215, 249, 250, 261, 282, 295, 297, 306, 310, 315, 316, 319, 329, 335, 347, 353, 361, 391, 394, 415, 421, 422, 429, 431, 432, 433, 437, 443, 446, 485, 486, 491, 706, 966, 1071, 2971, 4113, 4280, 4963, 5009, 5251)

PC #63: The agency should not drop key protections for lynx. (Ltr #22, 37, 53, 168, 215, 206, 391, 412, 490)

Response to PC 11, 24, and 63: The Purpose and Need for the proposal is to incorporate management direction that conserves and promotes recovery of the Canada lynx, by reducing or eliminating adverse effects from land management activities on NFS lands, while preserving the overall multiple-use direction in existing plans (FEIS, p. 1). This requires balancing protection for lynx with use of our federal lands, all the while being in compliance with ESA, NFMA, MUSYA, and numerous other laws. Key protections needed for conservation of lynx would not be dropped.

PC #321: The agency should describe under what conditions lynx evolved and became established. The agency should focus management on lynx prey, not place restrictions on all forest resources just in case there is a lynx out there somewhere. (Ltr #448)

Response to PC 321: Lynx are a specialized carnivore that evolved with large feet in relation to body weight, which facilitates their movement in deep snow conditions (FEIS, p. 141; LCAS, pp. 1-1 to 1-10). The relationship between lynx and snowshoe hares is well documented and lynx do not reproduce or persist in areas without snowshoe hares (ibid). Snowshoe hare are also adapted to deep snow conditions but

other factors such as dense horizontal cover are important elements of snowshoe hare habitat.

Management of prey habitat is an important part of the management direction. Many of the objectives, standards, and guidelines are concerned with maintaining or managing snowshoe hare habitat (e.g. see for example Objectives VEG O2, VEG O4, Standards VEG S1, VEG S2, VEG S5, VEG S6, and Guideline VEG G1). However, maintenance of the prey population is not our only concern. The LCAS and FEIS identify other risks factors for lynx. Restrictions on activities are only used where the scientific literature indicates a risk factor to the lynx population or habitat (FEIS, pp. 6-7 and 71-102; LCAS, Chapter 2).

PC #527: The agency should recognize that the Lynx Strategy has put forward as a way to insure the success of lynx in the Northern Rockies. This strategy entails putting reasonable limits on the extent that we log, thin, graze, and recreate on public lands. The strategy is not advocating eliminating any of these activities, but instead to carry out these activities with lynx survival in mind. (Ltr #165)

Response to PC 527: Indeed, we do recognize the Lynx Strategy was put forward as way to insure the success of the lynx; not to eliminate other activities on public lands. We also believe the objectives, standards, and guidelines in the FEIS preferred alternative, Alternative F reflects the level of management direction needed for the specific risk factors. For example, grazing may be a risk factor at a local level and not affect the population as a whole, where as vegetation management may affect populations. Therefore, the level of management direction is reflected in the level of risk to the species. The greater the risk the more direction (e.g. standards) is

incorporated. In general, we expect guidelines to be followed unless there is appropriate rationale for deviation.

PC #3: The agency should not change standards to guidelines. Unless something is mandatory, "guidelines" are seldom implemented to partially or fully mitigate the potential impact for which they are designed. The agency should establish all lynx direction as standards. (Ltr # 23, 65, 74, 136, 154, 163, 176, 363, 379, 495, 514)

PC #57: The agency should rewrite the management direction because the standards and guidelines are subject to individual interpretation and the potential for disagreements and lawsuits are high. (Ltr #4, 304, 313, 392, 482, 483)

PC #69: The management direction should provide for guidelines while allowing flexible local decision-making based upon local input. (Ltr #48, 50, 51, 70, 100, 209, 456) PC #61: The agency should not allow loopholes that ultimately threaten the well being of recovering lynx populations and potentially causing adverse effects to lynx. (Ltr #16)

PC #72: The management direction should not be so subjective. (Ltr #1, 3, 67)

PC #221: The agency, if they want to incorporate some management flexibility, should do so by rewriting the standards versus including guidelines. The standards could be rewritten to provide some management flexibility while promoting conservation and recovery of lynx. (Ltr #514)

PC #326: The agency should ensure there are specific and binding rules relating to grazing, logging, and road construction. Specific standards should be applied and enforced. Without specific rules the plan evolves into a shell game of shifting impacts, vanishing protections, and a

constantly increasing cumulative impact. (Ltr #20)

Response to PC 3, 57, 61, 69, 72, 221, and 326: Standards set the required sideboards, while guidelines identify ways to meet the objectives (FEIS, p. 9). In situations where it is clear certain actions would prevent us from meeting the Propose and Need a standard is clearly called for.

Guidelines, on the other hand, allow for more site-specific flexibility in managing for lynx. The intent of a guideline is that it should be implemented. If they are not used, the rationale for deviating from them may be documented in the project-specific NEPA documentation (FEIS, p. 9). In situations where it is not clear that certain actions would prevent us from meeting the Purpose and Need, establishing a guideline, rather than a standard is more appropriate.

A case in point is Vegetation Standard VEG S3 in Alternative B that is being used to maintain lynx denning habitat. The Biological Assessment found that denning habitat is generally not a limiting factor in the planning area because nearly all the existing plans include direction for retaining old growth forest, and dead and down material (FEIS, p. 173). Since this habitat is protected by existing plan language, and denning habitat is not a limiting factor, we can allow for more management flexibility and still meet the Purpose and Need of this proposal. Therefore, instituting a standard for denning habitat is unnecessarily restrictive. We do have an objective to manage vegetation to maintain habitat components necessary for lynx, so a guideline is called for that says denning habitat should be distributed in each LAU.

In addition, we believe guidelines are more appropriate for those risk factors FWS determined were not affecting lynx populations as a whole; because that level

of prescriptive management is unwarranted. Standards were applied to risk factors found to affect lynx populations to aid in the recovery and conservation of lynx.

PC #31: The management direction should include best management practices for lynx that prescribe the manner and degree of activities that can occur consistent with lynx recovery. These best management practices should cover ORV management, timber/forest management, grazing, wildlife management, and other activities that impact lynx and their habitat. (Ltr 363)

Response to PC 31: Using the term *best management practices* in this context for lynx would lead to confusion at the Forest Plan level where the term is more typically applied to soil and water practices. However, the standards and guidelines could very well be considered the best management practices for lynx that prescribe the manner and degree of activities that can occur consistent with lynx recovery.

PC #226: The agency should consider simplifying the management direction. It is complex, which will make it difficult to implement. Alternative E improves the management direction, but more could be done. The agency could be setting a precedent for detailed, complex management direction for every T&E species, each with specific direction, for each type of habitat type, and each potential management activity. (Ltr #4, 498)

Response to PC 226: The management situation for lynx is complex. As a result the management direction is also complex. In Alternative F we were able to simplify the denning habitat direction by combining the various standards and guidelines that

concern denning habitat into one, Guideline VEG G11.

PC #1: The agency should meet the purpose and need to preserve multiple use direction in existing plans. (Ltr #18, 100, 209, 218, 381, 382, 420, 455, 456, 519)

Response to PC 1: Part of the Purpose and Need is to preserve the overall multiple-use direction in existing plans (FEIS, p. 1). The FEIS analyzed the impact each of the alternatives would have on the many uses of public land, including wildlife, fish, timber harvest, grazing, many recreational pursuits, transportation, mining, and special uses (see FEIS, Chapter 3). While some of the management direction does constrain precommercial thinning and some other vegetation management projects (see FEIS VEG standards on Table 2-1), the existing multiple use direction in the exiting plans has been retained. Wildlife viewing and hunting, fishing, timber harvest, grazing, all the various recreational pursuits, use of open roads, mining, and special uses can continue on the public land covered by this FEIS. In some cases the new direction may change the location and intensity of some uses on the Forests.

PC #78: The management direction should be applied on-the-ground for several years before amending the plans so the effects of the conservation measures on management options can be better understood. (Ltr #331)

Response to PC 78: In 2000, and again in 2005 and 2006, the Forest Service signed Lynx Conservation Agreements requiring the agency to review and consider recommendation in the LCAS before making site-specific decision on project in lynx habitat (FEIS, p. 3). With seven years of experience, the agency has a good understanding of the effects of the conservation measures.

PC #164: The agency should designate critical habitat as part of the planning process. Failure to do so would not satisfy the requirements of the ESA and would allow adverse impacts to continue in habitat that may be of utmost importance to lynx recovery. (Ltr #226, 354)

Response to PC 164: The Forest Service does not have the authority to designate critical habitat, and this planning process is not the appropriate avenue to use to make the designation. In the case of Canada lynx, the Secretary of the Interior, though the USDI, FWS has the authority to designate critical habitat. FWS has designated critical habitat (USDI FWS 2006). No federal land managed by the agency was designated as critical habitat for lynx because the agency is already managing lynx habitat under conservation agreements, under new plan language, or are in the process of amending plans to include lynx conservation measures.

Range of Alternatives

PC #42: The management direction should call for a more general conservation approach that is less intrusive on management benefiting other biological components of the forest; especially given the lack of science and lack of adequate habitat in Wyoming. (Ltr #480)

Response to PC 42: The general conservation of the various biological components is already contained in the plans. This process is intended to focus on the direction necessary to conserve lynx while intruding as little as possible into other areas of the plans. Expanding the direction to cover conservation as a whole would be well beyond the Purpose and Need of the proposal.

PC #75: The management direction should offer an acceptable range of action

alternatives, including an alternative to manage for sustainable supply of sawtimber, while conserving lynx habitat. (Ltr #73)

Response to PC 75: The six alternatives considered in detail and the other *management direction considered*, (FEIS, pp. 25-102), constitute a reasonable range of alternatives. While some of the alternative put side boards on timber management, the direction contained in any of the six alternatives considered in detail still allows for a supply of saw timber. This process is intended to focus on the direction necessary to conserve lynx while intruding as little as possible into other areas of the plans, including supplying saw timber.

PC #81: The agency should evaluate an adequate range of alternatives, including a "conservationist" alternative that incorporates the scientific information provided during scoping and translates it into appropriate management direction. (Ltr #278, 334, 363, 365)

Response to PC 81: The six alternatives considered in detail and the other *management direction considered* (FEIS, pp. 25-102), constitute a reasonable range of alternatives. We considered all available scientific information (FEIS, References Used and Appendix F). Each of the action alternatives contribute to the conservation of lynx, but have differing impacts on other resources depending on the standards and guidelines each alternative contains.

PC #82: The agency should use the original LCAS recommendations in lieu of any of the alternatives developed in the DEIS. (Ltr #68, 215, 378)

Response to PC 82: This is one of the management direction considered, (FEIS, p. 101). The original LCAS does not match the format of the existing plans. Some of the measures in the LCAS are instructions

about how to lynx map habitat, which is already done. Other measures are descriptions of analysis processes already required in the existing plans. Appendix A in the FEIS compares the LCAS with the scoping proposed action, Alternative B (the DEIS proposed action), and Alternative F (the FEIS preferred alternative).

PC #83: The agency should evaluate an adequate range of alternatives including an alternative that is not based on the LCAS. (Ltr #134, 375, 381, 382, 401, 455)

Response to PC 83: The six alternatives considered in detail and the other *management direction considered* (FEIS, pp. 25-102), constitute a reasonable range of alternatives. The No Action Alternative is not based on the LCAS.

PC #112: The agency should improve their range of alternatives by developing an alternative that is proactive. The alternative should include prescriptions for mechanical treatments that create and restore hare habitat; and reintroduction of lynx into existing habitat. (Ltr #360)

Response to PC 112: Prescriptions for specific treatments are developed at the site-specific project level, not in planning level direction. However, all action alternatives contain Objective ALL O1, which states, "Maintain or restore lynx habitat connectivity in and between LAUs, and in linkage areas"; Objectives VEG O2 and O4, which emphasize improving, providing, or developing winter snowshoe hare habitat; and Guideline VEG G1, which states, "...projects should be planned to recruit a high density of conifers, hardwoods, and shrubs where such habitat is scarce or not available..." for lynx and snowshoe hare.

Moving lynx into unoccupied habitat was one of the management directions considered (FEIS, p. 101). The Purpose and Need of this analysis is to incorporate

management direction that conserves and promotes recovery of the Canada lynx, by reducing or eliminating adverse effects from land management activities on NFS lands, while preserving the overall multiple-use direction in existing plans (FEIS, p. 1). Analyzing the transplanting of animals is outside the scope of this Purpose and Need. We do note the State of Colorado has transplanted lynx. Some have successfully established themselves in Colorado, while others have scattered across many other states. The focus in the Northern Rockies is to maintain those lynx we already have.

PC #115: The agency should include an alternative with a management strategy that says to manage for landscapes that contain a continuum of age classes, including both very young and very old forests, and a lower proportion of even-aged silviculture. The strategy should emphasize the potential importance of late-successional forests for hares, red squirrels and lynx in the southern portion of their range. Provide for a variety of regeneration conditions and emphasize treatments that depend on natural regeneration rather than planting. (Ltr # 131)

Response to PC 115: The action alternatives already intend to supply a continuum of age classes necessary for lynx and their prey. Objective VEG O1 states, "Manage vegetation to mimic or approximate natural succession and disturbance processes while maintaining habitat components necessary for the conservation of lynx" (Alternative F). Objective VEG O2, states, "Provide a mosaic of habitat conditions through time that support dense horizontal cover, and high densities of snowshoe hare. Provide winter snowshoe hare habitat in both the stand initiation structural stage and in mature, multi-story conifer vegetation" (Alternative F). In addition, Standard VEG

S6 maintains multistoried habitat which would benefit snowshoe hare and red squirrels.

PC #335: The agency should develop an alternative that does not significantly affect human needs, including cattle grazing, hunting, use of resources, especially timber. (Ltr #7)

Response to PC 335: Alternatives A, E, and F do not significantly affect human needs, including cattle grazing, hunting, use of resources, including timber.

PC #441: The agency should revisit the range of alternatives, create a suitable description of desired habitat condition components and rely on forest plans to refine prescriptions and standards more appropriate for local lynx populations. The range of habitat conditions for lynx presence is immense and too variable for a one size fits all approach. The proposal does not present an adequate range of alternatives and are inappropriate at this time since neither critical habitat nor a recovery plan has been developed. In order for any management direction to be credible, a desired future condition for age and size classes by species with vertical and spatial diversity across forested landscapes must be developed. A reasonable, common sense management strategy must be proposed which sustains inter-relationships with ecosystem components, forest health, fuel reduction strategies and rural community stability. (Ltr #333)

Response to PC 441: We developed Alternative F from the public's comments on the DEIS. We reviewed the six alternatives and believe they present an adequate range of alternatives. FWS designated critical habitat (see response to PC 164 above) and issued a recovery plan outline. We believe the management direction developed in the alternatives are

reasonable, common sense management strategies that sustain the inter-relationships with ecosystem components, forest health, fuel reduction, and rural community stability.

The alternatives vary in how they address the level of management direction for lynx. Alternatives E and F only apply standards for those items found to be risk factors to lynx *populations* as opposed to individual lynx. Alternatives E and F minimize affects relating to human needs while providing management direction for lynx.

PC #530: Canada lynx are an important component of our Montana heritage, but other resources and land uses are important to Montanans as well. The agency' final alternative should be based on good science, practicality, common sense, and flexibility. (Ltr #209)

Response to PC 530: Indeed, Canada lynx are part of our heritage in the Northern Rocky Mountains, as are many other resources and land uses. Alternative F is based on good science, practicality, common sense, and flexibility.

PC #473: The agency should develop a final alternative that represents a strategy to conserve lynx. The agency should develop a new alternative based on combining different components (objectives, standards, and guidelines) from the alternatives. The wording and language in the components may need to be revised to strengthen and clarify plan direction. (Ltr # 5326)

Response to PC 473: Using the LCAS (Alternative B) as the proposed action, the agency developed a wide range of alternatives to respond to issues and concerns that were identified during the scoping process (FEIS, pp. 25-40). These alternatives were submitted to the public in the DEIS for public comment. Those

comments from the public can be found in the project file, and are compiled and responded to in this document. From those comments we developed a new alternative, Alternative F. Alternative F was developed from concerns regarding Alternative E, the DEIS preferred alternative.

Alternative F incorporates the appropriate level of management direction needed to conserve and promote recovery of lynx while preserving the overall multiple use direction in existing plans. Alternative F dropped Standard ALL S2, which some people felt would not provide appropriate regulatory mechanisms; it modified VEG S1 to apply only to an LAU, instead of multiple LAUs, thereby ensuring habitat blocks at a smaller scale; it modified how VEG S1 applied to fuel treatment projects (basically better defines where the standard does not apply to fuel treatments and limits the amount of habitat that can be modified); it added VEG S2 which limits the amount of regeneration harvest in a decade; it changed Guideline VEG G8 to Standard VEG S6, thereby protecting important multistory habitat; it modified Standard VEG S5 to allow precommercial thinning that in some circumstances FWS found would not adversely harm lynx; and it collapsed all the denning requirements into one guideline which is likely to result in better habitat conditions on the ground.

Where to apply

PC #30: The agency should not amend these plans in a "one size fits all" process. It is not the proper way to manage agency lands and may not meet the intent of NEPA and NFMA. There are many different ecosystems and conditions in the planning area. (Ltr #304, 366, 392, 482, 483, 517, 523)

PC #201: The agency should modify the alternatives to tailor programs to specific

terrain and small geographic areas. It is not possible to draw conclusions that can be appropriate for an extremely varied region. (Ltr #196)

Response to PC 30 and 201: While the Northern Rockies Mountains Geographic Area intersects three ecological provinces, and there are differences among the sections of each province (LCAS, pp. 4-4 to 4-6), the risks to lynx are the same across the Northern Rockies (LCAS, pp. 4-11 to 4-12). In order to respond more consistently to those risks and add guidance for the conservation of lynx into the plans in the Northern Rockies, the agency decided to have one planning effort for the entire planning area rather than address each plan individually. Adjustments to individual plans may need to be done in the future to respond to new information and/or local conditions (FEIS, p. 15). This process is in compliance with NEPA and NFMA, and we believe it is the best way to deal with listing of a new threatened species across a large area.

However, we do not believe one size fits all situations. As discussed in the Lynx Conservation Agreement between Forest Service and FWS (USDA, USDI 2006), some of the National Forests are occupied by lynx and others are not. Many comments suggested the management direction should only be applied to occupied habitat. Therefore, Alternative F is evaluated under two scenarios: (1) management direction would be incorporated into all forest plans and would *apply to all mapped lynx habitat*, whether or not occupied; and (2) management direction would be incorporated into all forest plans but would only *apply to occupied habitat*. Under scenario 2, the direction would be "considered" for unoccupied units, but would not have to be followed until such time as lynx occupy the unit.

The Nez Perce, Salmon-Challis, Beaverhead-Deerlodge, Bitterroot, Ashley and Bighorn NFs, and the disjunct mountain ranges on the Custer, Gallatin, Helena and Lewis and Clark NFs are unoccupied based on the best scientific information available at this time (USDA FS, USDI FWS 2006a and Figure 1-1).

PC #153: The agency should develop an alternative based on primary conservation areas, using known population data. Science-based conservation requires the consideration of population strongholds and reason for such strongholds-not set of some broad-scale generic recommendations. The final EIS should use the Greater Yellowstone area effort as an example to follow. (Ltr #25, 455, 492)

Response to PC 153: We considered the Greater Yellowstone work. Population data for any animal is difficult and time consuming to acquire, especially for an animal as secretive and wide-ranging as lynx. However, we do know the location of lynx population strongholds in the Northern Rockies: the Flathead, Kootenai, Lolo, Bridger-Teton and Shoshone National Forests have been identified as “core” areas in the FWS Recovery Outline. The Targhee, Custer, Gallatin, Helena and Idaho Panhandle have portions of their units identified as both “core” and “secondary” habitat. The Lewis and Clark NF contains core, secondary and peripheral habitat and the Clearwater NF has been only identified as secondary habitat. All of these National Forests are known to be occupied by lynx (see FEIS, Table 1-1, p. 5).

Core areas have the strongest long-term evidence of lynx persistence. Lynx have consistently been found in these areas and there is recent (within the past 20 years) evidence of reproduction.

Secondary areas have fewer and more sporadic current and historical records of

lynx, and as a result historical abundance has been relatively low. Reproduction has not been documented.

The following National Forests are in secondary habitat, but are not occupied by lynx: Bitterroot, Beaverhead-Deerlodge, Nez Perce, and Salmon-Challis NFs. Some of the isolated mountain ranges on the Helena and Gallatin NFs are also unoccupied secondary habitat.

The Bighorn and Ashley NFs, as well as the Pryor Mountains on the Custer and the Highwood and Snowy Mountains on the Lewis and Clark NF are not occupied and are considered peripheral lynx habitat.

See response to PC 30 and 201 above on how Alternative F is considering occupied and unoccupied habitat.

PC #314: The agency should only apply the management direction to areas likely to sustain lynx. As a comparison, all of the plains and mountains of Montana, Idaho, and Wyoming had some use by grizzly bears, but public land use recovery plans did not provide for grizzly recovery on all lands once known to have had bears walk across those lands. Lynx management should apply to areas with the best habitat, not to areas with marginal habitat. (Ltr #47, 66, 179, 303, 357, 448, 492)

PC #68: The agency should protect all known occupied lynx habitat from any adverse activities until research provides good estimates of lynx viability and habitat needs. (Ltr #1, 3, 67)

Response to PC 68 and 314: Based on a variety of public comments we decided evaluate two scenarios under Alternative F. Under Scenario 1 management direction would be incorporated into all forest plans and would *apply to all mapped lynx habitat*, whether or not occupied. Under Scenario 2 management direction would be incorporated into all forest plans but would only *apply to occupied habitat*. Under

scenario 2, the direction would be “considered” for unoccupied units, but would not have to be followed until such time as lynx occupy the unit.

While new and continuing research would add to our body of knowledge, we currently have a good understanding of the habitat needs of lynx (FEIS, pp. 141-142; LCAS, pp. 1-2 to 1-5; *Ecology and Conservation of lynx in the United States*, Ruggiero 2000a, Chapters 8 through 14). The management direction (FEIS, Table 2-1, pp. 41-69) is based on what we know about lynx habitat. Under Alternative F, Scenario 2, the management direction would apply to occupied lynx habitat (FEIS, p. 36). The FEIS section on *management direction considered* discusses habitat needs and why certain management direction was applied.

PC #296: The agency should include the Boise, Caribou, Payette, Sawtooth, Wasatch-Cache and Uintah National Forests in this analysis. That way, any improvements to the lynx direction incorporated into those forest plans from the LCAS could be changed concurrent with decisions to other forest plans. (Ltr #455)

PC #412: The agency should include the southern portion of the Targhee and Caribou National Forest in the proposal. The habitat is there. My family had observed lynx in the area in the last twenty years. It is close to Yellowstone Park, with its known population of lynx. (Ltr #371)

Response to PC 296 and 412: The Targhee NF mapped lynx habitat based upon guidance provided by interagency agreement (BLM, USFS, FWS) in 2000. This mapping was refined as a result of a field review and evaluation by agency personnel, researchers and the Lynx Biology Team in 2003. The Caribou NF is not mapped as lynx habitat and not considered historic habitat where lynx have persisted over

time. Management direction would be incorporated into the Targhee Forest Plan by this decision (FEIS, p. 10). The Payette, Boise, Sawtooth, Caribou, Wasatch-Cache, and Uinta NFs have completed revising their plans (FEIS p. 12). Information from this proposal has been used in developing those plans.

PC #406: The agency should apply the management direction to the Lewistown and Billings BLM field offices and the lynx habitats therein, specifically the Twin Coulee WSA and BLM-administered land. These lands were excluded from the historic range of lynx in the lynx Biological Assessment. (Ltr #226)

Response to PC 406: The BLM for the state of Montana decided to revise their plans and incorporate lynx management direction using a separate process.

PC #405: The agency should: (1) recognize the lack of ecosystem potential in Wyoming to support the continuing survival of lynx in Wyoming, and (2) not adversely affect the management of federal lands for a species which will never thrive in Wyoming forests. (Ltr #350)

Response to PC 405: Historic information shows lynx persisted in Wyoming from the 1800s to 1998. In an early monograph on the animal life of Yellowstone National Park, Bailey (1930) wrote that lynx “were said to be common and generally distributed throughout the timbered region” (Ruggiero, 2000, p. 230). At this time lynx are known to continue to occur in the Greater Yellowstone Ecosystem, and we would continue to manage for lynx where they occur.

PC #28: The Shoshone National Forest should be exempted from the final EIS and decision because the Shoshone is in the process of revision, there is very limited

lynx and snowshoe hare habitat, and there is a severe insect and disease infestation occurring. A more local and defined look at management direction would be appropriate. (Ltr #341)

Response to PC 28: Like many of the other National Forests in the Northern Rockies planning area, the Shoshone National Forest is in the process of revision. The target date for completion of the Plan is 2008. They wish to remain in this planning process. A Forest Plan revision does include a forest-wide look at management direction

PC #29: The Bighorn National Forest should not be included in the proposal because it is marginal habitat for lynx and is not critical to recovery. Designation of critical habitat should be done first. In addition, the Bighorn is in the revision process. (Ltr #10, 13, 357)

Response to PC 29: The FWS has now designated critical habitat, and no NFS lands were included in the designation (USDI FWS 2006).

The Bighorn National Forest mapped lynx habitat according to the direction provided in a multi-agency memo released in August 2000. In the *Recovery Plan Outline: Contiguous United States distinct population segment of the Canada lynx* (USDI FWS 2005), the Bighorn Mountains are considered peripheral lynx habitat. At this time the Bighorn National Forest is not known to be occupied by lynx. Under Alternative F, Scenario 2, until such time the Forest is determined to be occupied by lynx they are to consider the management direction in site-specific projects, but are they are not required to abide by them.

PC #318: The agency should focus lynx management in the Wyoming Range on the Bridger-Teton National Forest. Summarizations of state historical data show that lynx were most common there.

Studies by our Department during the 1990s documented a remnant population, again mostly in the Wyoming Range, and that lynx primarily used coniferous habitats below elevations of 9500 feet and moderate slopes (<12 percent). Intensive logging occurred in this area during the 1970s and 1980s. Timber harvest and proposals continue and numerous clear cuts are not regenerating as snowshoe hare habitat, and snowmobile use there has increased dramatically. The lynx population in this area is currently nonexistent, but this area may hold the most potential for habitat-based lynx benefits. Clearcuts and snow machines may have been a factor in reducing lynx populations. (Ltr #17, 129)

PC #422: The agency should not manage for lynx on the periphery of its natural habitat. The Bridger-Teton NF is largely a dry forest, particularly in recent years because of drought and has traditionally been marginal-habitat for lynx with little evidence even of their existence. (Ltr #349)

Response to PC 318 and 422: The Bridger-Teton National Forest, as a whole, is included in the lynx analysis. We are not prioritizing or focusing on portions of National Forests. It is up to the forests to identify LAUs and habitat quality and quantity based on site-specific information about elevations, stand condition, and amount of precipitation. Based on a variety of public comments about where and where not to manage for lynx we developed Alternative F, the FEIS preferred alternative. Under Alternative F, Scenario 2, management direction for lynx would only apply to those national forests known to be occupied. Occupied national forests would use the standards and guidelines in managing their LAUs and linkage area; this includes the Bridger-Teton National Forest, which is known to be occupied by lynx based on research and DNA records (USDA FS, USDA FWS 2006).

PC #515: The agency should explain why Wyoming BLM is working on their own strategy for lynx. (Ltr # 17)

Response to PC 515: The Wyoming BLM is incorporating management direction for lynx through a separate process (see Volume 1, Appendix L); therefore they declined to participate. In addition the Wyoming BLM is considering the LCAS, so there is consistency in our approaches to conserving lynx (USDI BLM Wyoming 2005, USDI FWS 2005).

PC #316: The agency should reevaluate the ability of the Ashley National Forest to provide lynx habitat. Elevation, topography, and location of the Ashley National Forest is better suited to bobcats, of which the Uintah Basin has a large population. Trapping of bobcats in Utah averages 2,000 verified and tagged pelts each year, with between 100 and 300 coming from the Uintah Basin area (Uintah, Daggett, and Duchesne Counties). Uintah County is concerned that the attempt to encourage lynx to populate this area, which is not likely to support a self-sustaining population, could lead to cross breeding with bobcats, further threatening the species. (Ltr 484)

Response to PC 316: Based upon the lack of recent (1999 - 2005) verified records this area is not considered occupied by lynx at this time. Under Alternative F, Scenario 2 management direction would only apply to units occupied by lynx. However, there are numerous historic lynx records (Ruggiero, et al. 2000a, p. 231) which indicate the area has provided lynx habitat in the past; therefore if lynx begin to occupy the site again then the management direction would apply. The FWS Recovery Outline indicates the habitat on the Ashley as "periphery" habitat (USDI FWS 2005a). *Peripheral areas* contain few verified historical or recent records of lynx; records are sporadic and are usually associated with

periods when there were cyclic population highs in Canada.

The Forest Service conducted an analysis of the hair samples collected during the National Lynx Survey. There is no evidence of hybridization between lynx and bobcats in the planning area (FEIS, p. 106).

PC #421: The agency should identify historic range of the lynx which include the old growth and mature forests of the Ashley, Uinta, Wasatch-Cache, Manti LaSal, and Fishlake National Forests where no adequate provisions currently exist. In addition, please identify all lands in Utah's forests that have lynx habitat. The agency should add a linkage corridor from Colorado to Utah indicating that these seemingly disjunct populations have a real concrete connection. (Ltr #363)

Response to PC 421: The map included with the FEIS (Figure 1-1) has linkage areas from Colorado to Utah indicated on it. The map includes lynx habitat on those forests included in the planning area, which includes the Ashley National Forest, but does not include the Wasatch-Cache, Manti LaSal, and Fishlake National Forests. While these forests have lynx habitat, it would be confusing to display on the planning area map the lynx habitat on forests that were not included in the Northern Rockies planning area. All forests within the range of lynx have mapped lynx habitat and they have identified the Lynx Analysis Units according to the LCAS (Ruediger et al. pp. 7-2 to 7-6) in order to conduct effects analyses on site-specific projects. Those maps are available from those units. They are changing, or have changed, their plans through a separate process.

PC #59: The management direction should not apply to Utah because there is limited data that lynx were there. Lynx needs should be addressed during revision. (Ltr #11)

Response to PC 59: Based upon the lack of recent (1999 – 2005) verified records this area (the Ashley National Forest) is not considered occupied by lynx at this time. Under Alternative F, Scenario 2 management direction would only apply to units occupied by lynx. However, there are numerous historic lynx records (Ruggiero et al. 2000a, p. 231) which indicate the area has provided lynx habitat in the past; therefore if lynx begin to occupy the site again then the management direction would apply. The FWS Recovery Outline indicates the habitat on the Ashley as “periphery” habitat (USDI FWS 2005). *Peripheral areas* contain few verified historical or recent records of lynx; records are sporadic and are usually associated with periods when there were cyclic population highs in Canada.

PC #403: The agency should apply this decision to all National Forests and BLM units located in the Northern Rockies Geographic Area. Separating the management of lynx habitat into some-number-greater-than- thirteen decision documents (this proposal plus eleven other National Forests plus an unspecified number of BLM Districts in Montana and Wyoming) is a failing of this proposal. (Ltr #309)

Response to PC 403: In order to respond more quickly and consistently the management direction would apply to those units in the planning area. However, there are units in the Northern Rockies that are not a part of the planning effort (FEIS, p. 12) due to timing of the planning process, or for other reasons. As noted in the FEIS, Idaho and Utah BLM decided to not be a part of this planning process because they are now incorporating similar management direction in their specific resource management plans. All other planning processes are starting with the same LCAS, and all are aiming toward the same goal of

conservation of lynx (see Background in FEIS, pp. 2-4 and Appendix L).

When to apply

PC #327: The agency should address lynx management during forest plan and land management plan revision so information about local lynx presence, habitat conditions, and management objectives based on these local conditions can be incorporated. Haste is not more important than diligence and accuracy. (Ltr 455)

Response to PC 327: In order to consistently address lynx needs across the Northern Rockies, a decision to incorporate management direction into land management plans would be made across the whole planning area. As individual plans become due for revision, adjustments to the management direction for lynx may be considered individually (FEIS, p. 5). As noted in the FEIS, Idaho and Utah BLM decided to not be a part of this planning process because they are now incorporating similar management direction in their specific resource management plans.

General suggestions for management direction

PC #91: The agency should consider an alternative that: 1) prohibits grazing; 2) prohibits snowmobiles; 3) doesn't let ski areas expand one more foot; 4) bans road construction; 5) bans loggers and mining and oil and gas leases; and 6) bans hunting. (Ltr #141, 144, 323)

PC #97: The agency should choose an alternative that prohibits road development or travel in lynx analysis units, and prohibits harvest and thinning the forests. (Ltr #154, 394)

PC #98: The agency should implement: 1) strong standards to protect lynx from snowmobiles; 2) remove livestock grazing from key lynx habitat; and 3) restricting or

banning logging in lynx habitat, even if done in the name of fire protection. (Ltr #318, 394, 486, 490)

Response to PC 91, 97, and 98: Many of these prohibitions were considered as potential management direction but were dismissed from detailed consideration (FEIS, p. 102). The Purpose and Need for this proposal is to incorporate management direction that conserves and promotes recovery of Canada lynx, by reducing or eliminating adverse effects from land management activities on NFS lands, while preserving the overall multiple-use direction in existing plans (FEIS, p. 1). Banning or prohibiting many of the activities on federal land is much more than what is necessary to conserve lynx, and would not preserve the overall multiple-use direction in existing plans.

Alternatives E and F contain management direction for grazing, minerals, and roads (See FEIS, Table 2.1), which would reduce potential effects of these activities on individual lynx. The management direction is changed from standards (found in Alternatives B, C, and D) to guidelines (in Alternatives E and F) which could affect individual lynx if the guidelines are not followed; however, this change would not affect lynx populations since these risks have been determined to not threaten the overall population of lynx (FEIS, p. 126). This would conserve lynx while maintaining the overall multiple use direction in exiting plans.

PC #110: The agency should include a discussion about the process used to determine whether a guideline is or is not being complied with during project planning. Some guidelines are subjective, such as HU G3. Who determines whether or not they are being met? (Ltr #455)

Response to PC 110: Monitoring items under Alternative F include monitoring

changes in snow compacting activities and routes every five years, annually reporting the acres of vegetation management projects in winter snowshoe hare habitat, and reporting the acres of fuel treatment projects in lynx habitat as decisions are approved. This last report is intended to monitor whether or not the fuel treatment projects met the vegetation standards VEG S1 and VEG S2, and to track the amount of fuel treatment projects that do not meet the vegetation standards. Each administrative unit (National Forest) would provide this information to the Northern Regional Office of the Forest Service in Missoula, Montana. This information would then be summarized and provided to the FWS according to the timeframe for each particular monitoring requirement.

Guideline HU G3 states, "Recreation developments and operations should be planned in ways that both provide for lynx movement and maintain the effectiveness of lynx habitat." A wildlife biologist would analyze the impact each alternative of a project would have on lynx based on the plan standards and guidelines. The Forest Supervisor or the District Ranger would be the Responsible Official for project and activity decisions that implement plans. It would be one of those line officers who would determine whether or not they are following their plan directions for the conservation of Canada lynx.

PC #99: The agency should include an objective that says: "Practice adaptive management and consider every action on the landscape to be an experiment." Biologists know very little about lynx in the United States. Management practices based on this partial knowledge are necessarily incomplete. (Ltr #131)

Response to PC 99: Alternatives D and E include Standard ALL S2 which was developed to address this concern.

Standard ALL S2 would allow deviations from standards if the action was found to not adversely affect lynx or would have short-term effects with long term benefits. The intent of this standard was to provide a mechanism for incorporating new information.

Many people were concerned that Standard ALL S2 allowed too much flexibility and could lead to adverse cumulative effects; therefore in developing Alternative F Standard ALL S2 was dropped. However, Alternative F does incorporate a caveat under Standard VEG S5 which applies to precommercial thinning activities in winter snowshoe hare habitat. Precommercial thinning could be allowed in some cases where there is new peer reviewed information that is accepted by the management and regulatory agency, where it is found that the activity would not adversely affect lynx or would have a short term effect but long term benefit. Based on discussions with the researchers, the lynx biology team, and FWS, the ID team felt this was the only standard where new information may result in changes.

New information regarding the other standards is unlikely because it is clear that lynx require a variety of successional stages (addressed in Standards VEG S1 and S2). New information was incorporated into Alternative F regarding the importance of multistory habitat (Standard VEG S6). Denning habitat guidance was also modified in Alternative F based on recent research findings. Research has shown that although lynx dens are often found under large logs they may also be found in other situations ('jack-strawed' small tree piles, slash piles, boulder fields). Alternative F consolidated all management direction for denning habitat into one guideline, Guideline VEG G11.

PC #154: The agency should modify Objective ALL O1 to meet the definition of

"objective" in 36 CFR 219.7. The objective should contain: 1) measurable results; 2) estimate of the time required for accomplishment; or 3) an estimate of the resources needed for accomplishment. (Ltr #455)

Response to PC 154: The regulation cited in the comment letter refers to the 2000 planning regulations which were replaced by the 2005 regulations. This proposal is being completed based on the 1982 regulations. The definition in the 1982 regulations 36 CFR 219.3 is "Objective: A concise, time-specific statement of measurable, planned results that respond to pre-established goals. An objective forms the basis for further planning to define the precise steps to be taken and the resources used in achieving identified goals." The objectives proposed are measurable and in general, time specific. For example, Objective ALL O1 says to "Maintain or restore lynx habitat connectivity in and between LAUs and in linkage areas." Any project or activity located in and between LAUs and in linkage areas would be designed to maintain or restore connectivity (measurable planned result); and generally would be done through that project (although all projects may not meet all objectives at one time, but may move towards an objective or be benign) - therefore it is time specific.

GOALS

PC #74: The management direction should not include a specific goal for conserving lynx. None of the management plans, including those already revised include such specific language. (Ltr #455)

PC #478: The agency should add recovery of the Canada lynx to the goal (i.e., state the goal as conservation and recovery of the Canada lynx). (Ltr #296)

Response to PC 74 and 478: Our roles as defined in the ESA are to "...utilize their

authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species..." The Purpose and Need for this proposal is to incorporate management direction into existing plans to conserve and promote recovery of Canada lynx FEIS, p. 1). We decided to retain the Goal to "Conserve Canada lynx" (FEIS, Table 2-1, and Appendix N).

"ALL" standards

ALL S1

PC #121: The agency should remove the reference of vegetative treatments from ALL S1 since the Forest Service nor the FWS have identified forest management activities as a threat to lynx movement and the literature doesn't document any threats from forest management activities to lynx movement. (Ltr #455)

PC #479: The agency should retain Standard ALL S1, as written, to allow lynx movement, migration and travel when hare populations decline, and so they can colonize other habitats, and augment existing populations. (Ltr #296)

Response to PC 121 and 479: According to FWS, "Timber harvesting can be beneficial, benign, or detrimental to lynx depending on harvest methods, spatial and temporal specifications, and the inherent vegetation potential of the site. Forest practices in lynx habitat that result in or retain a dense understory provide good snowshoe hare habitat that in turn provides good foraging habitat for lynx. In Maine, extensive clearcutting over the past 25 years has resulted in a large amount of the forest currently in a stage of regeneration that is optimal for snowshoe hares and lynx. However, research in Maine has shown that snowshoe hare densities are low in forest stands that have been partially harvested such that there is little understory to

provide snowshoe hare habitat" (Appendix O).

The Standard ALL S1 concerns maintaining habitat connectivity (FEIS, Table 2-1, p. 41). As discussed in the FEIS, (p. 141-181), "Lynx seem to prefer to move through continuous forest, frequently use ridges, saddles and riparian areas (Koehler 1990, Staples 1995) and have been observed to avoid large openings (Ruggierro et al. 2000a)." On the other hand, "no natural or human-caused barriers that effectively prohibit movement of lynx between Canada and the northern Rockies have been identified." Generally, vegetation treatments do not impede lynx movement; however in some situations special considerations may be needed (e.g. areas with recent large forest-fires), therefore, we retained the direction in Alternative F.

The map included with the FEIS identifies linkage areas that connect blocks of lynx habitat (see FEIS, Appendix B; and Map, Figure 1-1) as agreed to in the Conservation Agreement. After considering the public comments and rationale for maintaining linkage areas, Alternative F retained Standard ALL S1 in LAUs and linkage areas to allow for the movement of lynx. ALL S1 would not apply outside of LAUs and linkage areas.

ALL S2

PC #187: Under Alternative D, Standard ALL S2 allows projects that deviate from a standard to go forward without amending the plan if they are found not likely to adversely affect lynx. The agency should explain how a "Not Likely To Adversely Affect" call could be made. Usually if you deviate from standards it would result in a may affect - likely to adversely affect. (Ltr #495)

PC #233: The agency should not include Standard ALL S2, as described in

Alternative E in the final decision. ALL S2 does not have a positive effect on any risk factor, it does not include a higher level of review and it would be difficult to do appropriately. (Ltr #23, 56, 65, 108, 309, 319, 334, 347, 352, 365, 378, 397)

PC #234: The agency should retain Standard ALL S2, in Alternative E in the final decision. ALL S2 allows for management flexibility. (Ltr #100, 360, 484)

PC #236: The agency should explain what a higher level of review means in Standard ALL S2. Also explain whether or not consultation with FWS would still occur. (Ltr #495)

PC #474: The agency should reevaluate whether or not to include Standard ALL S2. Preferably the agency should not include standard ALL S2, as described in Alternative E. However if Standard ALL S2 is included in the selected alternative, then it should be modified to provide more protection to better balance lynx conservation and management flexibility. One suggestion is to add a requirement for Regional Forester and BLM State Director oversight, and also FWS oversight and adequate cumulative effects analysis. (Ltr #296)

PC #500: The agency should drop Standard ALL S2 as written. If Standard ALL S2 is retained it should be modified to: 1) identify the basis for determining the effects of an action on lynx; 2) define short and long term effects; 3) define those sorts of actions that result in only short term adverse effects; or 4) preferably, be removed from consideration. (Ltr #5326)

Response to 187, 233, 234, 236, 474, and 500: Standard ALL S2 allows for some deviation from the standards (FEIS, Table 2-1, p. 41). Based on public comments, and comments from the FWS, we dropped Standard ALL S2 from Alternative F. (It remains as part of Alternatives D and E.) Some of the

flexibility ALL S2 was intended to allow for in meeting other standards has been built into Standard VEG S5 which applies to precommercial thinning activities in winter snowshoe hare habitat.

Precommercial thinning could be allowed in some cases where there is new information that is accepted by the management and the regulatory agency, where it is found that the activity would not adversely affect lynx or would have a short term effect but long term benefit. Based on discussions with lynx researchers, the lynx biology team and the FWS, the ID team felt this was the only standard where new information was likely to result in changes. We included specific criteria on when precommercial thinning could be conducted using this allowance. To provide review and oversight of new information, the Regional level of the FS and state level of FWS would determine when and under what circumstances the new information could be applied.

Individual projects still need to analyze site-specific effects to lynx, include a determination of the impacts, and consult as necessary with FWS. The effects determination for a project is based on all the site-specific information contained in the Biological Assessment written by the wildlife biologist on the ID team for that project. Depending on the situation in the project area, the likelihood of impacting lynx or the their habitat, the amount of impact, and the duration of impact, it is entirely possible that a determination of Not Likely to Adversely Affect lynx could be made for a project that deviated from a lynx standard. There is no need in this proposal to add a requirement to do adequate cumulative effects analysis. Cumulative effects analysis is already required under NEPA (see 40 CFR 1508.8 and 1508.25) and typically included in the Biological Assessment under ESA (see 40 CFR 402.12(f)(4)).

Vegetation

Vegetation objectives

PC #113: The agency should more specifically define "design regeneration harvest, reforestation and thinning to develop snowshoe hare habitat". Objective VEG O4 is too subjective. (Ltr 1, 3, 67)

PC #158: The agency should describe what constitutes "historical succession and disturbance processes" as is described in Objective VEG O1. The objective should describe the habitat components necessary for conservation of lynx. In addition, the objective should be rewritten to meet the requirements of 36 CFR 219.7 to provide measurable results; with an estimate of time; or an estimate of resources needed for accomplishment. (Ltr #455)

PC #159: The agency should remove Objectives VEG O3 and O4. Prescribed burning and logging are not needed to restore lynx habitat. The agency should not allow any fire use, mechanical thinning, regeneration harvest, logging, prescribed burning, etc. in the national forests, specifically in critical lynx habitat. (Ltr #226)

PC #356: The agency should explain what constitutes "habitat improvement" (Objective VEG O2). The agency should only include those activities where specific research has been done on the topic and the results were unequivocal that the activity resulted in increased lynx populations. (Ltr #1, 3, 67)

PC #440: The agency should modify or drop Objective VEG O1 because historic conditions cannot be clearly and definitively defined, nor can it be shown why historic conditions are necessary for lynx viability. This objective adds a huge amount of uncertainty about the quality of information on which management

decisions are being based. The agency should focus on protecting what lynx habitat remains, and to restore lynx to currently unoccupied habitat, in order to stabilize populations and ensure recovery. (Ltr #1, 3, 67)

Response to PC 113, 158, 159, 356, and 440: At the time PC 159 was written FWS had not designated critical habitat for lynx. Now that FWS has designated critical habitat, none of it is on NFS lands, so it is difficult to tell what PC 159 is referring to. Vegetation management activities are allowed for on NFS lands under the Multiple Use Sustained-Yield Act. As stated in the FEIS (p. 1), the Purpose and Need is to reduce or eliminated adverse effects to lynx while preserving the overall multiple-use direction in existing plans.

In Alternative F we have rewritten Objectives VEG O1, O2, and O4 to clarify them and focus in on what was intended by the each objective (FEIS, Table 2-1, pp. 42-43). In VEG O1, "historical succession and disturbance processes" has been replaced with "mimic or approximate natural succession and disturbance processes". In VEG O2 "Maintain or improve lynx habitat..." has been replaced with "Provide a mosaic of habitat conditions through time that support dense horizontal cover, and high densities of snowshoe hare." The intent of these two objectives is to provide a variety of successional stages on the landscape. VEG O4 now states, "Focus vegetation management in areas that have potential to improve winter snowshoe hare habitat but presently have poorly developed understories that lack dense horizontal cover."

Winter snowshoe hare habitat is defined as: places where young trees or shrubs grow densely – thousands of woody stems per acre – and tall enough to protrude above the snow during winter, so hares can browse on the bark and small twigs (Ruediger et al.

2000a). Winter snowshoe hare habitat develops primarily in the stand initiation, understory reinitiation and old forest multistoried structural stages (FEIS, pp. 145-148). It is possible to use management actions, including regeneration harvest, to create the successional stages that support winter snowshoe hare habitat. Objective O4 says to focus these actions where the habitat is lacking.

PC #46: The management direction should identify a desired future condition for lynx habitat. The desired condition should include objectives for structural stages, age classes, and distribution of lynx habitat across the landscape, and it should contain management strategies to move toward the desired condition. It is difficult to determine if suitable habitat is being maintained without this target for habitat conditions. (Ltr #1, 64, 67, 278, 354, 381, 382, 401, 455)

PC #239: The agency should require a definite and measurable objective for vegetative components preferably on a large landscape scale. The agency should not rely on guidelines or exceptions to the vegetation standards, but should set sideboards so results can be measured. (Ltr #129)

PC #340: The agency should include guidance that states: late-succession and old growth forests should be maintained or enhanced to provide the stand distribution, stand sizes, large snags and down woody of minimum size needed for den sites. This would be help assure the presence of useable denning habitat, and would not assume it would be present with just the presence of a certain age of timber stand or in the presence of coarse woody debris. (Ltr #129)

PC #469: The agency should provide standards that maintain old growth forests. (Ltr #319, 359)

Response to PC 46, 239, 340, and 469: The terms *desired future condition* or *desired condition* are used in planning to describe the future condition of a defined landscape area. We have not used these terms because each plan already has already described their desired condition. However, we defined what is constitutes lynx habitat (FEIS, Glossary, p. 371; Glossary at end of Table 2-1, p. 66).

Basically, the desired condition is to provide sufficient lynx habitat in a variety of forest ages and structural stages. To that end we would incorporate management direction consisting of objectives, standards, and guidelines. We developed objectives for the habitat components necessary for the conservation of lynx (VEG O1), provide for winter snowshoe hare habitat (VEG O2), use fire to maintain or improve lynx habitat (VEG O3), and focus vegetation management in areas the have poorly developed understory and could be improved (VEG O4). The standards we developed address both the quantity of lynx habitat in a certain structural stage (VEG S1 and S2) and the quality of winter snowshoe hare habitat (VEG S5 and S6). We also developed guidelines (VEG G1, G10, and G11) that maintain denning habitat, promote lynx conservation, and encourage projects that produce hare habitat.

The FEIS updated the information on denning habitat. New information indicates denning habitat can be found in a variety of forest conditions and is not a limiting factor in the planning area (FEIS, pp. 79-83 and 173-175). Since denning habitat is not a limiting factor, instituting a standard for denning habitat or maintenance of old growth habitat is not necessary.

VEG S1/S2 - general

PC #135: The agency should consider a standard that requires engaging in spatially explicit landscape planning within very large management areas and is conservative in retaining habitat components. (Ltr #131)

PC #222: The agency should include a standard that requires an even distribution of lynx habitat within every section of ground. Standard VEG S1, especially when applied to larger landscapes, fails to ensure an even distribution of lynx habitat. (Ltr #1, 3, 67)

Response to PC 135 and 222: It would not be possible to meet a standard for even distribution of lynx habitat across the planning area. Lynx habitat is found at mid to upper elevations (FEIS, p. 142), and the geology that forms those elevations is not evenly distributed across the area. Lynx habitat is characterized by abundant moisture (FEIS, p. 141; this too, is not evenly distributed across the area. All lynx habitat in the entire Northern Rockies is not on publicly owned land, and we cannot dictate the management on private land.

Lynx use a variety of forest ages, types, and structural stages (FEIS, p. 142). It would be very difficult to produce an even distribution of these habitats in every section even on the publicly owned land, much less the private land. Even if we could produce such a distribution of habitat types, natural disturbances, such as fire, could change large areas of habitat in a matter of days, frustrating our attempts. (For example, the Robert Fire burned nearly 53,000 acres, which is almost 83 square miles, in three months.) A lynx home range can be from 25 to 50 square miles (FEIS, p. 141) or more (Ruediger et al. 2000a, p. 1-5). With home ranges of that size it is unnecessary to have an even distribution of lynx habitat in every square mile section of

ground in order to conserve lynx. The important point biologically is to have the variety of forest ages, types, and structural stages in each LAU. In Alternative E, VEG S1 could be applied to multiple LAUs. In Alternative F, VEG S1 was modified to only apply to a single LAU to ensure a variety of successional stages are provided in each LAU.

PC #120: The agency should focus on the use of natural disturbance patterns, in terms of size, frequency, intensity, and stochasticity for guidance concerning the design and management of landscapes. Standard VEG S1 should identify a desired level of early successional and late successional forest conditions by major plant community that national forests should strive to achieve in order to provide optimum lynx habitat. The agency should recognize that historical succession and disturbance processes are not the same for each forest type. (Ltr #131, 455)

PC #545: The agency should modify Standard VEG S1 so that the amount of lynx habitat in unsuitable condition is based on disturbance processes associated with that LAU. It is quite possible that with the large fires that occur in lodgepole pine, more than 30 percent of an LAU may be not suitable for a period of time but still be consistent with objective VEG 01. The normal disturbance processes in spruce-fir are generally small and would rarely exceed the 30 percent standard. This standard assumes the disturbance processes are the same for each plant community, and they are not. Rather than implement a standard that restricts management, this Standard should identify a desired level of early successional and late successional forest conditions by major plant community that national forests should strive to achieve in order to provide optimum lynx habitat. (Ltr #455)

Response to PC 120 and 545: We realize that different habitat types have different disturbance processes, and that a large fire could put more than 30 percent of an LAU in a stand initiation structural stage that would not provide for winter snowshoe hare habitat for a period of time. Standard VEG S1 allows for broad scale assessments that may indicate different historic levels of early successional stages. Depending on the outcome of these broad scale assessments, a unit may be able to move more than 30 percent of an LAU to a stand initiation structural stage.

At this time we do know that both early and late successional forest stages are used by lynx at different times of the year and at different levels. Research is still on going (FEIS, Appendix F), but at this time we do not know, and it is unlikely we would ever know the *optimum* combination of these stages for lynx. Since forest successional stages are ever changing, even if we could know what optimum for lynx is, it would be difficult to exactly maintain whatever balance that would be. It is also likely that what is optimum for lynx would not be the optimum combination for other animals and plants that use the same habitat. However, we can strive to provide a variety of habitats we know that lynx use. That is the intent of the VEG standards.

VEG S1/S2 - amounts

PC #106: The agency should retain the standards to maintain 10 percent denning habitat; 70 percent of lynx habitat in a suitable condition; and allow conversion of no more than 15 percent of lynx habitat to an unsuitable condition per decade. (Ltr #52, 278, 374, 397)

PC #191: The agency should reconsider Standard VEG S1; it appears to be too restrictive. In addition, the agency should

explain where the 70 percent suitability threshold came from.

For example, 73 percent of the Flathead Forest is lynx habitat. Roughly 30 percent of FNF is suitable for timber harvest. If we assume that 73 percent of the suitable timberlands are lynx habitat, that leaves only 8 percent of FNF land that is suitable for timber and unregulated by VEG S1 where there might be a reasonable assurance that timber harvest could occur. Clearly this is not enough to sustain any level of timber harvest infrastructure. Therefore we must be able to harvest some of that lynx habitat. It is doubtful that enough merchantable timber can be harvested as fire hazard reduction or that very much will be slated as lynx habitat improvement. (Ltr #358)

PC #246: The agency should consider allowing more than 30 percent of an LAU be treated (Standard VEG S1). Treatments designed to enlarge the vegetative patch size could result in desirable mid-seral vegetation in the future and decrease the need for interruptions in habitat. (Ltr #341, 357)

PC #341: The action alternatives indicate that 70 percent of an LAU must provide suitable lynx habitat and 10 percent must provide well distributed denning habitat before other vegetation management activities might be considered. The agency should not cater to managing 70 percent of the habitat for a single threatened or endangered species. (Ltr #73)

Response to PC 106, 191, 246, 341: There seems to be a misunderstanding of Standard VEG S1 in some of the comments. This standard follows the LCAS recommended standard: "if more that 30 percent of lynx habitat within a LAU is currently in unsuitable condition, no further reduction of suitable conditions shall occur as a result of vegetation management activities by federal agencies" (Ruediger et

al. 2000, p. 7-3). We modified Standard VEG S1 and S2 in Alternative F to be explicit about what “unsuitable habitat” entails. Unsuitable habitat includes those forests in a stand initiation structural stage (young forests) that are not yet tall enough to provide winter snowshoe hare habitat. We found the term “unsuitable” to be confusing. This habitat is still suitable during the summer – but does not provide adequate cover and forage in the winter. We also clarified that only regeneration harvest can create stand initiation structural stages – by definition. Therefore, this does not mean only 30 percent of an LAU can ever be harvested. Vegetation management activities that do not regenerate stands could take place at any time. And as the vegetation in young regenerating forests grow in height and provide winter snowshoe hare habitat other regeneration harvests could take place in the LAU.

Maintaining 70 percent of LAUs in a condition other than young regenerating forests for lynx does not constitute managing 70 percent of the habitat for a single species. Other species would benefit from this management (see *Other Wildlife and Fish*, FEIS, pp. 202-212), as well as timber production benefiting from a more even distribution of age classes. Again the intent of VEG S1 is to provide a successional distribution of habitat over time. The desired condition is to limit the amount of regenerating forests within each LAU over time.

VEG S1/S2 - activities

PC #88: The agency should manage logging and grazing to improve hare habitat. (Ltr 25)

PC #111: The agency should modify Standard VEG S1 to allow for vegetative treatments that could improve lynx habitat. They should also allow adaptive

management for the needs of lynx in non-lynx inhabited forests. (Ltr #4, 25, 35, 179, 360, 445, 484)

PC #232: The agency should provide protection to lynx habitat from logging. Alternative E does not change the status quo. (Ltr #2, 351)

PC #353: The agency should allow restoration after fire instead of setting limits how much timber harvest may occur. When the forest looks like a lunar landscape after a fire, the area should be restored no matter what size. (Ltr #395)

PC #357: The agency should discuss the appropriateness (or not) of salvage harvest of burned forests. Salvage logging of burned forests could have a tremendous impact on existing as well as long-term habitat quality for the lynx and the snowshoe hare. These burned forests may be the only places that provide the high-density sapling stands that the hare needs to achieve optimum population densities. (Ltr #1, 3, 67)

Response to 88, 111, 232, 353, and 357: Timber harvest can be beneficial, benign, or detrimental depending on the harvest method, the spatial and temporal occurrence on the landscape, and the inherent vegetation potential of the site (Appendix P).

Standards VEG S1 and S2 do not prohibit timber harvest except for regeneration harvest when more than 30 percent of an LAU is already in young regenerating forests not yet tall enough to provide winter snowshoe hare habitat. Regeneration harvest can produce the desired habitat conditions when it is done appropriately (it results in thick regeneration afterwards); therefore we did not preclude all harvest activities. We modified Objective VEG O1 and Guideline VEG G1 to encourage vegetation management projects that are done to recruit a high density of trees,

especially in those forests that have little to no forage value for snowshoe hares.

Standards VEG S1 and S2 do not apply to salvage logging because salvage logging is generally done on areas already changed to a stand initiation structural stage by a disturbance. For example, after a stand replacing fire the resulting stand is already in the stand initiation condition. Salvage harvest does not create the stand initiation condition. Even if salvage harvest were to limit the ability of the forest to provide winter snowshoe hare habitat this would be taken into account in the 30 percent standard. If this were the case, those acres would be included in the 30 percent standard until the young regenerating forests provide winter snowshoe hare habitat.

VEG S1/S2 - area to apply to

PC #73: The final preferred alternative should use multiple LAUs to evaluate/manage lynx habitat components. (Ltr #129, 494)

PC #156: The agency should apply Standard VEG S1 to an LAU for ease in analysis at the field level. Although it is probably more appropriate to apply the standard at a larger scale to incorporate disturbance processes, our ability to evaluate at that large scale is difficult. (Ltr #355)

PC #182: In Alternatives C and E, Standard VEG S1 requires LAUs be lumped together for future analyses. The agency should restate this and say "LAUs can be combined for analysis for some projects with the concurrence of the FWS, and those same LAUs may not necessarily be lumped in the future." (Ltr #495)

PC #190: The agency should consider the size of area to apply Standard VEG S1. A subbasin as proposed in Alternative D is

likely too large and would begin to wash out effects of projects. (Ltr #495)

PC #235: The agency should modify Standard VEG S1 to allow combining LAUs for some projects, and not for others. There may be cases when it is necessary to use a different combination of LAUs, with FWS concurrence. (Ltr #495)

PC #350: The agency should not use single LAUs in Standard VEG S1 for analysis purposes and should describe what type of harvest may be used to meet snowshoe hare habitat requirements. The fifteen to twenty five thousand acre home range LAUs are far too small to use as adequate analysis areas. Many recent fires are three to five times that size and would automatically preclude any forest management activities across several LAUs that currently lack lynx denning habitat or winter snowshoe hare habitat.

The following scenario demonstrates the ability to manage on such a scale: A LAU of 20,000 acres must provide no less than 70 percent snowshoe hare habitat including 10 percent denning habitat. That makes 14,000 acres of lynx habitat that may only be managed as lynx habitat. If the remaining 6,000 acres also provides lynx habitat, then silvicultural treatments such as shelterwoods, seed tree harvests, or clearcuts might be justified. If the other 6,000 acres does not meet suitable lynx habitat requirements, for example a developed private land tract or a 15-year-old burn or seed tree that hasn't reached a suitable height for hare habitat, then there are fewer management options in the original 14,000 acres. This is where the scenario becomes difficult to portray because the Management direction makes no effort to describe or identify acceptable harvest prescriptions that might meet snowshoe hare habitat requirements.

The document describes low lying branches, small trees, underbrush, and

course woody structure that must be left in order to meet the hare habitat requirements. Would a commercial thinning meet the requirements? How about a thin from below treatment? A certain level of basal area? Would everything be managed as an uneven age stand to maintain the understory structure and if so, wouldn't that force us to revert back to historic management techniques we have been trying to repair through habitat restoration and fuels reduction for a decade now? (Ltr #73)

PC #415: The agency should delineate larger LAUs. Larger landscape considerations should be given managing for lynx. This would allow for a more balanced landscape and would provide habitat where the most potential exists. (Ltr #480)

PC #506: The agency should apply Standard VEG S1 to a single LAU for vegetation management actions in the Northern Rockies. VEG S1 limits conversion of suitable lynx habitat to unsuitable lynx habitat to no more than 30 percent. This measure is based on the limited understanding of how large-scale environmental changes affect lynx populations in the contiguous United States, in part due to the lack of appropriate broad-scale habitat assessments. Application of conservation measures at the LAU scale requires blocks of quality lynx habitat to be maintained within each LAU, maintaining a good distribution of lynx habitat conditions across the range of lynx.

LAUs are delineated without influence of past or future projects and should provide the habitat conditions necessary to support lynx reproduction. Standard VEG S1 would apply the 30 percent conversion but at a scale that could include a combination of adjacent LAUs. If the limitation of the 30 percent conversion to unsuitable habitat were analyzed at a larger scale than the

LAU, it could result in large contiguous areas devoid of areas of suitable lynx habitat. The mosaic of habitat conditions that support lynx is a large part shaped by large-scale events, such as fire. However, our understanding of how to apply that principle in the mountainous Northern Rockies is limited at this time. The LCAS acknowledged this and recommended a broad scale assessment referenced in the standard would provide for both lynx conservation and management flexibility. Lynx research that is currently ongoing in the northwest may shed new information with which to fashion and interpret and assessment. For Alternatives C, D, and E, as written, the agency should consider and elaborate on how the management direction would ensure and adequate distribution of lynx habitat at scales meaningful to lynx. (Ltr #296, 5326)

Response to PC 73, 156, 182, 190, 235, 350, 415, and 506: From the above comments, it is clear the public is concerned about the scale at which analyses and vegetation management projects occur. A number of different solutions were suggested to remedy or mitigate the concern. The LCAS considered the scales of analysis (Ruediger et al. 2000, pp. 7-2 to 7-6). For project planning, "Lynx analysis units (LAUs) are intended to provide the fundamental or smallest scale with which to begin evaluation and monitoring of the effects of management actions on lynx habitat...Several of the conservation measures require analysis units within which rather specific parameters can be measured...LAUs provide this analysis unit... [however] The LAU may not provide a large enough analysis area within which to address direct, indirect, and cumulative effects of particular actions. In many cases project impact must be assessed within the context of two or more LAUs... Programmatic planning should not be limited to or focused on the scale of

individual LAUs. Programmatic planning may entail the consideration of landscape patterns across large areas, such as all the LAUs within a given subbasin or mountain range" (LCAS, p. 7-2).

Alternative B Standards VEG S1 and VEG S2 are in keeping with the rationale found in the LCAS. They focus on the LAU, but allow for broad scale assessments.

Alternatives C, D, and E would allow Standards VEG S1 and S2 (if applicable) to be applied at a larger scale. These alternatives allowed the standards to be applied to a larger area because natural disturbance processes tend to be larger than an LAU in the Northern Rockies.

Alternative F applies the management direction to an LAU (same as Alternative B) to ensure a variety of successional stages are provided within a home range. In addition, all alternatives allow a deviation if a broad scale assessment is completed and determines that different amounts are warranted.

VEG S2

PC #157: The agency should not drop Standard VEG S2, or lessen to a guideline. Since the standard is almost always met, why not keep it? (Ltr #23, 105, 352, 495)

PC #160: The agency should not include a standard that limits timber harvest to 15 percent of an LAU per decade. An average fire by today's standard is eight to ten thousand acres and that would eliminate the ability to do anything in the LAU for decades. (Ltr #73)

C #243: The agency should justify dropping Standard VEG S2 in Alternative E, which prevents conversion of more than 15 percent of lynx habitat in an LAU to an unsuitable condition within a ten-year period. (Ltr #334, 365)

PC #244: The agency should allow larger scale treatments under VEG S2. The

standard, under Alternative B could lead to a system of permanent roads that could be avoided if larger scale treatments were allowed and roads were removed. (Ltr #341, 357)

PC #248: The agency should add a standard that requires at least 15 percent of an LAU to be in an early stand initiation structural stage. This will insure that there will always be a component of land that is moving toward winter forage habit condition and that there will be no "gaps" in that habitat. (Ltr #179)

PC #483: The agency should evaluate further whether it would be more appropriate to apply Standard VEG S2 to all vegetation projects, not just timber management. (Ltr #296)

PC #507: The agency should retain Standard VEG S2, as described in Alternative B which limits the temporary conversion of lynx habitat into an unsuitable condition within LAUs within a specified time. The intended purpose of the standard was to limit the rate of change in lynx habitat within an LAU to ensure sufficient habitat for lynx through time and preclude LAUs rendered incapable of supporting lynx by an action or several action over a short period of time. Natural disturbance events (e.g. fires) in lynx habitat are typically large, resulting in the maintenance of large blocks of contiguous suitable lynx habitat on the landscape through time. Management actions, on the other hand, typically affect much smaller patches on the landscape, potentially resulting in unnaturally high fragmentation of lynx habitat and reducing the ability to maintain or create the large blocks of contiguous suitable lynx habitat with which lynx have evolved. The omission of VEG S2 under Alternatives D and E allows potentially negative effects on lynx to accumulate. Removing this standard could result in reducing the amount of

suitable lynx habitat over a short period time, at LAU or larger scales, and removing the consistent application of the LCAS and the use of the LAUs as analysis boundaries. (Ltr #5326)

Response to 157, 160, 243, 244, 248, 483, and 507: We reviewed the arguments, pro and con, relating to Standard VEG S2, and decided to retain VEG S2 in Alternative F, with some modification. The standard applies to timber management and fuel treatment projects that result in stand regeneration *outside* the WUI. Also, the cumulative total of fuel treatments *within* the WUI that do not meet the standard shall not exceed 6 percent of lynx habitat across a unit. The standard now contains the statement: "Timber management projects shall not regenerate more than 15 percent of lynx habitat on NFS lands in an LAU in a ten-year period" (See Table 2-1 for entire text of standard). This is in keeping with the LCAS (Ruediger et al. 2000, p. 2-5), which states, "Management actions shall not change more than 15 percent of lynx habitat in an LAU to an unsuitable condition within a 10-year period." *Unsuitable conditions* is where the trees in a forest stand are too short to provide winter snowshoe hare habitat.

VEG S3/S4 activities

PC #117: The agency should not allow salvage to occur in lynx habitat. (Ltr 354, 363, 437)

PC #183: The agency should retain the management direction in Alternative C for denning habitat. The inclusion of VEG S4 in Alternative C makes its management direction more sustainable for lynx. VEG S4 would allow salvage within 200 feet of structures which provides sufficient protection to denning habitat while also providing for the safeguarding of the human built environment. (Ltr #511)

PC #241: The agency should not allow any thinning or logging, as indicated in Guideline VEG G7, because it is not biologically or scientifically supported. Lynx are extremely sensitive species year-long, and specifically during breeding and winter stress periods, and will abandon denning habitats, young, and entire ranges in direct and indirect response to human actions; therefore no actions should be allowed. (Ltr #226)

PC #242: The agency should justify changing Standard VEG S3 to allow projects to proceed if they "move towards" providing 10 percent denning by leaving woody debris on the forest floor. (Ltr #334, 365)

PC #245: The agency should drop Guideline VEG G7 (or Standard VEG S4 in Alternative B and C) because it creates undue constraints on needed management actions. Salvage should be allowed to remove blowdown that would become the host site for insects and disease that could attack live trees and cause further stand deterioration. (Ltr #331, 341, 357, 366)

PC #255: The agency should properly address denning habitat. All guidelines for denning habitat (Guidelines VEG G2, VEG G3) should be changed to standards, including requiring creation, restoration, and retention of denning habitat. In addition, fuel treatments should not be allowed if they reduce denning habitat. (Ltr #108, 511)

PC #360: The agency should not establish standards for denning habitat because this component is not limiting to lynx. Imposing the standard could affect large acreages where there is no rationale to do so. (Ltr #209)

PC #508: The agency should remove the exemption for Standard VEG S3 under Alternative E and modify the standard to: 1) maintain 10 percent denning habitat within an individual LAU; 2) is

randomly/evenly distributed across the LAU; and 3) ensures recruitment of future denning habitat. Guideline VEG G7, under Alternative E should be combined with this standard to eliminate potentially inconsistent direction. The agency could include VEG S3 conditions 1 and 2 under Alternatives D and E and VEG S4 Conditions 1, 2, 3, and 4 under Alternative B and C. (Ltr #5326)

PC #533: The agency should recognize the need to salvage pockets of blowdown, so that healthy forests can exist. The agency should not leave 5-acre patches of blowdown material to become the host site for insect and diseases. (Ltr #331)

Response to PC 117, 183, 241, 242, 245, 255, 360, 508, and 533: Standards VEG S3, S4, and Guidelines VEG G2, G3, and G7 all concern providing adequate denning habitat for lynx.

Since 1989 researchers discovered that lynx denning habitat is found in a variety of structural stages from young regenerating forests to old forests. The integral component of lynx den sites appears to be the amount of downed, woody debris, not the age of the forest stand (Mowat, et al. 2000). Research by Squires (pers. com. 2006) has found that of 40 den sites in northwest Montana most were located under large logs, but “jack-strawed” small diameter wind thrown trees, root wads, slash piles and rock piles were also used. These structural components of lynx den sites can often be found in managed (logged) and unmanaged (e.g. insect damaged, wind-throw) stands.

Based on this information the ID team developed Alternative F which consolidates all the denning direction into Guideline VEG 11. This research does not indicate a minimum amount of denning habitat is required for lynx. In general, most forests have some pockets of down trees that would likely provide adequate denning

habitat. However, under Guideline VEG G11 if denning habitat appears to be lacking in an LAU, then projects should be designed to retain coarse woody debris, piles or residual trees to provide future denning habitat.

Also see the discussion of *Management direction considered* for denning habitat in the FEIS pp. 79-83.

VEG S3/S4 other

PC #355: The agency should include LCAS standard #1: conduct a post-disturbance assessment before salvage harvest, particularly in stands that were formerly in late successional stages, to evaluate potential for lynx denning and foraging habitat. NEPA documentation for salvage logging has been precluded for extended periods of time by acts of the U.S. Congress, at least twice in the last decade, to the detriment of immense acreages of lynx habitat. To rely on NEPA protections for the continued safety of lynx habitat from the hysteria surrounding salvage logging is ignoring the devastation of past activity of federal administrations, which has specifically negated NEPA protections for salvage logging. (Ltr #309, 315)

Response to PC 355: The National Environmental *Policy Act* is a procedural law. It does not contain protections in the Act for lynx or other species, only procedures that must be followed, according to Congress’ will. NEPA requires that prior to a project an analysis would be conducted (see 40 CFR 1501). To include a standard in this proposal requiring the same would be redundant. If, on the other hand, it is Congress’ will that NEPA not be conducted on certain projects (as alluded to by the commenter), we would not want to have a standard in the management direction that would be contrary to Congress’ will. Regardless of the situation

with NEPA, the agency would still need to comply with ESA, which does contain protections for federally listed species. ESA still requires an assessment of the impact a salvage harvest, or other federal action, would have on lynx and other federally listed species.

PC #523: The agency should change guideline VEG G4 to a standard. Fire lines punched into these known lynx preferred travel areas should only be temporary. Permanent fire lines on ridges and saddles could prevent lynx movement especially when the ridges and saddles are flanked by steep sided slopes. (Ltr #105)

Response to PC 523: Many things, including fire behavior, fire fighter safety, fuel types, topography, and wildlife habitat go into the decision on when and where to build fires lines. It is vitally important to allow for flexibility in placing fire lines so that the best outcome can be achieved. We considered the comment, but decided to keep VEG G4 as a guideline, in keeping with the recommendation in the LCAS (Ruediger et al. 2000, p. 7-7).

PC #482: The DEIS states (page 193) that with Alternative E Guideline VEG G7 salvage harvest could take place with adequate rationale, while Guideline VEG G8 states winter snowshoe hare habitat would have to be considered when designing timber projects, but it (we assume snowshoe hare habitat is "it") could be removed if reasons can be documented. These statements should be further clarified. If snowshoe habitat can be removed it should not only be documented (which does not provide protection and doesn't contribute to the conservation and recovery of the lynx), but there should be some scientific rationale to support the loss of snowshoe hare habitat. (Ltr #105, 296)

Response to 482: We considered this comment and comments about lynx denning habitat. Under Alternative F, we incorporated Guideline VEG G7 into Guideline VEG G11. Standards VEG S3, S4, and Guidelines VEG G2, G3, and G7 all concern providing adequate denning habitat for lynx. All of these have been combined into Guideline VEG G11. Please see our response to PC # 117 (previous page) concerning denning habitat.

Alternative F maintains the Standard VEG S6 for those vegetation management and fuel treatment projects outside the WUI. For those projects within the WUI we developed Guideline VEG G10. This guideline says for those projects within the WUI, the project should be designed considering the Standards VEG S1, S2, S5 and S6. Guideline VEG G10 therefore promotes the conservation of lynx while allowing for more management flexibility to response to high fuel loads in the WUI.

We also considered your comments about Guideline VEG G8. VEG G8 of Alternative E is included as part of the revised Standard VEG S6 in Alternative F. VEG G8 concerns winter snowshoe hare habitat, as does Standard VEG S6, (see FEIS, Table 2-1, pp. 49 and 52). We understand the importance of protecting winter snowshoe hare habitat, but also recognize the need in some places to manage the habitat to protect structures, for research, or for incidental removal during salvage. Each of Alternatives B, C, D, and F offers a different selection of situations where management of hare habitat could occur, but all maintain the direction as a standard. Alternative E simplifies the language and makes this item a guideline numbered VEG G8. Alternative F separates out the WUI, and places projects that occur in the WUI under guideline VEG G10.

PC #185: The agency should mandate vegetation management practices that will maintain and enhance habitat for the snowshoe hare and alternate prey, such as the red squirrel. (Ltr #511)

Response to PC 185: Maintaining and enhancing snowshoe hare habitat is important. We included Guideline VEG G1 to encourage projects that recruit a high density of conifers, hardwoods, and shrubs where that type of habitat is scarce.

The LCAS says red squirrels are primarily associated with coniferous forests; their densities tend to be highest in older, closed canopy forest with substantial quantities of coarse woody debris (Ruediger et al. 2000, p. 1-8 to 1-10). The vegetation standards and guidelines that maintain the various habitat components necessary for lynx would also maintain and enhance red squirrel habitat (Ruediger et al. 2000, p. 7-5).

VEG S5/S6

PC #510: Recent preliminary research generally reinforces the concept that multistoried forests are important to lynx. The agency should review the latest information or research on lynx use of forest in multistoried structural stages prior to developing a final preferred alternative. Based on current research, the agency should develop an objective with corresponding standards and guidelines that include the following language: "Provide habitat conditions through time that support dense horizontal, understory cover, and high densities of snowshoe hares. This includes, for example, mature, multi-storied conifer vegetation in the west. Focus vegetation management, including timber harvest and use of prescribed fire, in areas that have potential to improve snowshoe hare habitat (dense horizontal cover) but that presently have poorly developed understories that have little value to snowshoe hares." (Ltr #5326)

Response to PC 510: We continue to track new information and research, especially related to horizontal cover. This information is included in the FEIS (pp. 22 and 150). The findings of this new research have been incorporated into Objectives VEG O2 and O4 (FEIS, Table 2-1, 42-43), which describe the desire to provide conditions that support dense horizontal cover, and the desire to focus vegetation management in areas that presently lack such cover but have the potential to develop into good winter snowshoe hare habitat. In addition, Alternative F, the FEIS preferred alternative retains the management direction for multistoried forests as Standard VEG S6 because this is such an important component for lynx and its prey.

PC #161: The agency should expand the two standards (VEG S5 and VEG S6) in Alternative B to address all vegetation management projects that threaten winter snowshoe hare habitat, such as was done in Alternative C. (Ltr #62, 105, 171, 315, 322, 334, 365, 511)

PC #162: The agency should modify Standard VEG S5 and VEG S6 to take into account varying snow depths within and between LAUs, Districts, Forests. Criteria should be developed that identifies stand ages appropriate for thinning based on snow depths. (Ltr #494)

PC #351: The agency should not allow prescribed burning in winter snowshoe hare habitat or denning habitat. Many of the prescribed burns in the high country are weeding out young dense stands (precommercial thinning) and burning up the heavy concentrations and jackpots of fuels (the denning habitat). Alternatives B and E only preclude precommercial thinning. An adverse effect is an adverse effect--regardless of what caused it. (Ltr #96)

PC #542: The agency should modify standards to reduce or eliminate adverse effects on lynx recovery. The agency should manage/coordinate high elevation forest thinning (including fuels treatment projects), as well as vegetative treatments in older multi-storied forest, at the landscape level to allow for adequate retention and connectivity of lynx/snowshoe hare habitat. (Ltr #383)

Response to comments 161, 162, 351, and 542: We reviewed and revised Standards VEG S5 and S6 in Alternative F in light of various public comments and the Healthy Forests Restoration Act (HFRA), the purpose of which is, in part, to reduce wildfire risks to communities, municipal water supplies, and at-risk Federal land.

VEG S5 is concerned with maintaining winter snowshoe hare habitat in young regenerating forests. Alternative F allows precommercial thinning to occur in certain situations, including allowing thinning to reduce fuels within the WUI. Very few other types of projects occur in young regenerating forests; therefore we focused on the main concern, which is precommercial thinning.

Under Alternative F, Standard VEG S6 would apply to all vegetation management projects in multistoried forests. Alternative F allows for fuel reduction projects to occur within the WUI without necessarily meeting the standards. For both standards projects within the WIU would follow VEG G10. We placed a “cap” on the amount of fuel reduction treatments that would not meet the standards. We believe allowing some projects that reduce winter snowshoe hare habitat may be appropriate in the WUI, but we wanted to limit how much habitat could be modified. The standards would apply to 94 percent of lynx habitat on a unit, which we believe is a reasonable balance.

Taking into account varying snow depths, deciding which stands are appropriate for management, and whether or not to use prescribed burning are based on the site-specific situation. Developing criteria to cover numerous combinations would be a long exercise with very little benefit. The point is that during the winter, food for snowshoe hare is limited to twigs and stems that are within reach above the snow surface (Ruediger et al. 2000, p. 107). Once Standard VEG S5 and S6 identify where a project can take place, the project specific analyses are the best place to determine what is necessary to accomplish the objectives of maintaining and improving snowshoe hare habitat (Objectives VEG O2 and VEG O4).

Precommercial thinning

PC #76: The management direction should include an alternative that encourages precommercial thinning in lynx habitat where adequate snowshoe hare habitat exists. Also stands with less than 2500 trees per acre should be available for thinning. (Ltr #73)

PC #114: The agency should indicate that thinning of early succession forests should be done in a manner that results in shrubby undergrowth needed by hares. (Ltr #129)

PC #116: The agency should consider the integral part disturbance processes play in the Intermountain region and allow thinning that mimics these processes. Mixed severity fire results in a mosaic of "thinned" stands. The agency should limit thinning in areas where high severity stand replacing fires occurred. The agency should consider PNW-RP-514 by Hessburg and others to estimate a natural range of variation in spatial patterns of patch types in these areas, and manage accordingly. (Ltr #146, 455)

PC #119: The agency should more fully evaluate where precommercial thinning could be done to promote snowshoe hare habitat or where it could be done and not harm hare habitat. According to GTR RM-254 "Thinning stands early to maximize tree growth potential can be compatible with snowshoe hare and lynx habitat needs provided that stands are thinned before lynx colonize the area." The standards fail to recognize the benefits of thinning, which reduces self-pruning and consequently maintains limbs along more of the tree for a longer period of time. This would provide hiding cover longer, and provide conditions that enhance the growth of shrubs for valuable forage. The agency should also evaluate what value western larch regeneration units provide lynx. These forests provide little winter snowshoe hare habitat. (Ltr #455, 494)

PC #134: The agency should consider the following allowances for precommercial thinning in Standard VEG S5.

- Include the situations in the Southern Rockies planning area's Standard VEG S5 in addition to the ones you have identified.
- Stands that are not dense enough to qualify as hare habitat but could be thinned to increase tree growth and vigor.
- Pure stands of western larch or stands dominated by larch.
- Leave islands of unthinned trees in areas where precommercial thinning is desired.
- Thin the stands before they reach above the snow level.
- Thin stands to a density that is greater than the silviculturally optimum, but which will not so drastically reduce growth.
- The area being considered for thinning has an abundance of winter hare

habitat and thinning will improve the long-term mosaic of different structural stages.

- Since there is ongoing research addressing stand density and hare use, include an exception where new information shows that the thinning will not adversely affect hare habitat or will improve it. (Ltr #455)

PC #188: The agency should change Standard VEG S5 to a guideline so if information arises that precommercial thinning can be done to maintain and prolong winter snowshoe hare habitat plans won't have to be amended. Research is not in enough detail to claim that all precommercial thinning is bad for lynx. In some areas precommercial thinning can be used to provide a long term food source for the hare because thinning results in trees with a full crown. (Ltr #221)

PC #189: The agency should allow precommercial thinning to restore species and structures in decline as described in Alternative D. Precommercial thinning is a reasonable substitute for the "effects" of the low intensity wildfires that were historically part of mixed severity fire regimes. (Ltr #296, 355, 358, 417, 484)

- Western larch: WL is the most shade-intolerant conifer in the Northern Rockies (Burns and Honkala, 1990) and it will not maintain stand representation when overtopped or shaded. Daylight thinning will at least maintain some presence of this fire tolerant species for current and future structure as well as future natural seeding.
- Western White Pine- Some of our regeneration harvests have investments in blister rust resistant WP however they did not have good site preparation. WP on these sites are in jeopardy of losing dominance at a young age to shade tolerant GF and

WH unless given a competitive advantage by either doing an early weed/release, or some daylight thinning. Russ Graham's and Terri Jain's (of the Rocky Mountain Research Station) published research supports this understanding.

- Quaking Aspen- Quaking Aspen is not a highly represented cover type on the IPNF, but many of the clones we do have, have conifers encroaching in the understory. We need to be able to regenerate these stands or weed the conifers out of them to sustain this shade intolerant species.
- Whitebark Pine- This is a major issue in our upper elevation spruce/fir and white pine sites that support WBP. Blister rust and mountain pine beetle have greatly influenced the condition of these stands, without disturbance, we will lose the remaining stands. We need to be able to thin, and slash and burn shade tolerant conifers, not only to release WBP but also to reduce the risk of replacement fire in these stands.
- Lodgepole Pine- To manage for mature lodgepole pine, we need to be able to precommercial thin LP. This would improve achieving wildlife habitat objectives for species such as pine martin and northern goshawk as well as greatly reduce the fire risk and insect risk of these stands.
- Ponderosa Pine- Unique to the IPNF, ponderosa pine grows on warm/moist cedar cover types that have been mapped as lynx habitat. For this PP component to continue to survive on these vegetatively lush and diverse sites without historic fire disturbance, a competitive advantage must be provided at a young age for this shade intolerant species. Mature PP on these sites will survive some level of wildfire and serve to stimulate natural

regeneration, besides many other habitat virtues of large PP.

PC #192: The agency should reevaluate the precommercial options in Alternative D. Daylight thinning with retention of 80 percent of the cover is not going to release the growth in these stands and should not be considered a reasonable option. At the minimum, the agency should develop a range of thinning regimes and stem spacing so that portions of every LAU can be precommercially thinned, growing optimally, and maintained as candidates for study controls to compare the benefits and losses with those areas that defer all thinning in the first 30 to 40 years. (Ltr #331)

PC #230: The agency should only allow precommercial thinning adjacent to dwellings. Precommercial thinning should not be allowed for research or genetic test sites. (Ltr #33, 374)

PC #249: The agency should consider extending winter snowshoe hare habitat by allowing precommercial thinning in the stand initiation structural stage. The purpose of the thinning would be to allow just enough light to reach the lower branches to keep them alive for an addition 10 to 15 years, thus extending the "life" of those areas as winter foraging habitat. The agency should allow precommercial thinning in the stand initiation stage on at least one-third of an LAU when the purpose is to extend the life of lower twigs and stems. (Ltr #179)

PC #346: The agency should allow a combination of thinned and unthinned stands in lodgepole pine forests to provide suitable habitat over a longer period of time. Doing no thinning may reduce the amount of time regenerating stands could provide habitat for hares. (Ltr #357, 377, 480, 505)

PC #348: The agency should simplify the management direction for precommercial

thinning. There appears to be a lot of conflicting information. (Ltr #1, 3, 67)

PC #509: The agency could modify Standard VEG S5 1) daylight thinning of planted rust-resistant white pine where 80 percent of winter snowshoe hare habitat is maintained; 2) thinning within white bark pine stands; 3) white pine pruning, provided the criteria, developed jointly by the Forest Service and the USFWS for white pine pruning are incorporated; and 5) thinning for Christmas tree harvesting. These thinning activities would have cumulatively little effect upon lynx habitat and, in some cases, advances natural ecological conditions. The agency should modify the blanket exemption for fuel treatments and be more specific regarding what actions would be allowed. (Ltr #5326)

PC #521: The agency should retain standards limiting precommercial thinning or other vegetation management in winter snowshoe hare habitat. (Ltr #55, 65, 521)

Response to PC 76, 114, 116, 119, 134, 188, 189, 192, 230, 249, 346, 348, 509, and 521:

We considered all the comments on precommercial thinning in light of the needs for lynx, the HFRA, the Remand Notice, and the effects to various tree species in decline. We considered Hessburg's and other researcher's work (FEIS, Fire section, p. 213). Precommercial thinning is a useful silvicultural tool used to reduce stocking levels and increase the growth of desirable tree species (Ruediger et al. 2000, Glossary, p. 5). Research has shown that hare densities were lower in stands that had been precommercially thinned or in sparsely regenerating clear-cuts (Appendix P).

With all this in mind, we revised Standard VEG S5 to allow precommercial thinning in winter snowshoe hare habitat only in

certain situations (with rationale on why we allow the activity):

1. *Within 200 feet of administrative sites, dwellings, or outbuildings.* This is included because this entails a small amount of acres and is located adjacent to buildings in areas that lynx likely do not use a lot.

2. *For research studies or genetic tree tests evaluating genetically improved reforestation stock.* This is included because the research on genetic tree test sites is an important component of forest management, there are very few areas - which are dispersed across the landscape and usually these test sites have been maintained in an open environment and are unlikely to provide dense cover for snowshoe hare.

3. *Based on new information that is peer reviewed and accepted by the regional/state levels of the Forest Service, and FWS, where a written determination states:*

- a. *that a project is not likely to adversely affect lynx; or*
- b. *that a project is likely to have short term adverse effects on lynx or its habitat, but would result in long-term benefits to lynx and its habitat.*

This is included to allow an adaptive process when new research indicates precommercial thinning would not harm lynx habitat or could be done in a beneficial manner.

We considered allowing precommercial thinning in vast areas of young regenerating forests where precommercial thinning could be done to prolong winter snowshoe hare habitat. We considered precommercial thinning in young regenerating forests composed primarily of western larch with more than 10,000 trees per acre - where larch would be removed to favor other species that provide better winter snowshoe hare habitat. In both these situations the general belief is that these activities may be beneficial to lynx in the long term, but information is not available at this time to

support that hypothesis. So, the standard was modified to provide an avenue to consider new information that may in the future prove or disprove these hypotheses.

4. *For conifer removal in aspen, or daylight thinning around individual aspen trees, where aspen is in decline.* This is included since aspen is in decline in the Northern Rockies and aspen is a species lynx favors in certain situations; and because of the limited number of acres involved.

5. *For daylight thinning of planted rust-resistant white pine where 80 % of the winter snowshoe hare habitat is retained.* This is included because of the investment in planted rust-resistant western white pine, because western white pine is in severe decline in the Northern Rockies, because 80 percent of the cover would remain (only need to thin around individual planted trees not the whole stand), and because of the limited number of acres involved.

6. *To restore whitebark pine.* This is included because whitebark pine is in severe decline in the Northern Rockies, because whitebark pine is a tree species grizzly bear need for recovery, and because of the limited number of acres involved.

It should also be noted that a fuel reduction project that uses precommercial thinning as a tool, within the WUI, may deviate from Standard VEG S5. This gives some flexibility in situations where a project would need to retain larch and/or ponderosa pine in what would otherwise be hare habitat. However, a cumulative total of fuel treatment projects that do not meet the vegetation standards shall not exceed 6 percent of the mapped lynx habitat on the unit (see Standard VEG S5 in FEIS, Table 2-1, p. 47-48).

Fuel treatment

PC #79: The EIS should recognize that the present conditions in prime lynx habitat in no way support a need for

extensive fuel treatment. In fact, the standards included in the proposed action, would not stop individual logging and fuel treatment projects. The agency should eliminate the loophole regarding fuel treatment projects from all alternatives because it unfairly ignores credible scientific evidence in favor of excuses for "business as usual" timber activities. (Ltr #1, 3, 67, 378)

PC #90: The agency should not exempt fuel treatment projects from the vegetation standards. To do so will not maintain lynx persistence and conservation over time. (Ltr #23, 103, 105, 108, 277, 356, 363, 394, 397)

PC #136: The agency should only allow forest thinning around existing structures. (Ltr #52, 80)

PC #137: The agency should allow natural fires to burn except within 200 feet of structures. (Ltr #363)

PC #163: The agency should not exempt fuel treatment projects. (Ltr #1, 3, 64, 67, 74, 107, 154, 324, 329, 500)

PC #250: The agency should only allow fuel treatments within 50 to 200 yards of homes and structures, although 500 yards is also not likely to affect lynx either. (Ltr #57, 136, 319, 511)

PC #251: The agency should only allow fuel treatments within 500 yards of human residences and other structures because these areas are generally not appropriate to restore lynx anyway. (Ltr #108, 165, 321, 351, 3924)

PC #398: The agency should not use percentages or distances away from structures in managing for lynx habitat. It is important to keep any habitat moving through the succession stages or the diversity that is essential for functioning ecosystems may be lost. Manipulation may be necessary to maintain diversity within the habitat to keep the succession

necessary to ensure existence of long-term habitat or addressing unsuitable habitat conditions. How to maintain habitat diversity should be based on site-specific analysis and not limited by percentages or distances to buildings. (Ltr #12)

PC #438: The agency should ensure the management direction allows management of the forest health program and does not interfere with the Healthy Forest Restoration Act. Failure to adequately provide for measures to reduce fuel loadings could come at the cost of lives and property, as well as state and federal agency charged with fire suppression duties. (Ltr #5, 6, 34, 134, 196, 209, 358, 366)

PC #475: If the agency incorporate fuel treatments exemptions into the selected alternative the agency should consider the following changes. Standards VEG S1 and VEG S3 should be modified to only allow fuel treatments in high priority WUI and Condition Class 2 and 3 areas outside of WUI. The agency should provide a clear definition regarding the geographic extent of the WUI (e.g., within one-half to one-and-one-half miles of an at-risk community). (Ltr #296)

PC #480: The agency should describe mechanisms that would be in place to assure that fuel treatment projects are adequately evaluated for potential effects to the lynx and would not result in substantial adverse impacts to the lynx or its habitat. (Ltr #163, 296)

PC #502: The agency should define the size of a WUI. One suggestion is to define the WUI such that precommercial thinning activities are restricted to within 1 mile of structures, to minimize the adverse affects to lynx as a result of implementing these activities within lynx habitat. The agency should not include the broad exemption for fuel treatments outside the WUI. (Ltr #5326)

PC #503: The agency should not include fuel treatment exemptions in Standards VEG S1 and VEG S3. None of these measures proved problematic for Forest Service or BLM management proposals since lynx were listed, with few exceptions. Indeed, the DEIS on pages 163-164 concludes that VEG S1, and S3 would have very limited effects on fuel treatment projects. Very few LAUs currently have conditions that approach limits imposed by these standards. Therefore, proposals would infrequently be constrained by the standards. Yet under the proposed language for or absence of these standards in Alternative E, the potential for substantive negative impacts to lynx habitat would be contained in plan direction. Most information indicates that fuel treatment projects could be designed within the limits found in these standards. Therefore, the agency should maintain suitable habitat and denning habitat requirements in general plan direction to increase confidence that the plans will conserve lynx and lynx habitat and allow management flexibility. (Ltr #5326)

PC #504: By definition, condition class 1 forests are not outside their historic range of variability for fire and have not "missed" a fire cycle. Typically, condition class 1 forests are high elevation spruce/fir and lodge pole pine habitat types, where infrequent, severe fires occurring every 100 to 200 years are normal. Such forests comprise lynx habitat. As these forests have not "missed" a fire cycle, there is no unnatural buildup of forest fuels that need to be treated. Therefore, the agency should exclude condition class 1 from the fuel treatment exemption. The agency should identify specific elements, identified as guiding processes be identified and addressed individually in standards and guidelines. This would allow an analysis of effects to lynx and lynx habitat. (Ltr #5326)

Response to PC 79, 90, 136, 137, 163, 250, 251, 398, 438, 475, 480, 502, 503, and 504:

Treatment of hazardous fuels is an important part of managing public lands. We have considered the wide range of comments on the topic of fuel treatments in light of the LCAS; the best available science, including Ruggiero, et al. 2000a; the HFRA; and the Remand Notice. Based on these comments we provided more discussion in the FEIS regarding management direction considered for fuel treatments (FEIS, pp. 83-86).

For Alternative F we revised Standards VEG S1, VEG S2, VEG S5, and VEG S6. These standards would not apply to fuel treatment projects within the WUI as defined by HFRA. Projects within the WUI would follow Guideline VEG G10. VEG G10 states, "Fuel treatment projects within the WUI as defined by HFRA should be designed considering Standards VEG S1, S2, S5, and S6 to promote lynx conservation." This ensures projects within the WUI consider needs of lynx and do not just ignore them. Both the standards and the guideline would promote lynx conservation.

Since the WUI, as defined by HFRA is variable in size, depending on the situation, for analysis purposes we chose to consider the WUI as extending one mile from the boundary of the at-risk community. We found this one-mile distance encompasses 6 percent of the lynx habitat in the Northern Rockies planning area. (Note: Due to a different arrangement of lynx habitat and communities at risk in the Southern Rockies planning area it encompasses 3 percent of lynx habitat there.) We therefore set a limit for the cumulative total of fuel treatment projects that do not meet the vegetation standards at a maximum of 6 percent of the mapped lynx habitat on a unit. Based on the projected ten-year program of work for fuel treatments, it is likely that we would

impact much less lynx habitat over the next ten years (FEIS, p. 188). These changes recognize the best available science, and maintain lynx habitat while at the same time allow for management of hazardous fuels under HFRA.

Using natural fires as a fuel reduction tool has, and would continue to be done. Whether or not to use natural fires is a decision to be made on a case-by-case basis. We do not believe it is appropriate for this FEIS and the programmatic lynx management direction to address whether or not to use natural fire to manage fuels in a particular situation. However, we included an objective, VEG O3, which states, "Conduct fire use activities to restore ecological processes and maintain or improve lynx habitat."

Each project that may affect lynx or their habitat still would require consultation with FWS. In addition, all fuel treatment projects would need to report to the Regional office whether or not the standards were met (see Table 2-1, monitoring section). If the standards were not met, how many acres were affected, and why the standards were not met. This information would then be compiled and forwarded to FWS. With the consultation and monitoring, fuel treatment projects would be adequately evaluated for potential effects and would not result in substantial adverse effects to lynx or lynx habitat.

Hazardous fuel reduction projects would, for the most part, be implemented within the WUI, and federal land in condition classes 2 and 3. However, there may be instances where a hazardous fuel reduction project would need to be done in condition class 1, such as in lodgepole pine forests that are being affected by mountain pine beetle outbreaks. Therefore, we do not want to exclude condition class 1 from the fuel treatment exception. Any project that did not meet the standards would

contribute to the 6 percent ceiling. Only those fuel reductions projects that are within the WUI would be allowed to follow Guideline VEG G10. Those outside the WUI would follow the VEG Standards.

PC #539 (in part): In regard to wildland fire risk, the Forest Service's own analysis finds that there is little overlap between the areas at risk of catastrophic fire and lynx habitat. (Ltr #363) (The rest of PC 539 is in the Economics Section.)

Response to PC 539: Three-quarters of the lynx habitat is in forest types whose typical fire regime is stand replacing fires (FEIS, p. 214). Many people would consider a stand replacing fire “catastrophic”; however, these forests are generally in condition class 1. This means fires in these forests are burning as they historically did, the risk of losing key ecosystem components is low, and the vegetation composition and structure is intact and functioning (FEIS, p. 213). The FEIS recognizes that fuel treatments are less likely in lynx habitat than in lower elevation habitats where fires have departed from their historic frequency (FEIS, p. 215). Even though the higher elevation habitats are typically in condition class 1, there may be a need to treat some areas where there is a threat to a community (FEIS, p. 85).

Grazing

PC #138: The agency should reinstate standards to protect lynx from livestock grazing. (Ltr #1, 3, 23, 52, 55, 61, 67, 65, 74, 107, 108, 136, 165, 278, 319, 321, 324, 329, 334, 351, 352, 374, 379, 500, 3924)

PC #139: The agency should not allow grazing in lynx habitat (Ltr #130, 154, 226)

PC #140: The agency should only allow grazing in lynx habitat if the prey base is at the level of productivity suitable for lynx: 0.5 hares per hectare. The desired plant community should be that the

productivity, composition, and ground cover be that of the potential plant community defined by the Natural Resource Conservation Service in soil surveys. The agency should conduct research on the amount of livestock grazing that can occur and still have snowshoe hare populations at a level required for lynx recovery. (Ltr #363)

PC #165: The agency should not include Objective GRAZ O1. Grazing isn't compatible with forest structure supporting lynx or snowshoe hare. (Ltr #105)

PC #263: The agency should consider rewording the grazing standards. It appears that we are managing livestock allotments for lynx, when, in reality, we are simply trying to maintain the riparian component and allow later seral stages of shrubs to exist. (Ltr 495)

PC #264: The agency should change Guideline GRAZ G2 (Alternative E), back to Standard GRAZ S2. Aspen are important component for lynx and grazing has affected aspen. (Ltr #1, 3, 67)

PC #265: The agency should retain the grazing guidelines in Alternative E, because they allow more flexibility in addressing grazing management policies. (Ltr #40)

PC #386: The agency should choose an alternative that has no negative effect to existing grazing permits. (Ltr #5)

Response to PC 138, 139, 140, 165, 263, 264, 265, and 386: Grazing was not mentioned in the original listing decision as a threat to lynx, nor is it discussed as a threat in the *Ecology and Conservation of Lynx in the United States* (Ruggiero, et al. 2000a). In addition, grazing was not discussed in the Biological Assessment (USDA Forest Service, USDI BLM, 2000a) completed on existing plans. The LCAS however recommended objectives and standards for grazing

(Ruediger et al. 2000, pp. 7-10- to 7-11). These recommendations were based on a few studies on impacts of grazing, (Ruediger et al. 2000, pp. 2-13 to 2-14). The LCAS discussed the potential effects of livestock grazing and noted that no studies had been done about dietary overlap between livestock grazing and snowshoe hare or about the response of snowshoe hare to livestock grazing. The LCAS evaluated studies done on other species and the effects of grazing and suggested livestock grazing may also affect lynx. (See FEIS Chapter 2, *Management direction considered*, pp. 86-87).

Since the listing of lynx (Appendix O), and the publication of the LCAS, the agency and FWS looked for and requested information that would indicate whether or not grazing had an impact on lynx, lynx habitat, or lynx prey. The FWS Remand Notice found that there is no information to indicate that grazing poses a threat to lynx (Appendix P).

The ID team evaluated whether or not there was information to warrant some level of management direction regarding grazing. In Alternatives B, C, and D the management direction for grazing is in the form of standards. In Alternatives E and F the management direction for grazing is in the form of guidelines since grazing may have local effects, but has not been found to affect populations. Alternative A imposes no additional management direction on grazing. We believe these alternatives provide the responsible official an appropriate range of management direction for grazing.

Human uses

General

PC #87: The agency should develop an alternative to maintain the natural competitive advantage of lynx in deep snow by providing a landscape with

interconnected blocks of foraging habitat where recreation activities are prohibited or severely restricted. (Ltr #511)

PC #275: The agency should allow Guideline HU G11 to be implemented when the lynx is delisted, not before. (Ltr #33)

PC #334: The agency should not close areas to multiple uses. (Ltr#27, 43, 135, 217)

Response to PC 87, 275, and 334: The Purpose and Need for this proposal is to incorporate management direction that conserves and promotes recovery of Canada lynx, by reducing or eliminating adverse effects from land management activities on NFS lands, while preserving the overall multiple-use direction in existing plans (FEIS, p. 1). Therefore, we are not going to close areas to multiple uses, but we developed standards and guidelines designed to maintain the competitive advantage of lynx in deep snow (see HU objectives, HU standards, and HU guidelines, on Table 2-1). We developed objectives, standards, and guidelines for linkage areas (see LINK, on Table 2-1) that facilitate managing the areas linking blocks of lynx habitat (see map, Fig 1-1).

As explained by the FWS in the Remand Notice (Appendix P), "Despite the lack of evidence that competition with any species is negatively affecting lynx, the final rule explained the theory that ski and snowmobile trails and roads that are maintained for winter recreation, and forest management create packed snow corridors that give other species, particularly coyotes, access to lynx winter habitat on all land ownerships. This theory has neither been proven or disproven at this time (Roe et al. 2000)." Also as discussed in the FEIS pp. 90-93, new information regarding the effects of snow compaction is still not clear. The intent of Guideline HU G11 is to discourage

the expansion of snow compacting activities until such time there is more information on the impact to lynx from snow compaction. Until we are sure whether or not snow compacting activities impact lynx and to what degree, we feel it is important to retain HU G11 as a guideline.

Human uses - objectives

PC #179: The agency should modify Objective HU O1 to be less subjective and broadened in scope to something that would actually benefit the lynx. (Ltr #309)

Response to PC 179: Objective HU O1 sets the tone for the standards and guidelines in the Human Use section concerning snow compaction. We reviewed the wording of HU O1 and believe it is appropriate. The guidelines developed from this Objective for Alternative F (Guidelines HU G4, HU G11, and HU G12) are specific in dealing with snow compaction. We believe they, too, are appropriate to the situation.

PC #62: The agency should rewrite Objective HU O3 to say: Do not develop new areas in lynx habitat but allow for historical use. (Ltr #18)

Response to PC 62: We considered rewriting Objective HU O3, but decided to stay with the language from the LCAS (Ruediger et al. 2000, p. 7-8) for this objective, which has the same intent.

PC #86: The agency should resolve the conflict between objectives HUUO3 and HUUO4. (Ltr #179)

Response to PC 86: HU O3 and O4 are not in conflict. They state the desired resource condition in two different situations. HU O3 says, rather than developing new recreational areas, the objective is to "concentrate activities in existing developed areas". But we know that is not always possible. In some situations we may have to develop new or expand existing

developed recreation sites. In those cases, Objective HU O4 helps to describe the desired condition when developing new or expanding existing recreation areas.

Human uses - HU S1/HU G11

PC #127: The agency should define "consolidate use" as it is used in Standard HU S1. Suggested definition is: "consolidate use/development or designation of over snow trails means to consolidate over snow vehicle use and grooming within a smaller acreage or number of trail miles or number of trails than previously existed for a specific area within or adjacent to LAUs." (Ltr #496)

Response to PC 127: Your definition of "consolidate use" is the intent of Standard HU S1. However, we do not believe it is necessary to define "consolidate use" as we are using the standard dictionary definition for consolidate, which means "to combine".

PC #129: The agency should reword HU S1 to say "no net increase in designated over-the-snow routes or play areas within each LAU." The word "by" implies next to or adjacent, as in no net increase in routes next to an LAU. (Ltr #179)

Response to PC 129: The word *by* has multiple uses. In order to clarify the meaning, in Alternative F we changed the wording of Standard HU S1 to say, "This is calculated on an LAU basis, or on a combination of immediately adjacent LAUs."

PC #278: The agency should reevaluate HU G11 in Alternative E because it is open to interpretation. What does "should not" mean. What are the "baseline areas of consistent snow compaction"? Who gets to determine them? Will they choose the smallest amount of miles or areas used in a given year? (Ltr #348)

Response to PC 278: We reworded HU G11 in Alternative F to some extent. The Forest Service Handbook (FSH 1110.8, Exhibit 01) defines *should* as “Action is mandatory, unless a justifiable reason exists for not taking action. The use of ‘should’ and ‘ought’ signals that the directive originator recognizes that extenuating circumstances are likely to occur at times.” The word *not*, of course, is used to express the negation of the preceding word. The phrase *areas of consistent snow compaction* is defined in the FEIS glossary, p. 365. The baseline is the years 1998, 1999, and 2000. The baseline is mapped by each Forest. (See monitoring section of Table 2-1.) They make the determination of the baseline area on the public land they are responsible for managing.

PC #512: The agency should include the modification in HU G11 that allows using a combination of LAUs for assessing the effects of winter recreation (e.g. snow compaction through snowmobiling). In some circumstances, using a combination of LAUs for assessing the effects of winter recreation (e.g. snow compaction through snowmobiling) may enable more practical and efficient management of such activities while minimizing snow compaction within lynx habitat. (Ltr #5326)

Response to PC 512: In Alternative F we modified HU G11 to allow for using a combination of immediately adjacent LAUs.

PC #103: The agency should not make more rules that they cannot enforce. How will play areas in Guideline G11 be enforced? (Ltr #494)

Response to PC 103: *Designating* a route or play area is something done by a Forest. The guideline, as written, is saying the Forest should not expand the designated area. The guideline is not a Forest Order constraining the recreating public. It is not

enforceable by a Forest Law Enforcement Officer issuing a ticket to a member of the public.

PC #454: The agency should include play areas that have been used over the past 25 years, but not "designated". Several areas occur on the Beaverhead, Bitterroot, Lolo, and Clearwater National Forests. These areas should be included, inventoried, and recognized as established, legitimate activities. However, there is no need to neither encourage nor discourage their use. There is no need to neither advertise nor promote these areas. There is no need to groom the routes that access these areas. (Ltr #18)

Response to PC 454: We considered how to deal with known “play areas” that are not designated. For this proposal, we decided to develop standards and guidelines for designated areas. We focused on designated areas because those are areas where we encourage use. We did not provide direction for “un-designated play areas” or general areas open to the public because it is unknown whether competition, facilitated by over-the-snow-recreation, is adversely affecting lynx. We decided to focus on “designated” areas, including groomed routes, or areas we put on maps, because we did not want to increase the public’s expectation that any new areas would become available. We are not going to promote additional concentrated use, but we are not necessarily limiting the amount of use to current levels until we have a better understanding of the effects of over-the-snow recreation on lynx.

PC #513: Current, ongoing research in Montana may shed some information on the effects of snow compaction on lynx. During development of a final preferred alternative, the agency should carefully consider the most recent information and the reality of possible impairment of

options for the future. Consider language that could provide more guidance on conditions where the expansion of over-the-snow routes would be warranted and acceptable. (Ltr #5326)

Response to PC 513: Snow compacting activities may facilitate the movement of competing carnivores, primarily coyotes, along snow compacted routes into lynx habitat. Lynx have very large feet in relation to their body mass, which provides them with a competitive advantage over other carnivores in deep snow conditions. Various reports and anecdotal observations documented coyotes using high elevation, deep snow areas (Buskirk et al. 2000b). Research conducted in central Alberta, attributed the use of more open habitats by coyotes to greater snow compaction (Todd et al. 1981). In another study in Alberta, coyotes were more selective of hard or shallow snow conditions than lynx (Murray et al. 1994).

Since 2000 additional studies have been conducted. Within lynx habitat in northwestern Montana, twelve radio-collared coyotes were monitored over three winter seasons to assess how coyotes interacted with compacted snowmobile trails (Kolbe et al., in press). Coyotes remained in lynx habitat having deep snow conditions and traveled on compacted snowmobile trails more than expected by random chance. However, coyotes used compacted snowmobile trails for less than 8% of their travel and used compacted and uncompacted roads similarly (Kolbe 2005). Coyotes did strongly select for shallower and more supportive snow surfaces when traveling off of compacted trails. In this same study coyotes primarily scavenged ungulate carrion that were readily available, while snowshoe hare kills comprised only 3 percent of coyote feeding sites (Kolbe 2005).

In the Uinta Mountains of NE Utah and three comparative study areas (Bear River

range in Utah and Idaho, Targhee NF in Idaho, and Bighorn NF in Wyoming) Bunnell et al. (2006) found that the presence of snowmobile trails was a highly significant predictor of coyote activity in deep snow areas. From track surveys it was determined that the vast majority of coyotes (90%) stayed within 350 meters of a compacted trail and that snow depth and prey density estimates (snowshoe hares and red squirrels) were the most significant variable in determining whether a coyote returned to a snowmobile trail (Bunnell 2006). Of the four study areas recent lynx presence has only been documented on the Targhee NF. It is important to note that in Kolbe's (2005) study area there was an abundance of ungulate carrion in the winter, primarily related to hunting mortality, and this may be a rather unique occurrence within lynx habitat.

Snow conditions vary throughout the planning area both seasonally and from year to year. Periods of increased warmth and wind may result in hardened snow conditions that can facilitate the movement of other predators into otherwise deep snow habitats used by lynx. However, snow conditions and degree of firmness may vary greatly depending on location, aspect, slope, snowfall, and temperature changes during any given winter. Storms, which produce heavy snowfall, are typical within much of the planning area and compacted snow conditions may only consistently exist where repeated snow compacting activities occur throughout the winter months.

We discussed this new information with Research, the FWS, and the lynx biology team. Based on these discussions we determined there is still no conclusive evidence that over-the-snow recreation is a threat to lynx. However, we still believe it is important to maintain the status quo until further information is gathered. In

addition, we considered this newest information in the effects analysis (FEIS, pp. 176-179).

Human uses - HU S1/HU G11 – more restrictions

PC #65: The agency should enforce snowmobiling restrictions and keep them out of lynx habitat. (Ltr #14, 52, 102, 130, 169, 180, 226, 329)

PC #92: The agency should prohibit new groomed snowmobile trails. (Ltr #62, 71, 136, 146, 169, 171, 286, 511)

PC #93: The agency should confine snowmobiles to designated areas because the scientific evidence is clear that snow packed roads, in the form of groomed snowmobile trails, adversely impact lynx by allowing other predators unnaturally easy access to snowshoe hare populations. (Ltr #19, 53, 65, 165, 2971)

PC #104: The agency should manage snowmobiles in young, forested openings so over-the-snow vehicles do not damage regenerating forests. (Ltr #494)

PC #126: The agency should include a 10 percent annual reduction in groomed trails in lynx habitat. Regardless, implement the over-the-snow limitation with standards. (Ltr #363)

PC #130: The agency should develop an alternative that manages dispersed winter recreation. A standard should be developed to reduce activities in open, but not designated areas, based on a site-specific analysis. (Ltr #310)

PC #131: The agency should preclude OHV/snowmobile activity above 5,000 feet elevation. (Ltr #383)

PC #176: The agency should include direction for winter logging in HU S1. The agency should include a net decrease in groomed and designated routes in HU

S1. The agency should include a numerical road density standard. The agency should modify HU G8 to allow lynx habitat needs to preempt public safety. HU G9 should be modified to require road obliteration and recontouring. (Ltr #309)

PC #219: The agency should retain standards for over-the-snow recreation. The decision should be based on best available science, and where science is lacking protective measures should be included. (Ltr #32, 108, 163, 347, 3924)

PC #362: The agency should preclude all forms of over-the-snow recreation, not just snowmobiling. A trail is a trail, regardless of who or what made that trail. (Ltr #194, 195)

PC #364: The agency should err with caution regarding standards or guidelines relating to the issues of snow compaction. (Ltr #1, 3, 52, 65, 67, 300, 310, 356, 359, 379, 510)

PC #365: If the agency select management direction regarding Standard HU S1 in Alternative C then it should also provide some language regarding protecting lynx habitat while expanding snow routes. Alternative C would allow grooming to expand on designated ungroomed routes and areas of consistent snow compaction, and ungroomed routes would be allowed to expand into areas of constant snow compaction. This seems a fair addition to the standard, given that these areas would (conceivably) be compacted even if undesignated and ungroomed. There are (at least) three areas of concern, however, in accepting this condition.

First, though the regulatory language states that areas of constant compaction would be defined as areas consistently used in 1998, 1999, and 2000 it gives no indication of how large these areas are or would be. Secondly, perhaps there are

gradations in snow compaction, which may affect competition and are not being considered here, for instance differences in movement of bobcats or coyotes through snow considered "groomed," "designated ungroomed," and "areas of constant compaction." Third, if areas of constant compaction become designated, there will always be new backcountry enthusiasts and new areas of constant compaction, which will collectively have a greater impact on lynx habitat and foraging than the current conditions. (Ltr #347)

Response to PC 65, 92, 93, 104, 126, 130, 131, 176, 219, 362, 364, and 365: As explained in the Remand Notice (Appendix P), "Despite the lack of evidence that competition with any species is negatively affecting lynx, the final rule explained the theory that ski and snowmobile trails and roads that are maintained for winter recreation and forest management create packed snow corridors that give other species, particularly coyotes, access to lynx winter habitat on all land ownerships. This theory has neither been proven or disproven at this time (Roe et al. 2000)." In light of the speculation on the impacts to lynx from snow compacting recreational activities, we cannot justify precluding over-the-snow recreational activities. Instead we retained Standard HU S1 in Alternatives B, C, and D, and developed Guideline HU G11 in Alternatives E and F that allow for more flexibility in managing over-the-snow routes and play areas. Standard HU S1 allows no net increases in designated routes and play areas. The intent of Guideline HU G11 is to constrain the expansion of snow compacting activities until such time there is more information on the impact to lynx from snow compaction. Also see discussion in response to PC #513 on the previous page.

PC #227: The agency should consider the information from lynx studies in Wyoming on the Bridger-Teton NF that show snowmobile activity contributed to the demise of lynx populations in the Wyoming range. The agency should not allow snowmobile use in areas identified as lynx habitat. (Ltr #227, 374)

Response to PC 227: We are not aware of any studies from Wyoming or the Bridger-Teton National Forest that show snowmobile activity contributed to the demise of lynx populations in the Wyoming range. We contacted the Bridger-Teton National Forest and Forest Service researchers with the Rocky Mountain Research Station and they are not aware of any studies or peer-reviewed research that has been completed regarding this issue in Wyoming. There is one new study that is scheduled to begin during the winter of 2006-2007 in the Togwotee Pass area of Wyoming. The agency would be glad to consider this information when it becomes available.

Human uses - HU S1/HU G11 – less restrictions

PC #95: The agency should adopt an alternative that drops all direction limiting snow compaction because of the dynamic nature of snow. Snow is an indefinitely variable surface. It is ludicrous to presume that the presence or absence of man-made tracks (in very limited locations compared to the total landscape) affects this surface to any degree. (Ltr #21, 73, 135, 152, 174, 224, 331, 360, 366, 398, 395)

PC #96: The agency should include provisions that would allow expanding winter recreation in some places where heavy public use existed in 1998, 1999, or 2000. (Ltr #41, 100, 360)

PC #167: The agency should select HU G11 in the final alternative. Imposing a

standard on a regional scale instead of a guideline doesn't allow land managers the flexibility to manage winter recreation. (Ltr #31, 100, 209, 380)

PC #366: The agency should allow the flexibility in HU S1 or HU G11 to accommodate for growth of over-the-snow recreation in an orderly fashion. Also as vegetation conditions change new areas become available for play. Other areas become non-play areas as these areas become revegetated. Managers need the room to manage winter recreation based on the local conditions of the vegetation and needs. (Ltr #104, 209, 221, 380, 387)

PC #514: The agency should recognize the amount of lynx habitat already off limits to motorized travel. These should be enough to sustain lynx survival; therefore there should not be any additional restrictions. (Ltr #8)

PC #516: The agency should make HU S1 a guideline that reads: Limit the expansion of winter dispersed recreation activities in lynx habitat until more conclusive information is available regarding coyote competition in any specific analysis area. (Ltr #18)

Response to PC 95, 96, 167, 366, 514, 516:
As stated above and explained in the Remand Notice (Appendix P), "Despite the lack of evidence that competition with any species is negatively affecting lynx, the final rule explained the theory that ski and snowmobile trails and roads that are maintained for winter recreation and forest management create packed snow corridors that give other species, particularly coyotes, access to lynx winter habitat on all land ownerships. This theory has neither been proven or disproven at this time (Roe et al. 2000)." In light of the speculation on the impacts to lynx from snow compacting recreational activities, we cannot justify dropping all direction on over-the-snow recreational activities. Instead we retained

Standard HU S1 in Alternatives B, C, and D, and developed Guideline HU G11 in Alternatives E and F that allow for more flexibility in managing over-the-snow routes and play areas. Standard HU S1 allows no net increases in designated routes and play areas. The intent of Guideline HU G11 is to constrain the expansion of snow compacting activities until such time there is more information on the impact to lynx from snow compaction.

Human uses - ski areas

PC #132: The agency should prohibit expansion of ski areas, and ensure forested islands between ski runs are off limits to skiers in and near lynx habitat. (Ltr #351, 437)

PC #273: The agency should retain the Standard (HU S2) for ski areas, instead of making it a guideline. The agency should explain their rationale for a guideline versus a standard. (Ltr #356, 379)

PC #392: To adequately manage ski areas, the agency should change HU G3 to an objective that says, "Recreation developments and operations should be planned in ways that both provide for lynx movement and maintain the effectiveness of lynx habitat. Guidelines HU G1 and HU G2 should be standards to ensure denning and diurnal security habitat are provided. (Ltr #347)

PC #458: The agency should modify ski area direction to provide quantitative protections against ski area expansions. Standards that are qualitative and depend on further analysis are especially vulnerable to abuse in the highly politicized, high-pressure environment that often surrounds proposed ski area expansions. (Ltr #20)

Response to PC 132, 273, 392, and 458:
Lynx habitat within the planning area encompasses about 18.5 million acres. There

are 28 downhill and cross-country ski areas encompassing about 21,000 acres in lynx habitat (about .01 percent of lynx habitat). Ten of these areas have plans for expansion and one new ski area is planned within lynx habitat.

Objective HU O4 concerns recreation sites. It states, "Provide for lynx habitat needs and connectivity when developing new or expanding existing developed recreation sites or ski areas." Alternative B included a standard and several guidelines regarding ski areas (Standard HU S2, and Guidelines HU G1, HU G2, and HU G3). In Alternatives C through F, Standard HU S2 was changed to a guideline HU G10. Standard HU S2 (Alternative B) says "When developing or expanding ski areas and trails, access roads and lift termini shall be located to maintain and provide lynx diurnal security habitat." Diurnal habitat includes areas where lynx can retreat from human disturbance during the day. Since most ski areas are dispersed and lynx are a wide ranging species we believe the management direction was more appropriate in the form of a guideline. In addition, while ski areas may affect lynx on a local level, they have not been found to be a contributing factor to lynx populations. Guidelines are assumed to be followed but may not be where compelling reasons such as the protection of other species at risk or protection of public safety are an issue.

Human uses - mineral and energy development

PC #133: The agency should prohibit oil and gas leases and seismic exploration within lynx forage or denning habitat. Non-waivable No Surface Occupancy stipulations should be enacted for all lynx and snowshoe hare habitat for all oil and gas development or proposed operations. All future oil and gas development should occur in current active well pads through

directional drilling outside of lynx habitat. All lynx habitat should be withdrawn from all mining claims, mineral material operations, and mine claim working. (Ltr #363)

PC #177: The agency should include direction to require drilling permits to develop stipulations for limitation on the timing of activities and surface use and occupancy at the leasing stage. Objective, standards and guidelines should be developed specifically for the timing of activities, and surface use and occupancy. Also Guideline HU G5 should be a standard. (Ltr #309)

PC #231: The agency should retain guidelines relating to mineral and energy development. (Ltr #49, 369, 451)

PC #518: The agency should reinstate standards for oil and gas exploration (Ltr # 23)

Response to PC 133, 177, 231, and 518:

There are approximately 820,000 acres under lease for oil and gas with additional acreage pending for lease. Only two wells have been drilled on public lands within lynx habitat during the past ten years. One well on the Custer National Forest (Montana) has been plugged and abandoned; the other well on the Bridger-Teton National Forest (Wyoming) is currently in production. Recent estimates of foreseeable oil and gas development suggest that approximately thirty-three wells may be drilled within lynx habitat in the planning area. This includes four on the Beaverhead-Deerlodge, twenty-four on the Bridger-Teton, and two on the Helena National Forests. In addition, one exploratory well is expected likely to be drilled on the Bighorn National Forest.

The FWS and the agency have not found any research or evidence for the need to prohibit gas and oil leases, development, or exploration in order to conserve lynx. The

LCAS considered the impact of oil and gas well development in lynx habitat (Rudieger et al. 2000, p. 2-14). The greatest impact in gas and oil development is from the building of road access and from snow compaction. The LCAS proposed one objective, one standard, and five guidelines in response to the potential impact (Rudieger et al. 2000, p. 7-11).

Considering the potential impacts and the LCAS, we developed one Objective (HU O5) and three guidelines (HU G4, G5, and G12) for mineral and energy development when development occurs in lynx habitat. We also developed an Objective (HU O6) and four Guidelines (HU G6, G7, G8, and G9) that concern the road infrastructure in lynx habitat.

Human uses - roads and highways

PC #5: The agency should open gates and more roads. (Ltr #426)

PC #122: The agency should reword Guideline HU G7 to allow new roads to cross a ridge line, but prevent new roads from traversing laterally along a ridgeline. Guideline HU G9 should be reworded to allow gating, instead of just obliterating or decommissioning, to allow for fire access in high fire susceptible areas. (Ltr #179)

PC #123: The agency should limit road density to less than 1/2 mile per square mile of ground to minimize competition. The agency should not allow new road construction in spruce-fir forests. (Ltr #363)

PC #124: The agency should increase the rate of road decommissioning to improve conservation of species. (Ltr #383)

PC #128: The agency should ensure that all reasonable motorized roads and trails in the project area be kept open. Summer season motorized recreationists do not cause a measurable impact on the lynx.

This fact should be inserted into the document. (Ltr #27, 72)

PC #171: The agency should include a standard to effectively close all unnecessary forest roads and ghost roads. It's hard to believe that forest roads don't negatively impact lynx, especially where the road densities are high. (Ltr #74)

PC #173: The agency should include stronger guidance on roads and recreation, including reinstating the standards for snowmobile activities. The agency should heed the information in the Science Report that says:

- "Existing data, though sparse, do not indicate that roads are a major mortality factor for lynx. However, the indirect effects of roads on lynx populations are unknown," [Footnote 21: Science Report at 451].
- "Fenced roads and highways or development along transportation corridors may impede lynx movements," [Footnote 22: Id. At 453].
- "Competitors, especially the cougar and coyote, likely influence lynx recruitment and survival. Factors that facilitate movement of generalist predators into areas occupied by lynx should be considered a conservation risk," [Footnote 23: Id. At 450].
- "Humans facilitate coyote access into areas occupied by lynx by compacting snow with snowmobiles, snowshoes, or skis," [Footnote 24: Id.].
- "Winter trails may impact lynx indirectly by providing increased access to competitors, especially coyotes," [Footnote 25: Id. At 453].
- "Lynx appear to be extremely susceptible to trapping, and where trapping is permitted it can be (and has been) a significant source of mortality," [Footnote 26: Id.]. (Ltr #351)

PC #174: The agency should consider a standard that adequately protects lynx

from new roads in linkage areas. (Ltr #351)

PC #175: The agency should consider standards for roads and highways that address the LCAS guidelines.

Specifically:

- ALL G1 (pg 327, DEIS) refers only to construction or re-construction of highways and does not address the LCAS guideline, "Where needed, develop measures to reduce mortality risk." The LCAS guideline infers an active process of repairing the existing infrastructure.
- LINK S1 mandates only that, "When highway or forest highway construction or reconstruction is proposed in linkage areas, identify potential highway crossings" and
- ALL G1 states only "Methods to avoid or reduce effects on lynx should be used when constructing or reconstructing highways..." LINK S1 and All G1 do not meet the LCAS standard, "1. Identify, map, and prioritize site-specific locations, using topographic and vegetation features, to determine where highway crossings are needed to reduce highway impacts on lynx and other wildlife". Missing from LINK S1 and ALL G1 are the actions of "prioritize" and "determine where highway crossings are needed..." the substance of the LCAS objectives.
- The DEIS standard and guideline refer only to active construction sites; the LCAS refers to all highways.
- HU G6 (pg 330, DEIS) does not need the caveat, "... If the result would be increased traffic speeds and volumes, or a foreseeable contribution to increases in human activity or development." Upgrading and paving are known to cause this effect. All unpaved roads within known lynx habitat need to remain un-improved

and the DEIS needs to make this statement to protect lynx habitat.

- HU G3 (pg 332, DEIS) infers that it is only directed at new recreation developments. The LCAS guideline was directed at past developments, as well. Just another bias of this DEIS towards industry and away from lynx protections. The DEIS needs to follow the LCAS guideline. (Ltr#309)

PC #228: The agency should ensure that access restrictions on public lands are done as a last resort, and only when based on peer-reviewed research. Other less objectionable mitigating actions should be implemented first, to reduce the need for access restrictions that adversely affect forest users. (Ltr #24, 395, 517, 523)

PC #267: The agency should remove roads that cannot be maintained and severely curb snowmobile activity. (Ltr #215)

PC #271: The agency should not allow any roads, paved, unpaved, trails, routes, and ways, regardless of what they are labeled, in lynx critical habitats. (Ltr #226)

PC #272: The agency should change guideline HU G7 from a guideline to a standard. HU G7 recommends avoiding building permanent roads on ridgetops. This should be a standard because lynx have been shown to frequent ridgetops. In addition, roads should be obliterated after use. (Ltr #351)

PC #388: The agency should stop unauthorized use of roads by gaining public support for closing roads for legitimate reasons. When public support for closing roads for legitimate reasons is gained, the legislative support needed to levy heavy fines will limit the unauthorized use and pay for the enforcement. (Ltr #12)

PC #389: If returning forests to historic conditions for lynx is important, then the agency should also remove roads, since

they were not part of the historic landscape. The assumption is roads do not affect lynx; the agency should disclose the scientific study this assumption is based on. (Ltr #1, 3, 67)

PC #445: The agency should not close existing roads. (Ltr #6, 148, 366, 469)

PC #484: The DEIS states (page 29) that Guideline HU G6 changed its emphasis from avoiding to mitigating upgrading roads, where upgrades would lead to substantial increases in traffic volumes or speeds. The agency should avoid upgrading existing roads or construction of new roads that fragment lynx habitat or impair connectivity of lynx habitat areas. The agency should install wildlife underpasses, overpasses, and fencing, to mitigate the effects of existing roads that fragment and impair lynx habitat connectivity. (Ltr #296)

PC #525: The agency should not include the 2-mile by 2-mile road reclamation rule. (Ltr #134)

PC #528: The agency should limit the amount of new road construction in lynx habitat. (Ltr #169)

Response to PC 5, 122, 123, 124, 128, 171, 173, 175, 228, 267, 271, 272, 388, 389, 445, 484, 525, and 528: It should be understood that the Forest Service has little to no authority over Federal highways and state roads. The guidelines concerning roads and highways are written with this understanding. The FEIS discusses the consideration of road management direction (pp. 95-97). Although many species of wildlife are disturbed when forest roads are used (Ruediger 1996), preliminary information suggests lynx do not avoid roads (Ruggiero et al. 2000a) except at high traffic volumes (Apps 2000). In denning habitat, when roads are used during summer, lynx may be affected if they move their kittens to avoid the disturbance

(Ruggiero et al. 2000b; Ruediger et al. 2000, p. 2-12).

A recent analysis on the Okanogan NF in Washington showed lynx neither preferred nor avoided forest roads, and the low road density in the study area did not appear to affect lynx habitat selection (McKelvey et al. 2000c; USDI FWS 2000a, p. 39). This analysis did not address potential indirect effects on habitat quality.

The ID team reviewed the LCAS and other literature, including the Remand Notice, and found no information indicating road building should be banned or that further restrictions were needed. Due to this further review the ID team changed the emphasis of Guideline HU G6 in Alternatives C, D, E, and F from discouraging road upgrades to mitigating their effects. Other than the change to Guideline HU G6, the standards and guidelines in Alternative B adequately addressed the known risks associated with roads or highways, and so were carried through the rest of the alternatives.

The ID team also evaluated whether the road-related guidelines should be made into standards. There were concerns that road standards would not let managers address watershed and safety concerns. The ID team decided these guidelines were the best way to provide direction about what should be considered for lynx. The flexibility provided by guidelines is appropriate where the impacts to lynx are not very clear.

The ID team also evaluated whether an alternative should be developed that dropped all road-related guidelines. The available information indicates some direction is needed to ensure lynx needs are considered in road management decisions; therefore, an alternative to drop road-related direction was not considered in detail.

The LCAS standard, “1 Identify, map, and prioritize site-specific locations, using topographic and vegetation feature, to determine where highway crossings are needed to reduce highway impacts on lynx” (p. 7-15) is under the heading of *Project planning*. We understand that to mean at the project level, when a highway is being built or reconstructed, highway crossings would be identified, mapped and prioritized. We do not understand that to mean all existing highways need site-specific crossing locations identified, mapped, and prioritized absent a project. Standard LINK S1 and Guideline ALL G1 reflect the intent of the LCAS. Prioritizing actions and determining where highway crossings are needed are better done at the unit level, based on site-specific data and resource conditions, not in a programmatic document such as this.

The LCAS also considered programmatic planning (p. 7-14). It states, “Federal land management agency will work cooperatively with the Federal Highway Administration and State Departments of Transportation to address the following within lynx geographic areas: Identify land corridors... [and] Map the location of ‘key linkage areas’...” We identified and mapped key linkage areas (FEIS Map, Fig. 1-1) and we developed an objective to work cooperatively with other agency to provide for lynx movement and habitat connectivity (Objective HU O6).

The density of roads does not appear to affect lynx habitat selection. The LCAS (p. 2-12) said there was no compelling evidence to suggest managing road densities was necessary to conserve lynx.

The scoping proposed action included a guideline to prioritize reducing road densities in lynx habitat. This guideline was dropped from the DEIS Proposed Action, Alternative B, because in 2000, the Roads Analysis policy was adopted (see 36

CFR 212.5(2)). This new federal regulation says all Forest Service road systems must be evaluated based on their environmental effects to see whether they should be kept or decommissioned. Therefore, the guideline is no longer needed.

The ID team decided not to consider a road density standard in detail because there is no compelling evidence to show one is needed. Guideline HU G9 provides direction on new roads, and the Roads Policy requires reviewing existing roads.

The HU guidelines reflect the intent of the LCAS with respect to roads.

Other direction

Linkage areas

PC #286: The agency should provide management direction for identifying linkage areas. The agency should provide direction for the management of these areas. The agency should address acquisition of key linkage areas, including identifying focus areas where the agency should acquire conservation easements, exchanges or purchases. The agency should provide direction to use federal tools such as the Conservation Reserve Program and the Landowner Incentive Program, as well as education of landowners. (Ltr #351)

PC #287: The agency has appropriately identified linkage areas. American Wildlands also identified many of the same areas as being critical for habitat connectivity. The agency should establish adequate standards and guidelines to ensure there will be a decrease in habitat fragmentation of lynx habitat. The agency should take a hard look at the role public lands play in providing connectivity of lynx habitat and identify ways to make these lands less fragmented and more appealing to lynx movement. (Ltr #278)

Response to PC 286 and 287: The map included in the FEIS (Figure 1-1) indicates lynx habitat and linkage areas. The FEIS analyzes lynx movement risk factors, and the impact the objectives, standards, and guidelines concerned with linkage areas would have on lynx and lynx habitat (LINK O1, LINK S1, LINK S2, LINK G1, LINK G2) (pp. 181-185). Objective LINK O1 remains the same under all alternatives: In areas of intermingled land ownership, work with landowners to pursue conservation easements, habitat conservation plans, land exchanges or other solutions to reduce the potential of adverse impacts on lynx and lynx habitat.

Standard LINK S1 concerns identifying potential highway crossings. Guideline LINK G1 concerns keeping NFS land in public ownership. Standard LINK S2 and Guideline LINK G2 concern grazing management in linkage areas. These standards and guidelines provide the appropriate level of management direction for habitat risks in linkage areas.

PC #33: The management direction should provide for direction for coordinating management activities with adjacent landowners and other agency to ensure consistent management of lynx across the landscape. (Ltr #334)

PC #125: The agency should provide more direction for: 1) maintaining habitat connectivity within naturally or artificially fragmented landscapes; and 2) coordinating management activities with adjacent landowners and other agency to assure consistent management of lynx habitat across the landscape. (Ltr 1, 3, 67, 511)

Response to PC 33 and 125: The direction provided in Objective LINK O1, Standard LINK S1, and Guidelines LINK G1 and G2 would result in maintaining habitat connectivity throughout the various

landscapes where lynx occur or move. Although coordination of activities with adjacent landowners and other agency is desirable, private landowners are not required to manage habitat for threatened or endangered species. In order to facilitate coordination of activities, Objective LINK O1 states, "In areas of intermingled land ownership, work with landowners to pursue conservation easements, habitat conservation plans, land exchanges or other solutions to reduce the potential of adverse impacts on lynx and lynx habitat".

PC #172: The agency should include a standard that would preclude transfer of national forest roads in lynx habitat to county governments, because county governments are less likely to have concern over protection of lynx habitat. (Ltr 74)

Response to PC 172: The LCAS did not indicate the transfer of jurisdiction of a forest road is an issue with lynx or lynx habitat management. We have no data from other sources to indicate this would be an issue, either. Based on this we have decided no direction precluding transfers of road jurisdiction is called for.

PC #460: The agency should consider management direction for special uses, especially in how they relate to habitat connectivity. Habitat connectivity is especially pivotal on federal lands because land managers have the ability to control large, continuous tracts of land. The DEIS baldly states that no cumulative effects have been noted in relation to special use permits. However, the LCAS specifically stated that utility corridors can have "long term impacts" to lynx habitat, Forest Service special use permits affect lynx habitat connectivity through uses such as, but not limited to, distribution of electric transmission lines, telephone lines, fiber optic cables, railroads, highways, and oil

and gas pipelines. Habitat disturbances associated with such special use permits can severely inhibit lynx movement, particularly when located adjacent to highways and railroads. Special use permits are thus a key factor affecting connectivity. The DEIS provides no justification for this contradiction of the LCASs language on this issue. Lynx habitat connectivity must be considered when issuing special use permits. (Ltr #351)

Response to PC 460: The statement in the DEIS (p. 234) that “No cumulative effects have been noted” refers to the cumulative effects of implementing Objectives HU O3 and O5, Standards ALL S1 and HU S3, and Guideline HU G12 found in Alternatives B, C, D, E, and F. It does not necessarily mean that no direct, indirect, or cumulative effects to lynx or lynx habitat from a particular special use have ever occurred. We have rewritten the special use section to be clearer.

PC #379: The agency should provide specific protection of shrubland habitats important for habitat connectivity. Loss of habitat connectivity may affect lynx viability. (Ltr #1, 3, 67)

Response to PC 379: We have done so. Guideline LINK G2 (FEIS, Table 2-1, p. 63) provides this direction.

PC #149: More work is needed to identify and protect connecting corridors between known and important potential population epicenters. (Ltr #136, 176, 177, 232, 254, 255, 266, 269, 285, 287, 288, 289, 307, 314, 334, 353, 397)

PC #285: The agency should include management direction for connectivity including all the recommendations in the LCAS. Specifically they should include the following direction:

- Identify key linkage areas that may be important in providing landscape connectivity within and between geographic areas, across all ownerships;"
- "Develop and implement a plan to protect key linkage areas on federal lands from activities that would create barriers to movement;"
- "Evaluate the potential importance of shrub-steppe habitats in providing landscape connectivity between blocks of lynx habitat. Livestock grazing within shrub-steppe habitats in such areas should be managed to maintain or achieve mid seral or higher condition, to maximize cover and prey availability. Such areas that are currently in late seral condition should not be degraded;"
- "Federal land management agency will work cooperatively with the Federal Highway Administration and State Departments of Transportation to...[i]dentify land corridors...[and] [m]ap the location of 'key linkage areas' where highway crossings may be needed..."(Ltr #351)

Response to PC 149 and 285: As discussed in the FEIS (p. 9), we are not making a decision about what lynx habitat is or is not, nor where linkage area boundaries are located, or how linkage areas were identified. Lynx habitat and linkage areas have already been identified and compiled under the guidance of the Interagency Lynx and Wolverine Steering Committee. Since the mapping is completed there is no reason to include direction to map linkage areas. Linkage areas are identified on the map supplied with the FEIS (Figure 1-1).

The objectives, standards, and guidelines under LINK and HU provide management direction for linkage areas. Standard LINK S1 requires identifying potential highway crossings. Objective HU O6 calls for

working cooperatively with other agencies to provide for lynx movement and habitat connectivity. Standards GRAZ S4 and LINK S2, and Guidelines GRAZ G4 and LINK G2 concern managing livestock grazing in shrub-steppe habitats in order to contribute to maintaining or achieving a preponderance of mid- or late-seral stages.

PC #225: The agency should drop LINK G1 because it is inappropriate, irrelevant, and overarching. (Ltr #455)

Response to PC 225: The commenter gave no rationale to explain why LINK G1 that calls for retaining land in public ownership is inappropriate, irrelevant, and overarching. We consider it appropriate to retain public lands in linkage areas in order to allow for lynx movement.

PC #180: The agency should not change LINK S2 to a guideline (as was done in Alternative E) because there is a need to protect the public/private land corridor. (Ltr #352, 383)

PC #181: The agency should not include a standard or guideline for LINK S2 since the FWS has found that grazing management is not a threat to lynx. (Ltr #357)

PC #281: The agency should drop Standard LINK S2 (Guideline LINK G2 in Alternative E) because the FWS stated that grazing is not a threat to lynx. (Ltr #341)

Response to PC 180, 181, and 281: In their comment letter on the DEIS, the FWS stated (see PC 505), they have “no information to indicate that grazing or snow trail compaction is a threat to lynx at this time. While the best scientific and commercial data available does not indicate that grazing or snow compaction are threats to lynx conservation and recovery at this time, adverse effects to individual lynx could result from these activities if the guideline is not always followed.” In light of the

situation, we decided to retain the grazing objective and guidelines in Alternative F (Objective GRAZ O1, and Guidelines GRAZ G1, G2, G3, and G4). And we decided to change Standard LINK S2 to Guideline LINK G2 in Alternatives E and F. The guideline still protects linkage areas in shrub-steppe habitat while recognizing the best scientific and commercial data, and, at the same time, allows for some flexibility in managing livestock grazing.

Trapping

PC #178: The agency should develop objectives, standards and guidelines relative to trapping. The listing of the lynx as a threatened species placed management direction in the lap of the federal government. (Ltr #309, 5251)

PC #303: The agency should recognize the past and present effects of former legal and now illegal trapping. The effect of trapping due to high pelt prices was a factor in the lynx decline. In addition, the agency should evaluate the effects of lynx that are indirectly trapped (lynx trapped in the pursuit of other species such as bobcats). The agency should manage trapping to reduce mortality. One suggestion is to restrict trapping in prime lynx habitat. (Ltr #104, 105, 143, 192)

PC #373: The agency should maintain a closed season on lynx trapping indefinitely. (Ltr #383)

Response to PC 178, 303, and 373: We recognize that past and current trapping is a risk factor to lynx. It is discussed in the LCAS (Ruediger et al. 2000, p. 2-15) and the FEIS (p. 106). Trapping for lynx is not currently permitted in any of the states within the planning area and various efforts, including increased information and educational efforts have reduced the incidental trapping of lynx. Trapping is regulated by each state, not the federal government (FEIS, p. 106). The agency is

only developing objectives, standards, and guidelines for those risks we have control of, and trapping is not one of those activities.

Roadless area management

PC #144: The agency should develop an alternative that protects the presently-protected backcountry with non/motorized/wilderness designation. (Ltr #95, 102, 359, 385)

PC #380: The agency should provide management direction that protects broad, intact roadless lands from human interference. (Ltr #20)

PC #462: The agency should provide management direction that protects roadless areas. (Ltr #20, 74, 84)

Response to PC 114, 380, and 462: The Purpose and Needs is to incorporate management direction that conserves and promotes recovery of Canada lynx, by reducing or eliminating adverse effects from land management activities on NFS lands, while preserving the overall multiple-use direction in existing plans (FEIS, p. 1). This proposal is not intended to provide guidance on roadless, unroaded, or wilderness areas, or to change the various land designations already found in the plans.

Looking site-specifically at whether or not to change management prescriptions for the backcountry is more properly done by the individual planning unit. As each plan comes up for revision, roadless and unroaded areas would be reviewed. In addition, the 2001 Roadless Rule is in effect (see Appendix L) and that decision addresses this concern.

Specific alternatives

Alternative A

PC #8: The agency should not proceed. Instead the agency should look at individual management plan revisions to analyze various issues associated with lynx conservation. Critical habitat and a lynx recovery plan should be developed first to assist the agency in establishing priorities and evaluating tradeoffs. (Ltr #73, 362, 381, 382, 401, 455)

PC #27: The agency should stop the process. It is unnecessary and places additional and unneeded restrictions on the residents and businesses because:

- the analysis has not identified any environmental effects likely to be significant;
- there is little or no data to support the need for amending;
- there is basic conflict in the data - why does Alternative E still impose guidelines for the factors the Remand Notice found were not a threat to lynx;
- most forests are in the revision process. (Ltr #395, 482, 483)

PC #60: The agency should not be preparing this EIS. It is a waste of taxpayers' money. (Ltr #9, 148, 199, 286, 311, 395)

PC #141: The agency should select Alternative A, no action. (Ltr # 24, 45, 46, 101, 183, 196, 203, 223, 304, 313, 345, 349, 358, 372, 375, 392, 398, 414, 420, 423, 453, 455, 484)

PC #540: The agency should not amend the plans because it is not in the best public interest and will eventually be used to circumvent NEPA and the public process. Instead lynx should be evaluated in individual projects and proposals. (Ltr #540)

Response to PC 8, 60, 141, and 540: As discussed in the FEIS (p. 3) the Forest Service entered into a Conservation Agreement with the FWS. This agreement requires the agency to review and consider the recommendations found in the LCAS. However, long-term changes in how we manage federal land need to be incorporated into the land and resource management plans, either individually or as a group. These are requirements under NFMA. Incorporating management direction into the plans as a group, and consulting once with FWS is more efficient, and would allow for consistency in lynx management across the Northern Rockies.

A decision to adopt Alternative A means we would not adopt the conservation measures of the LCAS nor any of the action alternatives. This would NOT void the Conservation Agreement the agency has entered into with FWS, nor would it void our responsibilities under the ESA to conserve Canada lynx (FEIS, p. 26). Lynx was listed as a threatened species because of the lack of conservation guidance in plans. Choosing Alternative A would not address this lack of guidance.

As with other Threatened and Endangered species, impacts to lynx still need to be evaluated at the project level. Incorporating standards and guidelines for lynx in plans aids in the recovery and conservation of lynx and helps streamline our projects that are in lynx habitat.

Alternative B

PC #77: The FEIS should provide an alternative that adequately addresses environmental concerns and limits potential impacts to lynx. Alternative B should be modified to address specific weaknesses including:

- **halting expansion of groomed trails on public lands;**
- **not allowing grooming on existing un-**

groomed trails;

- **not accepting FWS remand notice that grazing, mining, over-the-snow recreation and some road building are not threats to lynx populations. (Ltr #156, 319)**

PC #147: The agency should select Alternative B, modified to strengthen Standard HU S1. The standard should be rewritten to minimize the incursion of snowmobiles into denning and hunting habitat. (Ltr #214)

PC #149: The agency should select Alternative B modified. Alternative B should include a standard that prohibits off trail snowmobile use. (Ltr #136, 176, 177, 232, 254, 255, 266, 269, 285, 287, 288, 289, 307, 314, 334, 353, 397)

PC #168: The agency should modify Alternative B to exclude the expansion of snowmobile activities in lynx analysis units. (Ltr #136, 308, 379)

PC #169: The agency should modify Alternative B to keep snowmobiles out of lynx habitat. (Ltr #107, 324, 329)

PC #170: The agency should modify Alternative B Standard HU S1 to limit snowmobiles in lynx habitat to designated routes and play areas only, to allow no net increase in snowmobile routes or play areas in lynx habitat whether they are "designated" or not (unless it serves to consolidate use), and to actively reduce snowmobile routes and play areas where they are not known to be compatible with lynx restoration. (Ltr #65, 315, 319, 321, 322, 334, 365)

Response to PC 77, 147, 149, 168, 169, and 170: Snow compacting activities may facilitate the movement of competing carnivores, primarily coyotes, along snow compacted routes into lynx habitat. Lynx have very large feet in relation to their body mass, which provides them with a competitive advantage over other

carnivores in deep snow conditions. Various reports and anecdotal observations documented coyotes using high elevation, deep snow areas (Buskirk et al. 2000b). Research conducted in central Alberta, attributed the use of more open habitats by coyotes to greater snow compaction (Todd et al. 1981). In another study in Alberta, coyotes were more selective of hard or shallow snow conditions than lynx (Murray et al. 1994).

Since 2000 additional studies have been conducted. Within lynx habitat in northwestern Montana, twelve radio-collared coyotes were monitored over three winter seasons to assess how coyotes interacted with compacted snowmobile trails (Kolbe et al., 2005). Coyotes remained in lynx habitat having deep snow conditions and traveled on compacted snowmobile trails more than random expectations. However, coyotes used compacted snowmobile trails for less than 8 percent of their travel and used compacted and uncompacted roads similarly (Kolbe 2005). Coyotes did strongly select for shallower and more supportive snow surfaces when traveling off of compacted trails. In this same study coyotes primarily scavenged ungulate carrion that were readily available, while snowshoe hare kills comprised only 3 percent of coyote feeding sites (Kolbe 2005).

In the Uinta Mountains of NE Utah and three comparative study areas (Bear River range in Utah and Idaho, Targhee NF in Idaho, and Bighorn NF in Wyoming) Bunnell et al. (2006) found that the presence of snowmobile trails was a highly significant predictor of coyote activity in deep snow areas. From track surveys it was determined that the vast majority of coyotes (90%) stayed within 350 meters of a compacted trail and that snow depth and prey density estimates (snowshoe hares and red squirrels) were the most significant

variable in determining whether a coyote returned to a snowmobile trail (Bunnell 2006). Of the four study areas recent lynx presence has only been documented on the Targhee NF. It is important to note that in Kolbe's (2005) study area there was an abundance of ungulate carrion in the winter, primarily related to hunting mortality, and this may be a rather unique occurrence within lynx habitat.

Snow conditions vary throughout the planning area both seasonally and from year to year. Periods of increased warmth and wind may result in hardened snow conditions that can facilitate the movement of other predators into otherwise deep snow habitats used by lynx. However, snow conditions and degree of firmness may vary greatly depending on location, aspect, slope, snowfall, and temperature changes during any given winter. Storms, which produce heavy snowfall, are typical within much of the planning area and compacted snow conditions may only consistently exist where repeated snow compacting activities occur throughout the winter months.

We discussed this new information, as well as public comments, with Research, the FWS, and the lynx biology team. Based on these discussions we determined there is still no conclusive evidence that over-the-snow recreation is a threat to lynx. However, we still believe it is important to maintain the status quo until further information is gathered; therefore we retained the management direction in Alternative F as Guideline HU G11. Also see the discussion in the FEIS, *management direction considered*, pp. 90-93).

PC #148: The agency should select Alternative B modified. In order to restore and maintain lynx habitat, fire prevention activities should only be allowed where they are most effective,

within 500 yards of residences and other structures. (Ltr #52, 65, 71, 108, 176, 177, 211, 229, 230, 234, 257, 260, 263, 264, 273, 274, 275, 278, 279, 281, 283, 294, 328, 334, 368, 374, 397 489, 490, 491, 507)

Response to PC 148: The ID team decided not to modify Alternative B, but instead provide specific criteria (location) as to where the standards would not apply to fuel treatments. Under Alternative E, the standards did not apply to any fuel treatment done in a collaborative manner. We considered saying the vegetation standards would not apply to fuel treatment projects within 500 yards of residences and other structures, but dismissed this from detailed consideration (FEIS, Chapter 2, *Management direction considered*. p. 85).

This option provides a defined area which could be meaningfully evaluated and it meets the purpose and need. However, in some cases it may not provide for community protection because this option would not fulfill the need to break up the continuity of fuels and or to reduce fire spread by creating fuel breaks (Finney 2001, USDI, USDA FS 2006).

PC #150: The agency should select Alternative B modified. Standards VEG S5 and VEG S6 should be expanded to address all vegetative treatments to protect snowshoe hare habitat, as described in Alternative C; and Standard HU S1 should be strengthened to allow no net increase in snowmobile routes or play areas in lynx habitat whether they are "designated" or not (unless it serves to consolidate use), and to actively reduce snowmobile routes and play areas where they are not known to be compatible with lynx restoration. (Ltr #318, 322, 334, 361, 363, 365, 443, 485, 499, 509, 510, 2919, 4280, 4963)

Response to PC 150: We considered this comment in the developing Alternative F, the FEIS preferred alternative. In

Alternative F Standard VEG S5 would only apply to precommercial thinning because that is the predominate activity in young regenerating forests. Management direction for winter snowshoe hare habitat in multistoried forests would be in the form of a standard, Standard VEG S6, because we have further learned of the importance of multistoried forests since the development of the LCAS. See our response to PC 77 concerning over-the-snow recreation.

PC #155: The agency should modify Alternative B to incorporate all the LCAS standards and guidelines. VEG S3 should be modified to defer logging in all potential denning habitat (not just highest potential) if there is less than 10 percent denning. VEG S5 and S6 should be expanded to apply to all vegetation treatments. The management direction should include a standard to "Revise or develop fire management plans to integrate lynx habitat management objectives. Prepare plans for areas large enough to encompass large historical fire events...". Also include a standard that requires a post-disturbance assessment before salvage harvest, particularly in those stands that were formerly in late successional stages, to evaluate potential for lynx denning and foraging habitat (LCAS Standard #1). (Ltr #309)

Response to PC 155: The FEIS (p. 101) considered the alternative of including all the LCAS standards and guidelines. The ID team rearranged the LCAS recommendations to match the format of land use plans. Some recommendations from the LCAS were not included in the alternatives because they were instructions about how to map lynx habitat, they were descriptions of an analysis process, or they were already required in existing plan direction. FEIS Appendix A is a crosswalk between the LCAS, and the scoping proposed action, the DEIS/FEIS Proposed Action (Alternative B), and FEIS Alternative

F. FEIS, Appendix A displays what recommendations were put into Alternative B, what recommendations from the LCAS were not included, and explains why they were not included.

PC #166: The agency should retain HU S1 as described in Alternative B in the final alternative. (Ltr #23, 52, 55, 56, 61, 154, 278, 352, 379, 397, 500)

Response to PC 166: We considered retaining Standard HU S1 as described in Alternative B in the final alternative, but as described in response to PC 77 on the previous page we determined there is still no conclusive evidence that over-the-snow recreation is a threat to lynx. However, we still believe it is important to maintain the status quo until further information is gathered; therefore we retained the management direction in Alternative F as Guideline HU G11. Also see the discussion in the FEIS, *management direction considered*, pp. 90-93).

PC #304: To meet the legal obligations under ESA, the agency should modify Alternative B to provide more protections for lynx. Lynx protections in Alternative B are designed to maintain lynx populations in their present state, and do little to improve the eroded on-the-ground conditions that the agency have allowed to occur. (Ltr #309, 310, 354)

Response to PC 304: Lynx were listed because of an inadequacy of regulatory language in the existing plans; not because of the condition of the federal lands. Alternative B, and all of the action alternatives have the goal of conserving Canada lynx and they are all based on the LCAS, which was developed to provide a consistent and effective approach to conserve Canada lynx. Under ESA *conserve* means the use of all methods and procedures to bring a listed species to the

point at which the measures are not longer necessary [ESA §3(3)]. In other words, the alternatives do more than just maintain the present state; they are intended to supply the measures needed to bring the lynx to the point that it can be de-listed. Specific requested changes to all the action Alternatives, including B are discussed in the FEIS (Chapter 2), and in the ROD in the discussion of the selected alternative.

PC #145: The agency should select Alternative B. Do not lessen standards to guidelines, get rid of the loophole ALL S2, and allow no fuel treatment exemptions. (Ltr #2, 16, 22, 33, 36, 37, 52, 53, 55, 56, 57, 58, 59, 60, 63, 65, 68, 71, 74, 76, 77, 80, 82, 83, 85, 86, 87, 89, 90, 92, 93, 94, 97, 99, 103, 105, 106, 107, 108, 131, 150, 153, 155, 156, 158, 163, 165, 166, 167, 168, 170, 172, 173, 175, 176, 177, 187, 197, 198, 200, 201, 207, 208, 212, 222, 225, 227, 228, 231, 233, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 246, 247, 248, 249, 250, 251, 252, 253, 256, 258, 259, 261, 262, 265, 267, 268, 270, 271, 272, 276, 277, 278, 282, 283, 284, 286, 290, 291, 292, 297, 298, 299, 300, 301, 302, 305, 306, 307, 309, 315, 320, 325, 329, 334, 339, 340, 344, 352, 363, 371, 373, 374, 375, 379, 384, 388, 389, 391, 403, 405, 406, 407, 413, 416, 418, 424, 429, 434, 435, 436, 450, 487, 490, 500, 501, 502, 503, 504, 506, 508, 512, 515, 516, 518, 521, 524, 2971, 3431)

PC #146: The agency should develop a strengthened Alternative B that protects the wild areas. (Ltr #95, 515, 516, 518)

PC #151: The agency should not select Alternative B because it represents a "hands off" approach. The agency should conduct a balancing act in restoring forests to structures and compositions that are both natural and sustainable, with full regard for ecological resources such as lynx populations, while providing for human needs. (Ltr #338, 360)

PC #526: The agency should admit that Alternative B is an attempt to tie the hands of land managers and prohibit meaningful timber harvest on federal lands. (Ltr #134)

Response to PC 77, 145, 146, 147, 148, 149, 150, 151, 155, 166, 168, 169, 170, 304, and 526: We considered these comments in the development of Alternative F to better balance the many resource management and environmental trade-offs and the effects to lynx.

Alternative C

PC #477: The agency should consider selecting Alternative C with some changes to Standards VEG S1, VEG S3 and VEG S5/S6. The agency should further consult with FWS to develop management direction that ensures more effective lynx conservation and better balances the many resource management and environmental trade-offs. In general the revised direction in Alternative C, with modifications of VEG Standards S1, S3 and S5/S6, would better balance the many resource management and environmental trade-offs. (Ltr #296)

- **VEG S1 should be modified to limit the 30 percent standard to an LAU.**
- **VEG S3 should be modified to simply say "Maintain at least ten percent of the lynx habitat in an LAU as denning habitat well distributed in the LAU."**
- **VEG S5 and S6 should be modified to only apply fuel treatments to high priority WUI areas or areas outside the WUI in Condition class 2 and 3.**
- **VEG S5 and S6 should be modified to incorporate some, if not all, the precommercial thinning allowances in Alternative D for restoring tree species and structures in decline.**

Response to PC 477: We considered this comment in the development of the FEIS preferred alternative, Alternative F. Standard VEG S1 would be limited to an

LAU. Based on a better understanding of denning habitat Standard VEG S3 was dropped and all management direction for denning habitat was combined into one guideline VEG G11. Fuel treatment projects within the WUI would be exempt from Standards VEG S1, S2, S5, and S6. Standard VEG S5 was modified to incorporate some precommercial thinning allowances as described in Alternative D. We only included those allowances where we felt sure we could still contribute to the conservation and recovery of lynx.

Alternative D

PC #85: The agency should include the precommercial thinning recommendations in Alternative D, in all alternatives, but specifically in the final alternative. (Ltr 202)

PC #186: The agency should select Alternative D. (Ltr #133, 213, 216, 219, 220, 221, 326, 327, 338, 390, 425)

Response to PC 85 and 186: We considered these comments in the development of Alternative F, the FEIS preferred alternative. Under Alternative F, Standards VEG S5 was modified incorporate some precommercial thinning allowances as described in Alternative D. We only included those allowances where we felt sure we could still contribute to the conservation and recovery of lynx.

Alternative E

PC #2: The agency should meet the purpose and need to conserve and recover the lynx by reducing or eliminating adverse effects to lynx. The agency should ensure the selected alternative meets the purpose and need and complies with ESA. Alternative E fails to do so. (Ltr #1, 67, 201, 278, 300, 309, 328, 334, 365, 379, 410, 415, 429, 514)

PC #85: The agency should include the precommercial thinning recommendations in Alternative D, in all alternatives, but specifically in the final alternative. (Ltr 202)

PC #193: The agency should select Alternative E. (Ltr #7, 24, 39, 42, 47, 48, 66, 70, 100, 135, 137, 139, 140, 142, 143, 151, 179, 202, 217, 218, 303, 360, 451, 456, 498, 5118)

PC #194: The agency should not select Alternative E because it will not conserve or recover the lynx. The agency should protect and restore sufficient habitat to maintain viable populations of lynx well distributed throughout the Northern Rockies region, preferred Alternative E does not do that. (Ltr #1, 64, 67, 136, 138, 154, 278, 296, 300, 309, 310, 363, 493, 511, 605)

PC #195: The agency should select Alternative E, plus the precommercial thinning in Alternative D to manage for health and resiliency of the forests. (Ltr #50, 355, 448)

PC #196: The agency should reconsider the preferred alternative because it does not follow the recommendations of the biologists who developed the LCAS. The preferred alternative drops or severely weakens all significant reforms regarding logging, fire suppression, snowmobiles, and grazing. (Ltr #52, 55, 61, 64, 108, 130, 153, 161, 162, 170, 173, 176, 191, 211, 248, 262, 277, 315, 319, 321, 324, 351, 353, 361, 370, 412, 428, , 429, 430, 438, 444, 450, 486, 488, 489, 490, 500, 514, 520, 2356, 2902, 3924)

PC #197: The agency should not select the preferred alternative, Alternative E because it does not address the significant threats to lynx habitat. The management direction does not remedy the reasons for the lynx listing; therefore the preferred alternative will not lead to recovery and is contrary to the ESA. (Ltr #1, 64, 67, 103, 319, 334, 351, 361, 365, 378, 410, 495, 511)

PC #198: The agency should not select Alternative E. (Ltr #33, 64, 69, 80, 166, 176, 186, 227, 277, 338, 340, 370, 391, 438, 439, 4280)

PC #199: The agency should not select Alternative E because it is based on opinion versus scientific research. (Ltr #105, 150)

PC #200: The agency should select Alternative E because it provides some balance for managing the excess fuel buildup and declining forest health. Prior to this, the single species focus on lynx recovery would have limited active management necessary to protect both public safety and other resource values. (Ltr #5, 40, 41, 47, 179)

PC #202: The agency should select Alternative E because it provides a good balance of uses while providing for lynx conservation. The guidelines for over-the-snow recreation are appropriate. (Ltr #25, 205, 312, 364, 386)

PC #203: The agency should select Alternative E because it appropriately considers information in the FWS Remand Notice and only applies standards to activities that threaten lynx populations. In addition, Alternative E considers the importance of forest management and thinning to reduce wildland fire risk and fuel reduction needs. (Ltr #209, 367)

PC #204: The agency should not select Alternative E because it relies on a set of "guidelines" for lynx protection. (Ltr #64, 103, 225, 226, 230, 310, 319, 334, 347, 365, 378, 416, 495)

PC #206: The agency should select a modified Alternative E. The agency should drop any management direction, including guidelines, related grazing, mining, forest roads, and snow compaction since the FWS Remand Notice found no evidence of negative impact or threat from these activities. (Ltr #358)

PC #207: The agency should select a modified Alternative E. Modifications should include:

- removing management direction related to roads, grazing, mining and snow compaction;
- add special treatments for tree species included in Alternative D;
- reexamine Standard VEG S1, specifically considering lowering the 30 percent unsuitable threshold;
- exempt all special use permits for access to private property from lynx considerations ;
- redraw the maps to comply with the 4000 foot standard and other habitat criteria. (Ltr #358)

PC #208: The agency should select Alternative E because it best addresses the issues and preserves multiple-use direction in existing plans. However, the agency should assure that there will be little effect on transportation, winter recreation and grazing activities, especially since current research and evidence does not support constraints. (Ltr #402)

PC #209: The agency should select Alternative E. Alternative E is in agreement with the Lincoln County Commissioners Land Use Plan and associated land use documents. (Ltr #419)

PC #210: The agency should select Alternative E with modification. The modifications include dropping the guidelines for road development, grazing or over-the-snow trails, but keep the management direction related to minerals. (Ltr #49, 210, 369, 442, 451)

PC #211: The agency should not select Alternative E. This alternative places the need to deal with fuels over lynx conservation needs. In reality, there should be little conflict between the habitat needs of lynx and restoration of areas that have historically burned at

frequent intervals. In some areas this may lead to a significant reduction in lynx habitat. (Ltr #16, 29, 56, 61, 71, 77, 164, 214, 277, 334, 363, 365, 378, 490, 495, 510, 5402)

PC #214: The agency should explain why Alternative E is the preferred alternative. The agency should include an analysis as to why the management direction in Alternative E, which reduces, modifies or eliminates standards, present the best alternative to not only minimize adverse effects to lynx, but encourage viable populations. (Ltr #33, 378, 494, 495, 5326)

PC #217: The agency should not select Alternative E because it does not ensure the recovery of lynx. The Preferred Alternative will authorize legal violations including: acting in contradiction to an existing biological opinion, failing to take a hard look at and adequately consider the impacts of the preferred alternative. (Ltr #23, 351)

PC #218: The agency should explain why Alternative E is preferred and how it better responds to the issues than Alternative B. The agency should explain what has changed to make the Proposed Action no longer appropriate and justified. (Ltr #334, 365)

PC #224: The agency should explain how Alternative E would maintain viability for lynx given Alternative E has no actual management of lynx habitat (standards and guidelines are either absent or can be avoided through many loopholes). The agency should disclose how much habitat could be lost through burning and timber harvest. (Ltr #1, 3, 67)

PC #247: The agency should change Alternative E, Guideline VEG G8 to a standard to protect snowshoe hare habitat. (Ltr #103, 356)

PC #252: The agency should not select Alternative E because it does not include the protections against logging as recommended by the LCAS. The LCAS

was derived from findings from the Science Report. Specifically the following standards should be retained:

- VEG S2: Do not allow more than 15 percent of lynx habitat in an LAU to be changed to an unsuitable condition within a 10-year period;
- VEG S4: Following a disturbance... That could contribute to lynx denning habitat, do not salvage harvest when the affected area is smaller than 5 acres
- VEG S5: In lynx habitat, pre-commercial thinning will be allowed only when stands no longer provide snowshoe hare habitat. (Ltr #351)

PC #256: The agency should select Alternative E because it provides the greatest latitude to enhance lynx habitat. (Ltr #10)

PC #259: The agency should not select Alternative E, which allow fuel treatments because it violates ESA, NEPA among other laws, as well as the Montana Wilderness Study Act of 1976 relative to the Wilderness Study Areas and the Critical Lynx Habitats and populations therein, specifically including the Snowy Mts. Wilderness Study Area (SMWSA), and the Lost Fork WSA nearby. (Ltr #226)

PC #261: The agency should select Alternative E, modified to include precommercial thinning for western white pine, western larch, and ponderosa pine, all of which are in Alternative D. Much time and money has been invested in planting these seral species. (Ltr# 11, 73)

PC #262: The agency should select Alternative E, but should reevaluate how much precommercial thinning could be incorporated. Since precommercial thinning is usually accomplished in small patches and is designed to maintain connectivity, it should not negate lynx habitat, especially given the sizes of their home ranges. In addition 41 percent of the

Northern Rockies is in non-developmental allocations. In addition, many independent contractors and their employees in Lincoln County depend on projects such as these for their livelihood. (Ltr #402)

PC #266: The agency should not select Alternative E because it reduces Standard HU S1 to a guideline HU G11 and HU S2 to guideline HU G12. These changes will result in less protection for the lynx. The agency cannot ensure that its actions are not likely to jeopardize lynx. (Ltr #309, 351, 495)

PC #274: The agency should select Alternative E because it would continue to allow snowmobile use to occur and would allow expansion of groomed routes. (Ltr #48, 50, 51, 70, 360, 456, 3230)

PC #294: The agency should explain why Alternative E excludes fuel treatments. Was it a political decision to exclude fuel treatments under the National Fire Plan, and then use an EIS to justify the decision? If so, this violates NEPA. (Ltr #96, 494)

PC #387: The agency should incorporate management direction into Alternative E that does not impede the counties road management during the summer or winter snowmobile maintenance system. (Ltr #5)

PC #501: Under Alternative E, Standards VEG S1, VEG S3, and VEG S5 include a provision exempting fuel treatment projects that are identified through collaborative processes, such as that described in A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment 10-Year Comprehensive Strategy Implementation Plan from adherence to the particular standard's criteria. The agency should not exempt a broad range and unknown number of actions from plan direction. As currently worded, this exemption is sufficiently vague that it

does not allow an adequate analysis of the potential effects upon lynx or lynx habitat under implementation of Alternative E. The agency should modify Alternative E, VEG S5 to allow some acceptable and appropriate to use some precommercial thinning within lynx habitat to reduce forest fuel accumulations to protect structures and for other objectives. The agency should identify "sideboards" to guide where and under what conditions such precommercial thinning activities would occur within lynx habitat. (Ltr #5326)

Response to PC 2, 85, 193, 194, 195, 196, 197, 198, 199, 200, 202, 203, 204, 206, 207, 208, 209, 210, 211, 214, 217, 218, 224, 247, 252, 256, 259, 261, 262, 266, 274, 294, 387, and 501: Alternative E addresses the issue of wildlife fire risk while contributing to lynx conservation. Alternative E also responds to the Remand Notice that FWS found no evidence that forest roads, mining, grazing, or snow trail compaction are threats to lynx at this time (FEIS, Appendix P). Due to the lack of documentation of impact in the scientific literature, as discussed in the Remand Notice, we changed Standard HU S1 to Guideline HU G11, Standard HU S2 to Guideline HU G10, Standard HU S3 to Guideline HU G12, Standards GRAZ S1, S2, and S3 to Guidelines GRAZ G1, G2, and G3, and Standard LINK S2 to Guideline LINK S2 (FEIS, pp. 33-35. Standards in the VEG section were also modified to allow for fuel treatments.

As noted above, we received many comments on Alternative E as well as other alternatives. The comments ranged from believing Alternative E provides an adequate balance to others that believe Alternative E would not contribute to lynx conservation. Based on these comments we developed Alternative F. The following summarizes how we considered the

comments in developing Alternative F (See FEIS, Appendix A, Table A-1 for a comparison of the LCAS recommendations, the scoping proposed action, the DEIS Alternative B, and the FEIS Alternative F).

The management direction in Alternative F was developed so that the agency could treat hazardous fuels while also providing sufficient "regulatory mechanisms" that were deemed lacking by the FWS in their listing of Canada lynx as threatened in 2000 (Appendix O, pp. 16051-16086).

Standards VEG S1 and S2 - are designed to address the risk factor of timber harvest and sustaining winter snowshoe habitat components over time.

Standard VEG S1: limits regeneration harvest if there is more than 30 percent of an LAU in the structural stage that does not yet provide winter snowshoe hare habitat. Some people were concerned about Alternative E because it applied the standard to multiple LAUs and did not apply the standard to fuel treatment projects identified through a collaborative process. Some people thought these allowances were too broad and did not provide enough constraint to activities to ensure an even flow of winter snowshoe hare habitat over time.

Based on these comments we modified Standard VEG S1 to: 1) apply only to an LAU which ensures adequate habitat within a home range; 2) not apply to fuel treatment projects in the WUI as defined by the HFRA; and 3) establish a cumulative cap of how much the planning area could have projects in the WUI that did not meet the VEG standards. This cap is 6 percent of the lynx habitat on each National Forest. The standard in Alternative F would apply to fuel treatment projects outside the WUI; whereas in Alternative E, some fuel treatment projects outside the WUI could have been exempted if identified through a

collaborative approach. Under Alternative F only those projects within the WUI would be exempted up to the 6 percent cap.

In addition, we added Guideline VEG G10 that says for fuel treatment projects within the WUI we should still try to meet the standard. The intent is that we consider lynx habitat needs for fuel treatment projects within the WUI, and we expect that most times we would be able to meet the standard. But in other situations we would not be able to meet the standards while reducing the fuel load in the WUI. This is an acceptable balancing of competing needs in the WUI. In order to address the impacts of Guideline VEG G10 we assumed that none of the fuel reduction projects in the WUI would meet the standards up to the 6 percent limit.

Standard VEG S2: was not in Alternative E, but has been added back to Alternative F. VEG S2 applies to the amount of timber harvest and fuel treatment projects that regenerate habitat within an LAU over a decade. The purpose is to: 1) provide an even flow of habitat; and 2) provide for natural occurrences so we do not cumulatively modify too much habitat at one time. Although there are very few LAUs that do not meet this standard we felt it was an important regulatory mechanism to retain.

Standard VEG S5 is designed to maintain winter snowshoe hare habitat in the stand initiation structural stage.

Standard VEG S5 was modified in Alternative F to allow for precommercial thinning in some additional situations. The analysis found that by not allowing for precommercial thinning around western white pine, whitebark pine, and aspen these species would further decline in the analysis area. These species have suffered a dramatic decline over the past hundred years for a variety of reasons and these tree

species are beneficial to a variety of other wildlife. Therefore Alternative F would allow removal of competition around planted western white pine; and would allow thinning for whitebark pine and aspen. Over a 10-year period 67,110 acres could be thinned. We determined there may be some adverse effects to lynx; however, in balancing resource needs we determined that allowing this thinning would not reduce the likelihood the recovery of lynx. The management direction still limits precommercial thinning in most situations.

We also added another criterion in Alternative F VEG S5. Many people were concerned about Standard ALL S2 which would allow projects to go forward if they did not meet a standard, as long as they met other criteria. The intent of ALL S2 was to allow for adaptive management. For example, if we received new research that found certain vegetative practices would not harm lynx – or may even be beneficial to them. In discussion with the scientists and the lynx biology team we determined the only area where we were likely to get new research information was in regards to activities in winter snowshoe hare habitat and specifically in regards to precommercial thinning. Therefore we dropped ALL S2 and added an additional criterion to VEG S5. The criterion states, “Based on new information that is peer reviewed and accepted by the regional level of the Forest Service, and the state level of FWS, where a written determination states: a) that a project is not likely to adversely affect lynx; or b) that a project is likely to have short term adverse effects on lynx or its habitat, but would result in long-term benefits to lynx and its habitat.” This criterion would allow precommercial thinning only if it is based on peer reviewed information and is agreed to by higher levels and applied at a site-specific level. We believe this would

provide the appropriate oversight when the exception is applied.

VEG G8 (Alternative E) and VEG S6 (Alternative F) - are designed to maintain winter snowshoe hare habitat components in the multistory forest stage.

Under Alternative E management direction for multistory forests was in the form of a Guideline, because that is what the LCAS recommended. Based on our understanding of the importance of multistory habitat (see FEIS, pp. 22), and to be consistent in applying standards to habitat components that may be limited, we decided to change Guideline VEG G8 to Standard VEG S6 in Alternative F. Incorporating a standard which provides sideboards on what activities may occur in multistory forests is important to reducing risks to lynx.

Based on new information, impacts to denning habitat is not a risk factor to lynx in most cases because denning habitat can be found in a variety of circumstances and it is not a limiting factor for lynx.

We also reviewed all the management direction regarding denning habitat. Alternatives B through E provided a variety of direction for denning habitat in the form of Objectives, Standards, and Guidelines. After review of new information regarding where lynx den, what site components they use, and discussions with research and the lynx biology team, we decided to combine all denning management direction into one guideline, Guideline VEG G11. The research does not indicate a minimum amount of denning habitat is required for lynx. Research indicates pockets of large amounts of down wood, root wads, or large piles of small wind thrown trees provide denning habitat; and these pockets should be distributed across an LAU. In general, most LAUs have pockets of down trees that would be adequate denning habitat. Guideline VEG G11 says denning habitat

should be distributed in an LAU and if denning habitat appears to be lacking in an LAU, then projects should be designed to retain coarse woody debris, piles, or residual trees to provide future denning habitat.

Activities related to grazing, roads, minerals and over-the snow recreation were not found to affect lynx populations but may affect individuals; therefore, for these activities we provided the direction in the form of guidelines. We intend to follow guidelines; projects/activities may deviate from a guideline if the rationale is documented. We believe some level of management direction for these activities is warranted, but because these activities are not a threat to lynx populations and we do not believe standards are appropriate.

We crafted Alternative F to provide adequate regulatory mechanisms for habitat components lynx need to survive (winter snowshoe hare habitat and multistory habitat) and for timber harvest activities that could affect the rate and amount of young regenerating forests. We allow some activities such as fuel treatments within the WUI and precommercial thinning in some circumstances in order to strike a balance between adequate conservation for lynx and our ability to address other ecosystem problems and resource objectives. Based on our analysis and in consultation with FWS, we determined that plans allowing some adverse effects on lynx for the activities described above would still contribute to conservation and recovery of lynx because: 1) we preclude adverse actions in most areas; 2) even though the management direction would allow the activity, the likelihood that all activities would not be designed to meet lynx needs is low; 3) fuel treatments would likely not be funded to the level where all lynx habitat within a WUI is treated; and 4) not all areas where

exceptions are allowed need to be treated. In addition we would monitor how often and the degree to which the exceptions are applied.

PC #213: If the agency chooses Alternative E, then the agency should start a section 7 consultation process with FWS to consider the impacts of the selected alternative. (Ltr #378, 493)

Response to PC 213: Regardless of the alternative we choose we are required to enter into a Section 7 consultation with FWS. See the Biological Assessments and FWS Biological Opinion concluding the formal consultation process.

PC #220: The agency should select Alternative E. Standard ALL S2 should be included because it promotes long-term management. The agency should modify HU G11 to read as follows: Designated over-the-snow routes or play areas can be allowed to expand outside areas of consistent and intermittently-consistent snow compaction by LAU or in combination of immediately adjacent LAUs when designation consolidates use and/or improves lynx habitat. In addition, the agency should allow snowmobilers to participate in determining the areas of consistent snow compaction. (Ltr 348)

Response to PC 220: We retained Standard ALL S2 in Alternative E. We received many comments on HU G11 (see Response to Comments section discussing the various comments on HU G11 (above)). The intent of HU G11 was to maintain the level of snow compaction, not expand it; therefore we decided not to change the wording of HU G11 in Alternative E. We also have HU G11 in Alternative F, with slightly different wording.

PC #280: The agency should retain Guideline HU G12 in Alternative E because it requires an assessment of lynx

needs when addressing proposals to alter, change or increase mineral and energy development. (Ltr #210)

Response to PC 280: We have retained Guideline HU G12 in Alternative E and included in Alternative F.

PC #291: The agency should justify why it selected Alternative E as the preferred alternative over Alternative B. The agency is legally bound to implement Alternative B under the terms of the FWS biological opinion. (Ltr #334, 363, 365)

Response to PC 291: The FWS's Biological Opinion on the existing plans completed October 25, 2000 (USDI FWS 2000a) does not legally bind us to implement Alternative B, or the Canada Lynx Conservation Assessment and Strategy (LCAS) on which Alternative B was based. At the time the Biological Opinion was written Alternative B did not exist and we had agreed with FWS to *consider* the LCAS in amending the plans.

Part of the purpose of the environmental analysis is to identify issues associated with a proposed action. Based on this analysis we determined Alternative B does not fully integrate lynx needs with other needs across the planning area. We identified Alternative E as the preferred alternative in the DEIS because it provided better integration of activities that reduce wildland fire risk while contributing to lynx conservation, and responding to findings by FWS that grazing, minerals, forest roads, and over-the-snow activities do not affect lynx populations (see DEIS cover letter).

In the FEIS Alternative F is the preferred alternative. Besides responding to wildland fire risk, the Healthily Forests Restoration Act, the Healthily Forests Initiative, grazing, minerals, forest roads, and over-the-snow activities while contributing to lynx conservation, Alternative F responds to the

public's concerns about Alternatives B, C, D, and E.

Relation to laws, act, policies

PC #476: The agency should identify Alternative B as the environmentally preferred alternative. It would come the closest to meeting obligations to comply with Section 7(a)(1) of the Endangered Species Act. Alternative B, developed from conservation measures in the LCAS, includes management direction to limit or avoid effects of 16 of 17 lynx risk factors, and thus, would appear to have the highest conservation effectiveness (Table 3-18, page 139). It is not clear, however, if Alternative B fully addresses land management agency concerns regarding multiple-use management and management flexibility. (Ltr #296)

Response to PC 476: We identified Alternative F as the environmentally preferred alternative because Alternative F incorporates management direction to conserve lynx while allowing other activities that are necessary to manage protect and restore the public lands. These activities include fuel treatment activities within the WUI and limited precommercial thinning in some situations. Fuel treatment activities are generally designed to protect communities and reduce fire risk and severity so all landscape components are not consumed at one time. Precommercial thinning activities would be allowed in some situations where needed to restore tree species in decline (western white pine, whitebark pine, and aspen).

PC #292: The agency should explain the legal basis for the determination that the "analysis in the DEIS has not identified any environmental impacts likely to be significant (Summary, p. 4); and the legal basis for using the FWS Remand Notice. (Ltr #226)

Response to PC 292: The statement in the Summary was preliminary, based on the analyses in the DEIS. At that point, none of the ID team members working on the project had found any environmental impacts that appeared to be significant. Public comments on the DEIS have not identified any significant environmental impacts from incorporating lynx conservation measures.

The ESA gives the Secretary of the Interior the authority and obligation to promulgate regulations concerning endangered and threatened species (16 U.S.C. 1533). In the case of the Remand Notice, the FWS was ordered by the Federal Court for the District of Columbia to clarify the findings the FWS had made in support of finding Canada lynx as threatened. The FWS did this in the *Notice of Remanded Determination of Status for the Contiguous United States Distinct Population Segment of Canada Lynx* (Appendix P). We are using the Remand Notice in conjunction with the original listing notice (Appendix O) because the two documents provide the complete set of information for listing lynx.

PC #10: If the agency decides to proceed then the Forest Service should follow the process for a significant forest plan amendment, including an in-depth review of lynx habitat and the effects on forest management and forest health over the short and long term, with an opportunity for full public review and comment. (Ltr #381, 382, 401)

PC #295: The agency should reevaluate their determination that the management direction is not a significant change under NFMA. The reason why this process was undertaken was because existing plans had significantly failed to protect lynx; therefore in order to halt the ongoing decline of lynx, significant changes to existing plans must be made. The agency has not objectively evaluated the factors

for determining significance. The plans affect 18 million acres, which is a significant amount of land. The size of this proposal in addition to other amendments and revisions should be considered cumulatively. In addition, certain outputs should be curtailed and the amendment should reduce goods and services. (Ltr #226, 319)

PC #298: The agency should reevaluate whether or not the management direction is a significant amendment. The amendment does not have a "sunset date" and there is simply no basis for assuming the amendment would not be permanent direction. The effects on precommercial thinning will be far more significant than estimated. "Only 20 percent of the 38.5 million acres within the planning area would be most affected by new management direction" (page 256), however the percentage of suitable timberlands affected will be much, much higher. The management direction would also lead to increased risks of insects, disease, and stand replacement fire, reduced presence of western white pine and larch in forested ecosystems, and squander past reforestation investments. (Ltr #455, 482, 483)

PC #395: The agency should adequately disclose the cumulative effects to each forest plan of this amendment in combination with other amendments to those forest plans. (Ltr #341, 357, 358)

Response to PC 10, 295, 298, and 395: The purpose of this proposal is to incorporate management direction into plans for the conservation and recovery of Canada lynx.

The National Forest Management Act (NFMA) provides that forest plans may be amended in any manner, but if the management direction results in a significant change in the plan, additional procedures must be followed.

In December 2004, the Forest Service removed the November 9, 2000 National Forest System Land and Resource Management Planning Regulations at 36 CFR 219, subpart A and replaced them with newly adopted regulations. The new regulations set forth a process for land management planning, including the process for developing, amending, and revising land management plans (36 CFR 219.1). These regulations also incorporate effective dates and transition periods. Section 219.4(e) says "Plan development, plan amendments or plan revision initiated before the transition period may continue to use the provisions of the planning regulations in effect before November 9, 2000" - in this case the 1982 regulations.

This proposal was initiated before the transition period (starting January 5, 2005), therefore, it is being completed under the requirements of the 1982 regulations. The 1982 regulations at 219.10(f) require the agency to determine whether or not a proposed amendment would result in a significant change in the plan. If the change resulting from the proposed amendment is determined to be significant, the same procedure as that required for development and approval of a plan shall be followed. If the change resulting from the amendment is determined not to be significant for the purposes of the planning process, then the agency may implement the amendment following appropriate public notification and satisfactory completion of NEPA procedures.

The Draft and Final EISs provide an in-depth review of lynx habitat and the effects on forest management and forest health over the short and long term. Based on public review and comments, changes were made to the FEIS and a new alternative, Alternative F was developed. Alternative F would allow precommercial thinning in young regenerating forests for planted

western white pine, whitebark pine, and aspen; and the vegetation standards would not apply to fuel treatment projects within the WUI.

The FEIS, pp. 347-350 evaluate whether or not incorporating the management direction described in Alternative F would result in a significant change to existing plans. Based on the process outlined in the Forest Service Manual 1920, section 1926.15 the analysis indicates, the management direction in Alternative F would not be a significant change under NFMA to the 18 forest plans because: (1) it does not significantly alter the long-term relationship between levels of multiple-use goods and services originally projected in the plans – instead it provides additional sideboards in the design of projects and activities; and (2) it does not effect the entire land management plan – it affects a small portion, primarily those management areas suitable for timber management. Again, in general it does not preclude activities, except for precommercial thinning, but provides additional sideboards and considerations for project design.

The FEIS evaluates the cumulative effects of this management direction with other amendments (identified in Appendix L) on good and services in each resource section.

PC #290: The agency should explain how multiple use goals, which are part of the purpose and need, are going to be maintained. It appears the proposal focuses on one species, compromising the management of an entire landscape for the benefit of multiple use and sustained yield. (Ltr #341)

Response to PC 290: The proposal focuses on lynx because the lynx Listing Decision of April 2000 indicates that guidance for the conservation of lynx was missing from the plans (FEIS, p. 2, and Appendix O). The Purpose and Need is to conserve Canada

lynx and promote its recovery while preserving the over-all multiple use direction in the existing plans (FEIS, p. 1). The lynx goal, objectives, standards, and guidelines would be inserted into existing plans. All the existing goals, objectives, standards, and guidelines that promote multiple uses on public lands would remain in the plans. The lynx direction would provide some additional sideboards during the implementation of site-specific projects. Where there is a conflict between the lynx direction and other plan direction the more restrictive would be followed, but we expect such conflicts to be minimal. Each plan, when taken as a whole, including the lynx direction, does continue a sustained yield of multiple uses, as required under MUSYA.

PC #307: The agency should provide enough management flexibility so that restrictions for one individual species do not place further limitations on the effective management of all species, as well as on the management of land use and multiple use activities. (Ltr #100, 331, 350, 366, 453, 480, 517, 523)

Response to PC 307: Alternative F conserves lynx and promotes its recovery while providing the needed management flexibility to effectively manage for other species and multiple uses on public lands (see Table 2-6 in the FEIS, which compares how each of the alternatives affects other resources).

PC #439: The agency should disclose the acreage of suitable timberlands that are mapped as lynx habitat. The agency should not make other forest plan goals and objectives subservient to the lynx management direction. This is contrary to both the Organic Act and the National Forest Management Act. (Ltr #455)

Response to PC 439: Table 3-1 (FEIS, p. 137) indicates the number of acres of lynx

habitat that is in development allocations, which are those land allocations that allow developments (such as campgrounds) and active management (such as timber sales). There are 18,470,000 acres of lynx habitat in the planning area; 7,940,000 acres are in development allocations, and the rest is in non-development allocations.

The existing plan goals and objectives are not subservient to the lynx management direction. The new direction is a refinement of existing direction to provide for the conservation of lynx. The lynx goal, objectives, standards, and guidelines would be inserted into existing plans. All the existing goals, objectives, standards, and guidelines that promote multiple uses on public lands would remain in the plans. The lynx direction would provide some additional sideboards during the implementation of site-specific projects. Where there is a conflict between the lynx direction and other plan direction the more restrictive would be followed, but we expect such conflicts to be minimal. Each plan, when taken as a whole, including the lynx direction, does continue a sustained yield of multiple uses, as required under MUSYA.

PC #305: The agency should drop the Conservation Agreement once the lynx decision is finalized. The decision should supersede the Conservation Agreement and LCAS. (Ltr #358)

Response to PC 305: The Conservation Agreement only applies until the plans provide guidance to conserve lynx. Once the direction is incorporated in the plans the Forest Plans would supersede Conservation Agreement and the LCAS.

PC #288: The agency should designate critical habitat for lynx to avoid being in violation with ESA, NEPA, and the recent court ruling from Judge Gladys Kessler, US District Court. The court ordered FWS

to designate critical habitat and to issue Biological Opinions for any projects that affect lynx. (Ltr #226)

Response to PC 288: The Forest Service does not have the authority to designate critical habitat. It is the responsibility of the Secretary of Interior, through the FWS to designate critical habitat for lynx (ESA, Sec. 4(b)(2)). In compliance with a court order, the FWS published the *Designation of Critical Habitat for the Contiguous United States Distinct Population Segment of the Canada Lynx* (Appendix O).

PC #301: Once the decision is completed, the affected states and the agency should petition for delisting because adequate regulatory mechanisms will be in place. (Ltr #312, 364, 386)

Response to PC 301: FWS outlined the recovery process for lynx in their Recovery Outline (USDI FWS 2005). The outline serves as an interim strategy to guide recovery efforts and inform the critical habitat designation process. The outline identifies the preliminary recovery objectives and measures for calculating progress toward the recovery goal of delisting the lynx, as well as the recommended recovery actions to attain that goal. One of the recovery actions needed is to establish management commitments in core areas; however, the FWS has identified several other recovery actions. Based on the preliminary list of actions in the Recovery Outline it is likely to take more than just incorporation of adequate regulatory mechanisms before lynx can be delisted.

Environmental values

PC #84: The agency should critically analyze the effects the management direction will have on multiple use direction. (Ltr #7, 455, 736)

Response to PC 84: An important part of the Purpose and Need is to preserve the overall multiple-use direction in existing plans (FEIS, p. 1). The multiple use *direction* found in the plans would not change. A substantial portion of the FEIS analyzes the effects the management direction would have on the multiple uses on our public lands, including fish and wildlife other than lynx (FEIS, p. 202), fire (FEIS, p. 213), forests and the timber program (FEIS, p. 231), rare plants (FEIS, p. 261), range (FEIS, p. 275), recreation (FEIS, p. 279), transportation (FEIS, p. 294), minerals (FEIS, p. 302), special use permits (FEIS, p. 316), and economic and social effects (FEIS, p. 324).

PC #400: The agency should fully evaluate the cumulative effects on the timber program. The reductions in precommercial thinning would cause a significant reduction in sawtimber growth, and consequently on timber sale programs. The affected national forests would also lose seral species, especially larch and white pine, with increases in more shade tolerant species such as Douglas-fir and grand fir. The reduction in precommercial thinning would also contribute to an increased long-term risk of insects, disease, and stand replacement fires. (Ltr #455)

Response to PC 400: We have fully evaluated the effects of the management direction on the timber program. The FEIS includes additional analysis on how the alternatives may affect the Allowable Sale Quantity and Long-term Sustained Yield (FEIS, pp. 261-262). The FEIS discloses the effects of the different alternatives on seral species (FEIS, pp. 233-244).

The FEIS (p. 263) states, "Past, present, and reasonably foreseeable actions listed in Appendix L have reduced the area available for timber harvest. Other tools, such as prescribed fire would be used to meet resource objectives in these areas. The

management direction would have a limited cumulative effect on the timber program. There could be a change in the type of material harvested and where."

Physical elements

PC #311: The agency should protect riparian habitat per INFISH and PACFISH standards. (Ltr #363)

PC #519: The agency should allow for the ability to fix and improve riparian areas (Ltr #26)

Response to PC 311 and 519: All the alternatives would not change existing management direction, such as that prescribed in the Inland Native Fish Amendment (INFISH) or the Interim Strategies for Managing Anadromous Fish-producing Watershed on Federal Land in Eastern Oregon and Washington, Idaho, and portions of California (PACFISH). The alternatives add a standard (Standard GRAZ S3 in Alternatives B, C, and D) or a guideline (Guideline GRAZ G3 in Alternatives E and F) that provides direction to manage livestock grazing in riparian areas to contribute to maintaining or achieving a preponderance of mid-or-late seral stages. The FEIS (p. 204) states, "The alternatives propose management direction for livestock grazing similar to the PACFISH and INFISH direction amended into the existing plans of most units west of the Continental Divide. For units east of the Continental Divide whose plans do not contain similar direction, adding this grazing direction may beneficially affect fish by managing riparian-area grazing to achieve conditions similar to historic."

Wildlife

Lynx - populations

PC #417: The agency should indicate which portions of potential habitat actually contain lynx. The agency should include population estimates or census figures for lynx. (Ltr #7)

Response to PC 417: The national lynx survey has provided information on where lynx have recently been detected on public land in the Northern Rockies. Since 1999 lynx have been detected on all national forests within the planning area with the exception of the Ashley, Beaverhead-Deerlodge, Bighorn, Bitterroot, Nez Perce, and Salmon-Challis National Forests. The rest of the administrative units where lynx *have* been detected according to the *Occupied Mapped Lynx Habitat Amendment to the Canada Lynx Conservation Agreement* (USDA FS and USDI FWS 2006) are considered occupied. The current available information is not sufficient to develop population estimates for lynx, however population estimates are not essential in deciding to conserve occupied lynx habitat.

PC #308: The agency should include a thorough discussion on lynx and snowshoe hare populations. Including what the existing and past population numbers are, whether or not lynx have inhabited all the areas mapped as lynx habitat and what scientific, peer-reviewed data this information is based on. (Ltr #364, 386)

Response to PC 308: Sufficient information is not available to assess lynx or snowshoe hare population numbers in the Northern Rocky Mountains at this time. The national lynx survey has provided data on the current distribution of lynx in this area. However, there are some areas that have not been surveyed. Chapter 8 of the *Ecology and Conservation of Lynx in the United*

States (Ruggiero et al. 2000a) provides a comprehensive review of historical distribution of lynx in the U. S. Also see response to PC #417, above.

PC #309: The agency should determine a minimum viable population number and population distribution. If lynx population are cyclical, as indicated by the ten-year peak and fall of snowshoe hare numbers, then which of the lynx levels would you consider being the viable level. The agency should also determine the minimum amount and spatial arrangement of habitat necessary to maintain viable populations of lynx in the Northern Rockies. (Ltr # 73, 354)

Response to PC 309: Data is currently not available to determine a minimum viable population of lynx. Work is currently underway by research scientists at the Rocky Mountain Research Station which would eventually lead to a viability analysis for a portion of the lynx population that occurs within northwest Montana. Some evidence is suggestive that hare populations may be cyclic in the southern portion of their range, including the Northern Rockies, except that peak and low densities are lower than those in northern areas (Chapter 7 *in* Ruggiero et al. 2000).

The intent of the direction in the various alternatives is to manage the habitat where lynx are found, based on the FWS's risk factors in the Canada lynx listing decision and the LCAS. The minimum viable population is not directly relevant to our decision on habitat management; however, it is relevant in developing a recovery plan for lynx, which is under the authority of the FWS, not the Forest Service (USDI FWS 2005a).

PC #418: The agency should recognize that lynx don't just live in high, snow covered mountain areas. The census of lynx finds them on the plains of Wyoming

and Minnesota. I have yet to see a mountain in Minnesota. (Ltr #10)

Response to PC 418: Lynx are strongly associated with snowshoe hares, within moist, cold forests that have deep winter snows. These conditions occur in the northern portions of the Great Lake states such as in northern Minnesota. In the Rocky Mountains, these conditions typically are found within spruce-fir and lodgepole pine habitats at moderate to high elevations. Occurrences of lynx in atypical habitats (e.g. shrub-steppe habitats of Wyoming) have been documented but persistence and reproduction of lynx in these atypical habitats has never been documented.

PC #319: Apparently three lynx in Wyoming died of starvation in 2003. The agency should explain if this is true, and if so, why did they die. (Ltr #71, 181)

Response PC 319: Forest Service researchers documented that two adult lynx died of starvation in Wyoming in 2003. Starvation is known to be a major source of mortality of lynx in Montana and during hare-cycle lows in Canada. Thus, starvation is common in lynx populations.

PC #26: The agency should validate the lynx detected on the Manti LaSal National Forest in 2002. Was this hair planted? (Ltr #11)

Response to PC 26: The Manti LaSal National Forest is not affected by this decision because that National Forest is not in this planning area. Two lynx were verified through DNA analysis on the Manti LaSal NF. These lynx are from the reintroduction effort in Colorado, and had moved to the Manti LaSal on their own.

Snowshoe hare

PC #329: The agency should focus their effects analysis on lynx biology not snowshoe hare biology. At one time (prior

to the mid 1990s), it appeared according to at least four authors that *Lynx canadensis* and *Lynx lynx* were conspecific. It appears *L. lynx* over the past 150 years has shifted its diet to deer, caribou, cattle, or other carrion in a response to agriculture and other land use changes (Sunde, P. et al. 2000, Foraging of lynx in a managed boreal-alpine environment. *Ecography* 23: 291-298). (Ltr #492)

Response: The effects analysis focused on lynx biology, which is closely tied to snowshoe hare biology in the Northern Rockies. Although lynx do prey on other species including ungulates, studies throughout North America have demonstrated that, at this time, snowshoe hares are the primary prey of lynx (Ruediger et al. 2000, pp. 1-1 to 1-2, 1-5 to 1-8; and Ruggiero et al. 2000a, pp. 265 to 268). There is no information to date to suggest that Canada lynx in North America are following a similar dietary shift as that of the larger European lynx (*Lynx lynx*).

PC #330: The agency should reevaluate whether or not snowshoe hare is the primary prey. Lynx are an opportunistic predator that will eat any animal from a mouse to a deer. Studies conducted in Scandinavia show lynx primarily eat rodents however their stomach contents included sheep. It is not unusual for a lynx to eat deer. Many Wyoming hunters have noted lynx follow hunters during hunting season. The lynx know a warm gut pile waits ahead. Lynx have been observed on a rural home patio to kill small deer and feed of the carcass for several days in the late cool fall. (Ltr #10, 226)

Response to PC 330: We acknowledge that lynx do prey on other species and carrion. However, various completed and ongoing studies of lynx in North America have clearly demonstrated that snowshoe hare are the primary prey of Canada lynx (FEIS,

p. 141, and Appendix F; Ruediger et al. 2000, pp. 1-1 to 1-2, 1-5 to 1-8; and Ruggiero et al. 2000a, pp. 265 to 268) both in terms of numbers and biomass consumed.

PC #320: The agency should explain if defined lynx habitat requires viable populations of snowshoe hare. If there is a limited population of hare because of poor hare habitat is it still important to the lynx? (Ltr #303)

Response to PC 320: Snowshoe hare are the major prey of lynx throughout the year and especially during winter. In northwestern Canada, lynx distribution is generally limited where snowshoe hare density is less than 0.2 hares per acre. In the southern part of lynx range, minimum snowshoe hare densities are unknown (Ruggiero et al. 2000a, Chap. 16). Areas with lower snowshoe hare densities may sustain lynx over short time periods and may facilitate their ability to disperse to other higher quality habitat. Specific information in regard to snowshoe hare densities within mapped lynx habitat is not currently available throughout the Northern Rockies lynx planning area, but research is on going.

PC #317: The agency should describe the snowshoe hare population for the Northern Rockies. (Ltr #398)

Response to PC 317: Information is currently unavailable to provide detailed information regarding snowshoe hare population numbers in the Northern Rockies. Chapter 7 (pp. 163 to 206) of the *Ecology and Conservation of Lynx in the United States* (Ruggiero et al. 2000a) provides a detailed discussion of snowshoe hare biology and ecology in the conterminous United States. The LCAS also discusses snowshoe hare populations (Ruediger et al. 2000, pp. 1-5 to 1-8).

PC #315: The agency should provide rabbit farms, just like you provide fish hatcheries. (Ltr #2)

PC #328: The agency should adequately manage snowshoe hares in order to ensure healthy lynx populations. The agency should:

- keep out all other possible predators where they do not actually natively occur;
- manage vegetation to provide maximum food value year round;
- limit human harvest;
- provide hiding and birthing safe areas;
- eliminate other predators i.e. coyotes, wolves, mountain lions, golden eagles, etc (Ltr #2, 16, 379, 511)

Response to PC 315 and 328: The Forest Service is a land management agency. We manage for a variety of wildlife through managing their habitat. The intent of the management direction is, in part, to manage the vegetation to provide snowshoe hare food, and hiding and denning habitat for lynx and snowshoe hare. Predator control, 'rabbit' farms, and setting harvest levels are the responsibility of state and other federal agencies, which are not parties to this proposal.

Lynx - habitat

PC #94: The agency should revisit the term "unsuitable habitat". Constraining the amount of "unsuitable habitat" conveys the image that any unsuitable habitat should be avoided. Suitable habitat is not possible without first progressing through the "unsuitable" stage. Also the stage when forests pass self prune and live tree forage is well above levels of snowshoe hare habitat is not defined. Suggested terms are 1) pre-forage/cover habitat; 2) suitable habitat; and 3) unsuitable habitat. (Ltr #355)

PC #322: The agency should define suitable habitat. What type of forest treatments would meet habitat requirements? (Ltr #517, 523)

PC #332: The agency should reevaluate whether or not habitat is the limiting factor. Lynx seem to do well in managed areas, such as Seeley Lake. (Ltr #35)

PC #337: The agency should describe and quantify how much "suitable lynx habitat" should be young stands, and how much should be held in multi-storied stands. Is there more value in one stage or the other? What are the relative proportions of each that are preferable? Should we develop some of these advanced succession stages into early succession stages? The agency should also include a discussion of desired condition of forage, as well as denning habitat.

Good example of this dilemma is trying to hold mature lodgepole pine in the face of mountain pine beetle epidemics because it has dense understories of spruce/fir, rather than regenerating these stands under evenaged management systems with dense regeneration that will become suitable habitat. These conditions are a result of historic disturbances. In many cases, they are also similar to conditions that lead the large-scale disturbances. Too much of this structure will not promote healthy resilient landscapes or address fire plan objectives inside or outside WUI areas. We have seen this on the Targhee and Nez Perce NFs in our lifetime as well as the disturbance scenarios that followed over the following decades.

The relative amounts of "suitable lynx habitat" in young stands and multi-storied stands or the priority of these types of habitat should be quantified within an adaptive management approach allowing adjustment as information and experience with management of lynx habitat increases. (Ltr #355, 455)

PC #343: The agency should explain how inventories for suitable lynx habitat and denning habitat would be conducted. Full surveys are very expensive. (Ltr #355)

Response to PC 94, 322, 332, 337, and 343:

Based on the definition in the LCAS (Ruediger et al. 2000, Glossary, p. 4), we defined suitable habitat as follows:

"Lynx habitat occurs in mesic coniferous forest that experience cold, snowy winters and provide a prey base of snowshoe hare. In the northern Rockies, lynx habitat is generally occurs between 3,500 and 8,000 feet of elevation, and primarily consists of lodgepole pine, subalpine fir and Engelmann spruce. It may consist of cedar-hemlock in extreme northern Idaho, northeastern Washington and northwestern Montana, or of Douglas fir on moist sites at higher elevations in central Idaho. It may also consist of cool, moist Douglas fir, grand fir, western larch and aspen when interspersed in subalpine forests. Dry forests do not provide lynx habitat" (FEIS, Glossary, p. 370).

Basically areas that have snowy winters and are moist enough to grow dense forests are considered suitable habitat. The landscape changes over time and location as the forest undergoes natural succession following natural or human-caused disturbances such as fire, insect epidemics, wind, ice, disease, and logging. Large-scale disturbance is necessary to create the mosaic of different successional forest stages that provide foraging and denning habitat for lynx. Lynx have evolved to adapt to an ever changing boreal forest and require a mosaic within the boreal forest of appropriate species composition, varying stand ages, and structure to support abundant snowshoe hares and lynx denning habitat. Additionally, one must consider scale. Lynx are naturally highly mobile, moving long distances to find abundant prey, and

use a large area on a landscape; the average home range for a male lynx is 151 square kilometers (58 square miles) (Aubry et al. 2000).

In order to affect the suitability of lynx habitat and, in particular, a local lynx population to the extent of putting the population at risk of extinction, an activity would likely have to occur across a very large area (at a minimum the size of several home ranges) and: (1) cumulatively result in the conversion of lynx habitat into non lynx habitat; (2) result in a homogeneous forest that does not provide the various stand ages, species composition, and structure that are good snowshoe hare and lynx habitat; or (3) effectively preclude dispersal (USDI FWS 2003).

Based on comments from the public and units that have been considering management recommendations in the LCAS the ID team determined it was prudent to remove the word "unsuitable" habitat from the management direction. The term unsuitable habitat was causing confusion, because as one commenter noted the habitat – in the way it was used – was really not unsuitable habitat for lynx but was habitat in a stand initiation structural stage that was too short to provide for winter snow shoe hare habitat.

Therefore, in Alternative F Standards VEG S1 and VEG S2 were reworded. We removed the term unsuitable and replaced it with wording we feel is clearer. Basically, if there is too much habitat in the stand initiation structural stages that do not yet provide winter snowshoe hare habitat, then regeneration harvest is precluded.

Regeneration harvest can be beneficial by providing a successional path to young regenerating forests that provide winter snowshoe hare habitat. The desire is to have a mosaic of successional stages on the landscape to provide for lynx and snowshoe hare needs.

Identification of lynx habitat is based on the capability of the site to grow trees and the amount of winter snowfall in an area; therefore, it is not difficult to determine if a site is lynx habitat or not. Denning habitat is also easy to identify because it includes those areas with dead trees, root wads, etc that provide hiding cover for kittens. In Alternative F we removed the numeric (10 percent denning) habitat direction because pockets of dead trees, or root wads generally can be found across forests, and are not dependent upon forest structures. They can occur in old logging units, young regenerating units, as well as areas that have never been harvested.

PC #534: The agency should evaluate the habitat in Seeley Lake, Montana. This area has the most significantly known populations of lynx in the lower 48 states in areas of checkerboard ownership extensively managed for timber production since 1900. The landscape level mosaic of species and structural diversity (size, density, vertical, and horizontal) has provided excellent habitat for snowshoe hares and the cunning, rarely seen lynx. (Ltr #333)

Response to PC 534: Since 2000 research has been done in the Seeley Lake and Cabinet Yaak areas on lynx habitat (FEIS, Appendix F, p. 463; LCAS, Ruediger et al. 2000, pp. 4-8 and 4-9). This research has been evaluating the vegetation condition of the habitat within the range of lynx. The standards and guidelines are based on the information coming out of those studies.

PC #223: The agency should define what lynx needs are, versus defining how much habitat can be removed. In addition, the agency should disclose the current population and habitat levels are, to appropriately evaluate the impact of habitat degradation. (Ltr #1)

Response to PC 223: The FEIS (pp. 141-142) and LCAS (Ruediger et al. 2000, pp. 1-1 to 1-13) detail lynx habitat needs. The FEIS details *management direction considered* to address each of the habitat needs (FEIS pp. 71-102).

As discussed in the lynx listing notice (Appendix O), "The complexities of lynx life-history and population dynamics, combined with a general lack of reliable historic or current lynx data for the contiguous United States, make it difficult for us to ascertain the past or present population status of lynx in the contiguous United States." The FEIS (Table 3-1, p. 137) displays the amount of lynx habitat in the Northern Rockies. There are 18,470,000 acres of NFS lands that are mapped as lynx habitat. The intent is to analyze the impact of the various alternatives, which are combinations of management guidance intended to conserve lynx in lynx habitat. This we have done in the FEIS (see Chapter 3).

PC #524: The agency should describe broad-scale patterns of lynx and prey species habitat occupancy. The agency should become more proactive and at the same time take a more conservative approach to making decisions that might affect lynx and their prey. (Ltr #131)

Response to PC 524: In the May 2006 Amendment to the Canada Lynx Conservation Agreement, the Forest Service signed with FWS, we identified those National Forests that are occupied by lynx. The Amended Conservation Agreement and attached map of the northwestern forests can be found in the project file. By incorporating management direction into the plans we are taking a proactive approach to conserving lynx. The Conservation Agreement with FWS says the agency will look for opportunities to

undertake proactive management actions to benefit lynx (USDA FS, USDI FWS, 2006).

PC #64: The management direction should be considered on a landscape scale. It should provide a reasonable chance for tangible benefits for lynx and also fit within the confines of multiple use management of public lands. The agency should look at the broader ecosystems in terms of composition, structure, and function in order to improve habitat over the short and long term. (Ltr #73, 129, 355)

Response to PC 64: The LCAS identified five geographic areas that provide habitat for lynx; one of those is the Northern Rockies (FEIS, pp. 10-11). This proposal covers the majority of the Northern Rockies at the ecosystem level where we have looked at composition, structure, and function relative to lynx. Landscape level analyses are best done at the forest and project levels where site-specific impacts can be assessed, based on the local situation.

The management direction in Alternative F, the FEIS preferred alternative, provides for tangible benefits to lynx, while still allowing for multiple use management of the public lands.

PC #420: The agency should use computer mapping technologies that allow forest managers to map forests according to areas with differing structures, and to plan a course of action that diversifies these forests using fire and thinning and regeneration harvests (see January 1998 Journal of Forestry, "Integrating Wildfire into Strategic Planning for Sierra Nevada Forests). (Ltr #455)

Response to PC 420: This approach is best suited for the project level where a team would be trying to map or design a project to incorporate lynx needs. At the broad programmatic level of this analysis and decision we have incorporated management

direction that considers diversifying the forests (Objective VEG O1, O2, O3, and O4).

Lynx – effects general

PC #297: The agency should conduct a viability analysis that shows lynx will be maintained on each individual National Forest. So far, they have failed to do so. (Ltr #363)

Response to PC 297: Since lynx populations fluctuate over time the occurrence of lynx in any given area is also likely to fluctuate. The focus of the management direction is to provide suitable habitat for lynx over time so that whenever lynx are present they would find the habitat elements needed to occupy the area and successfully reproduce. Measures identified in the LCAS are important in providing for the conservation of lynx and are likely to provide for the viability of lynx. These measures have been evaluated and incorporated into the preferred alternative (Alternative F) consistent with the Purpose and Need.

PC #310: The agency should explain why they are allowing the destruction of current lynx habitat, for an undefined time frame. What is going to happen to lynx in the meantime? (Ltr #1, 3, 67)

Response to PC 310: We are not destroying lynx habitat. The Forest Service is currently following a Conservation Agreement signed with the FWS. Under this agreement we have agreed to consider the recommendations in the LCAS when planning and implementing projects, to not undertake any projects that would be “likely to adversely affect” lynx, and to incorporate management direction into plans to conserve lynx.

PC #324: The agency should evaluate in more detail the threat to individual lynx and the standards should conserve

individual lynx as well as populations. The agency should take a precautionary approach. (Ltr #300, 347, 378)

Response to PC 324: The threats and potential effects of these threats to individual lynx were evaluated in detail in the FEIS (FEIS, pp. 137-201). As defined by ESA, the term “conservation” means to use all methods and procedures to bring any endangered species or threatened species to the point at which the measures provided under ESA are no longer needed (16 U.S.C. 1532). The term “conservation” does not apply to individuals. The goal of the management direction is to provide for persistent populations of lynx over time.

PC #237: The agency needs to consider the effects on local populations and ensure these populations are conserved as well. Assessing impacts at the LAU level remains the most logical way to do this, as well as retaining adequate standards for their protection. (Ltr #103, 105)

Response to PC 237: Assessing impacts at the LAU level is done during the site-specific project analysis. The intent of LAUs was to provide a consistent basis for evaluating the effects of project activities on individual lynx (Ruediger et al. 2000, pp. 7-2 to 7-3; FEIS, p. 144).

PC #414: The agency should consider the benefits of available lynx habitat outside of the available timber base. On the Flathead National Forest, vegetation management will be excluded from 72 percent of the forest unless the treatment is for wildlife or prescribed burning. Why aren't these areas (including wilderness) not recognized and accounted for in lynx management? How much acreage is available in young dense stands that are already considered prime snowshoe hare habitat? (Ltr #331)

Response to PC 414: Lynx habitat was mapped regardless of management area designation, including Wilderness designation. The FEIS acknowledges the value of wilderness (pp. 137, 140, 152), and that was reflected in the analysis conducted for potential hazardous fuels treatments. However, some good quality lynx habitat occurs outside of designated wilderness and other non-developmental land allocations (e.g. the Seeley Lake area). Snowshoe hare habitat was identified using FIA data. The results are displayed in the FEIS (p. 152).

PC #212: The agency should:

- **adequately consider cumulative effects;**
- **make use of "best available science";**
- **comply with the recommendations of the biological opinion - or its own biologists;**
- **meet recovery requirements or recovery objectives of ESA;**
- **present research needs; and**
- **provide a balanced economic analysis (not just focused on tourism tradeoffs, and recreational use values that are biased towards industry). (Ltr #309)**

Response to PC 212: The FEIS lynx section evaluates the cumulative effects of the major program activities that may affect lynx (FEIS pp. 154-200), as well as the cumulative effects of other programmatic type decisions (FEIS pp. 200-201). The FEIS also evaluates the cumulative effects of incorporating this management direction into forest plans. The cumulative effects analysis for other resources is found at the end of each section.

The ID team evaluated all the science available for lynx, including new information since the release of the DEIS (*Management direction considered*, pp. 71-106 and Chapter 3, Lynx section).

The alternatives do not have to “comply” with the recommendations of the biological opinion issued on existing plans, nor the LCAS. The NEPA process requires decisions based on the understanding of environmental consequences. We considered the recommendations (Alternative B); developed alternatives based upon the issues related to these recommendations (Alternatives C, D, E and F); and determined, based on our understanding of the environmental consequences and associated tradeoffs, that Alternative F best balances the needs of lynx, the need to restore tree species in decline, and the need to reduce hazardous fuels in the WUI.

We believe Alternative F would meet recovery objectives of FWS’s Recovery Outline (USDI FWS 2005a).

Objective 1: Retain adequate habitat of sufficient quality to support the long-term persistence of lynx. Alternative F provides management direction to provide the sufficient quantity (Standards VEG S1 and S2) and quality (Standards VEG S5 and S6) to support the long-term persistence of lynx.

Objective 2: Ensure sufficient habitat is available to accommodate the long-term persistence of immigration and emigration between each core area and adjacent populations in Canada. Alternative F provides management direction to maintain habitat connectivity (Standard ALL S1).

Objective 3: Ensure habitat in secondary habitat remains available for continued occupancy by lynx. Alternative F would apply to occupied habitat, including occupied habitat identified as secondary habitat in the recovery outline.

Objective 4: Ensure threats have been addressed. Alternative F incorporates management direction in the form of standards for those risk factors found to be

a threat to lynx populations, and management direction in the form of guidelines for those risk factors found to be a threat to lynx individuals.

Research needs have been identified in the LCAS (Ruediger et al. 2000).

The economic analysis evaluates the effects of the management direction (FEIS, pp. 324-341).

PC #499: The agency should discuss the potential for climate change or global warming and how it may affect lynx and its habitat. The FWS Remand Notice states that the potential for long-term reduction in snow depth because of climate change is speculative at this time and is not a threat to the lynx. The DEIS states (page 128) that heavy snowfalls are frequent in the northern Rockies, and also acknowledges (page 162) that weather is among the basic factors that influence vegetation and fire behavior. Since lynx are dependent on deep snow habitats, it appears that climate change may pose a potential risk to lynx. The majority of scientists believe climate change poses real risks to the environment, although the exact nature and magnitude of these risks remain uncertain (<http://yosemite.Epa.gov/oar/globalwarming.nsf/content/index.htm>). The rapid reduction in glaciers across the planet and rising sea levels provides evidence that climate change is real. Global warming poses a potential risk to other wildlife species (e.g., polar bear), although determination of the magnitude and extent of this risk is difficult. Since the FWS Remand Notice says that global warming is "speculative," and perhaps as a result the DEIS does not even mention global warming as a potential risk factor for lynx. Global warming or climate change should be identified as a potential risk factor, although the extent and magnitude of this risk is unknown. We note that we do not

have recommendations regarding management direction to address global warming (this is an issue which has to be addressed on a very broad scale), but recommend that the potential risk of global warming or climate change to lynx should be at least be mentioned. The exact nature and magnitude of risk of global warming or climate change to lynx is difficult to determine. (Ltr #296)

Response to PC 499: We added a discussion on climate change in the FEIS, Chapter 2, *Management direction considered* (FEIS pp. 88-90). Climate change, resulting in global warming could have an effect on the occurrence and distribution of lynx through changes in vegetation structure and composition as well as in the depth, consistency, and persistence of snow packs. The extent, magnitude, and duration of these climatic changes on lynx and lynx habitat are unknown and hard to predict with any degree of certainty. If average snow depths decrease it is possible these areas may become less suitable for lynx. Long-term changes from moist spruce-fir forest types to drier forest types would likely be unfavorable to lynx. Effects to snowshoe hare may also occur. However, the magnitude and extent of these changes is not likely to affect hare populations to the same extent as lynx populations because hare are found in a wider variety of habitats and have a larger geographic distribution than lynx.

Forage - effects

PC #538: The agency should discuss the effects that precluding establishment of large scale, seral vegetation, and replication of natural historic events would have on the lynx. (Ltr #357)

Response to PC 538: The direction in this analysis supports the restoration of fire to the ecosystem. Objective VEG O1 states, "Manage vegetation to mimic or

approximate natural succession and disturbance processes while maintaining habitat components necessary for the conservation of lynx." The LCAS did not identify "precluding establishment of large scale, seral vegetation" as a risk factor for lynx (Ruediger et al. 2000, pp. 4-11 and 4-12, 5-1 to 5-3, and 6-1 to 6-3). The LCAS did identify certain management practices as risk factors, including timber management and wildland fire management. (The LCAS combines fire suppression and pre-suppression activities, as well as prescribed fire, both natural and management ignitions, under the term *wildland fire management*.) So we have focused our analysis on the use of the timber management and wildland fire management tools, and their impacts on lynx, snowshoe hare, and their habitat, rather than on the size of the resulting landscape patches.

PC #349: The agency should acknowledge the role wildfire played in fire dependent species such as the lynx. When it suits logging and prescribed burning, fire is good. When it is a natural process that wildlife depends upon, it is bad and has to be eliminated. (Ltr #1, 3, 67)

PC #471: The agency should disclose the impacts of fire suppression policies. Existing fire suppression policies would result in unquantifiable take of lynx. (Ltr #354)

Response to PC 349 and 471: The FEIS discusses the effects of wildfire and fire suppression on lynx habitat (pp. 153 and landscape pattern risks to foraging, for each alternative). We understand that fire is a natural and necessary forest process (FEIS, p. 215). We do allow natural fires to burn where they can do so safely (FEIS, 215).

In high-elevation *spruce/fir* and *lodgepole pine forests*, infrequent, severe fires are the norm.

Because fires burn only about every 100 to 200 years in these cold, moist, high-elevation forests, fire suppression has had less of an effect than in other fire regimes. These naturally dense forests are close to historic conditions, generally in Condition Class 1.

Excluding fire has reduced the role played by low- and intermediate-intensity fires. At higher elevations, such fires kill competing fir and spruce trees so whitebark pine can grow and some lodgepole pine can develop old growth characteristics. Fire suppression has changed the natural age distribution of forests at the landscape level. Stand-replacing fires used to create a mosaic of even-aged forests across the landscape. Today there are proportionately fewer young even-aged forests and more, older forests (Hessburg et al. 1999; Hillis et al. 2003; Losensky 2002). Excluding fire has resulted in a more homogenous landscape with an increased potential for larger stand-replacing fires.

The management direction includes an objective to conduct fire use activities to restore ecological processes and maintain or improve lynx habitat (Objective VEG O3). This objective would provide managers with a reason to allow fires to burn for a resource benefit - where it is not already precluded by other management direction.

PC #529: The agency should reevaluate the statement on page 159 regarding fires in dry, warm low-elevation forests. We disagree with the statement that "fire suppression" has resulted in making these forests unnaturally dense. We believe "total fire exclusion, including both suppression and exclusion of prescribed fire" since 1935 has been the culprit. If we had continued the practice of prescribed burning after 1935, on a scale of 1 - 2 million acres per year, we would likely not be in the fix we are today. (Ltr #179)

Response to PC 529: We corrected this statement in the FEIS, p. 215.

PC #345: The agency should focus on increasing habitat components found in early and late succession forest habitats. These include undergrowth that provides life requirements for snowshoe hares in early succession forest habitat, and lynx den sites in late-succession and old-growth forest. Providing these components would be beneficial in areas where that habitat exists below the historic range of variability. (Ltr #129, 377, 480)

PC #442: The agency should discuss the importance of old forests next to the small openings favored by hares. (Ltr #359)

Response to PC 345 and 442: Alternative F provides management direction regarding the quantity of habitat in young regenerating forests. Standards VEG S1 limits the amount in a young regenerating forest, so not all the habitat is changed to a young condition at one time. It also includes Objective VEG O4 and Guideline VEG G1 which essentially say to focus vegetation management where young regenerating forests are lacking. Standards VEG S5 and VEG S5 protect quality of winter snowshoe hare. Standard VEG S6 protects multistoried forests – especially in Alternatives C and F and encourages using timber harvest to maintain the multistoried component.

We discuss denning habitat (older forest with down woody debris), the importance of having denning habitat near to foraging habitat, and compare the impact of the various alternatives on this habitat (FEIS, p. 172-175).

PC #338: The agency should explain whether or not all multistoried forest types need disturbance to maintain their multistoried structure. Natural disease and insect processes can provide the

disturbance to create and maintain habitats for Swainson's thrushes and other species. Multistoried stands do not need prescribed fires to maintain their structure. (Ltr #356)

Response to PC 338: Whether or not a particular stand or type needs disturbance to maintain its multistoried structure is a site-specific, project level determination. We recognize natural disturbance process can maintain multistoried structure, but also recognize timber harvest can be designed to have a similar effect (FEIS, p. 150 and 154).

PC #344: The agency should recognize the effects from road obliteration, many of these road prisms support vegetation that supports snowshoe hares and is excellent foraging habitat. At 3.5 acres to the mile it may be a consideration. (Ltr #96)

Response to PC 344: A review of our road decommissioning activities in Region 1 show that an average of 180 miles of system road was decommissioned annually for the fiscal years 2002, 2003, and 2004 (compiled from individual forest management accomplishment reports). Approximately a sixth of these were re-contoured and a third of these roads are in lynx habitat. This means the surface of about 10 miles of road or 27 to 40 acres, depending on road width, in lynx habitat was altered annually, a very small portion of the lynx habitat in Region 1. The situation is similar in other Forest Service regions.

PC #331: The agency should not rely on Objective VEG O1 or Guideline VEG G1 to increase snowshoe hare habitat or increase individual habitat components. The agency should utilize a long-term conservation approach that relies on natural disturbance processes. (Ltr #20)

Response to PC 331: Natural disturbances could supply us with more young

regenerating forests than the agency could produce; however, we cannot manage when and where natural disturbance processes would occur. Objective VEG O1 and Guideline VEG G1 encourage the designing of projects to supply snowshoe hare habitat in situations where it is otherwise lacking.

PC #260: The agency should explain why VEG G1, which encourages management to increase habitat conditions for lynx, is subject to all other forest plan direction. All the other lynx direction trumps everything else in the plan. It appears this only applies to VEG G1, the agency should explain why. (Ltr #455)

Response to PC 260: Any project, regardless of what it is, is subject to all plan direction. A project implementing Guideline VEG G1 is not any different than any other project in this regard – they must all follow all plan direction. The lynx direction does not necessarily “trump” the existing plans’ goals, objectives, standards, and guidelines. The new direction is a refinement of existing direction to provide for the conservation of lynx. The lynx goal, objectives, standards, and guidelines would be inserted into existing plans. All the existing goals, objectives, standards, and guidelines that promote multiple uses on public lands would remain in the plans. The lynx direction would provide some additional sideboards during the implementation of site-specific projects. Where there is a conflict between the lynx direction and other plan direction the more restrictive would be followed, but we expect such conflicts to be minimal.

PC #254: The agency should explain how foraging habitat can be maintained in the long term, and still maintain a viable lynx population in the short term. The agency should state that 0.5 snowshoe hares per hectare are needed for lynx to have suitable habitat. (Ltr #363)

Response to PC 254: Foraging habitat amounts and distribution throughout the range of lynx are continually changing through natural succession as well as disturbance events such as fires. Lynx have evolved over time to adapt to these changing circumstances. The proposal provides management direction by LAU that would help to provide foraging habitat over time. The figure of 0.5 snowshoe hare per hectare is believed to be a lower minimum threshold of snowshoe hare densities within lynx habitat in northwestern Canada. Farther south this relationship may be different (Ruggiero et al. 2000, Chap. 16).

PC #492: Table 3-12 (DEIS page 125) shows 4,120,000 acres snowshoe hare forage habitat in Montana. Table 3-26 (DEIS page 161) shows 9,060,000 acres of lynx habitat in Montana. The discussion on page 104 suggests that snowshoe hare forage habitat and lynx habitat are similar, but this can't be true since the tables show over twice as much lynx habitat as hare forage habitat. The agency should explain the difference between hare forage habitat and lynx habitat. The agency should disclose how much hare forage habitat and lynx habitat is present on the 18 National Forests within the jurisdiction of this planning area in MT, WY, ID, and UT (since only the amounts of such habitats in Montana appear to be disclosed).

Response to PC 492: Lynx habitat consists of foraging habitat and denning habitat, as well as other general forest conditions. The discussion in the FEIS that starts on page 150 and continues through page 172 concerns only foraging habitat. Foraging habitat is defined as habitat that supports snowshoe hare or red squirrel (FEIS, p. 145). The FEIS discussion of denning habitat begins on page 172 and continues through page 175. The table on page 137 of the FEIS is referring to all lynx habitat, including

foraging **and** denning habitat. The types of habitat lynx use are described in the FEIS (pp. 141-142) and in the LCAS (Ruediger et al. pp. 1-2 to 1-10).

The figures displayed for snowshoe hare forage in Montana were estimated data from FIA. Lynx habitat is a complex mosaic of varying conditions, which occur across the landscape. It is not currently possible to include all of the factors that are known or believed to be important in providing lynx foraging habitat. These include: snow depth and condition; vegetative cover and habitat types; stem density of small diameter trees; horizontal cover; height of forage that protrudes above mid-winter snow depth; availability of denning sites; patch size; and dispersion of foraging stands across the landscape.

Therefore, acreage generated from this data is not a definitive determination of the amount of lynx foraging habitat in Montana and is very likely an overestimate. The decision to do this analysis for Montana was based upon the fact that approximately 48 percent of the mapped lynx habitat in the planning area is within Montana and the data was readily available. Data was not readily available for the other states to perform the same type of analysis.

PC #385: The agency should evaluate the effect elk grazing has on lynx habitat in riparian areas, shrubs and aspen. The agency should provide management direction for elk numbers. (Ltr #12)

Response to PC 385: The risks and potential effects of grazing on lynx have been discussed in the DEIS. The Forest Service does not manage or regulate elk numbers; however the guidelines would encourage cooperation with those who do. Guidelines have been developed to provide for habitat management objectives associated with riparian areas, shrubs and aspen. The management direction for grazing is

focused on habitat conditions regardless of which class of animal may be having an undesirable effect.

Effects from fuel treatments

PC #481: The DEIS states that highest priority areas for fuel treatments are within the WUI and Condition Classes 2 and 3 outside the WUI (page 160). In Montana 70 percent of fuel treatments would occur inside the WUI, and that the other 30 percent of fuel treatments would generally occur on lands in Condition Class 2 or 3, or maintenance in Condition Class 1 lands (page 160). Table 3-24 (page 158) shows that the great majority of lynx habitat is outside the WUI and outside Condition Class 2 and 3. Table 3-12 suggests that in Montana only about 4 percent of thinning (i.e., pre-commercial thinning, fuels treatment and whitebark pine restoration) would occur in snowshoe hare habitat. The agency should analyze if this low percentage of anticipated forest thinning in snowshoe hare habitat would be similar throughout the planning area in MT, WY, ID, and UT. (Ltr #296)

Response to PC 481: We have provided additional information in the FEIS regarding the projected fuel treatment program on ALL units within the WUI and outside the WUI (FEIS pp. 217-218).

We were only able to provide information regarding fuel treatment impacts to winter snowshoe hare habitat for Montana (FEIS, p. 219). Data was not available, in the form we needed it, for the other states. However, it is likely the effects would be similar in the other states because western Montana reflects conditions in northern Idaho; and eastern Montana reflects conditions in Wyoming and Utah. In addition, Montana provides some of the best habitat for lynx; therefore if we provide the habitat components in Montana then we are likely

providing the habitat components elsewhere.

PC #494: The agency should reevaluate the assumptions made regarding fuel treatments in lynx habitat. The DEIS, page 160, says that a MOU for development of collaborative fuel treatment projects prioritizes WUIs and condition class 2 and 3 outside the WUI for fuel treatments. It is then stated that a key assumption for evaluating fuel treatment effects is that treatments would occur evenly across the landscape regardless of Condition Class. This is inconsistent. Shouldn't the key assumption be that fuel treatments occur in the high priority areas (i.e., WUI and condition class 2 and 3 outside the WUI)? We note that the DEIS states that 70 percent of the fuel treatments in Montana would occur in the WUI and only 30 percent outside the WUI in Condition Classes 2 and 3, and maintenance in Condition Class 1 lands. This seems to contradict assumptions that fuel treatments would occur across the landscape regardless of Condition Class. (Ltr #296)

Response to PC 494: We provided additional information regarding fuel treatment projects in the FEIS (FEIS pp 217-218). This information is based on each unit's 5-year integrated strategy (Appendix M) and indicates how many acres would be treated within the WUI and how many outside. Therefore, the information about acres in and out of WUI is based on each unit's program-of-work. However, we still assumed lynx habitat would be treated in proportion to its presence. As you note, we likely over-estimate the amount of lynx habitat that would be treated because lynx habitat is generally in Condition Class 1 – and that is not the priority area except in some situations. We decided over-estimating was better for evaluating the effects on lynx.

PC #238: The agency should explain how winter habitat is defined and how the agency determined that fuel treatments would affect 4 percent of winter hare habitat. Also disclose how much will future fuels treatments affect over the life of the forest plan (15 years). The agency should disclose whether or not there are maps of winter snowshoe hare habitat. (Ltr #356)

Response to PC 238: For the analysis in the FEIS we used FIA data to evaluate how much winter snowshoe hare habitat could be affected in Montana. Winter snowshoe habitat in young regenerating forests was defined as those plots that had 5,000 trees or more per acre that are less than 5 inches in diameter, and with less than 60 square feet of basal area (no overstory); and 2,500 to 5,000 trees per acre that are less than 5 inches in diameter, and with less than 60 square feet of basal area (no overstory). Winter snowshoe hare habitat in multistoried forests was defined as those plots with 2,500 trees or more per acre that are less than 5 inches in diameter, and with 60 square feet or more of basal area (has an overstory), and with crowns that are at least 50 percent of the tree (meaning the branches may reach the snow level). We also measured for plots between 1,000 and 2,500 trees per acre.

Based on the amount in each component we then assumed winter snowshoe hare habitat would be treated in proportion to its presence (see FEIS, Appendix M). The percentages reflect the amount that is assumed to be treated divided by the amount (acres) available (FEIS, Figure 3.5b)

PC #352: The agency should base their effects analysis on 15 years, instead of one. Alternative E shows that 5 percent of winter snowshoe hare habitat may be reduced based on the projected annual fuels program. A forest plan is in effect

for 15 years or longer. This projection should not be based on one year's fuels treatment program. (Ltr #356)

Response to PC 352: Effects on snowshoe hare forage habitat are listed in the FEIS (Figure 3.5a and 3.5b, p. 188). These figures display acres of winter snowshoe hare habitat affected for **a decade** with full funding. Funding levels become less reliable with longer time intervals. One could infer the effects for 15 years but the funding is less reliable.

PC #325: The agency should define fuel treatments in more detail. Do fuel treatments include clearcuts, seed cuts, salvage projects, or commercial timber cuts? (Ltr #378)

Response to PC 325: A fuel treatment is a type of vegetation management action that reduces the threat of ignition, fire intensity, or rate of spread; or is used to restore fire-adapted ecosystems. If done for the above purposes they can include clearcuts, seed cuts, salvage projects, and commercial timber cuts. For example, some areas may be removed of most vegetation to create a fuel break. These areas may resemble a clearcut or seed cut; therefore fuel treatments are not limited to a specific type of activity.

PC #253: The agency should explain how collaborative thinning projects, as allowed in Alternative E, are more environmentally benign than traditional thinning projects. There is no scientific reason to exclude collaborative fuel treatments. (Ltr #351)

PC #258: The agency should provide adequate lynx protections. Fuel treatments are not defined; therefore there is no assurance that the exemptions will not harm lynx. In fact, the agency acknowledges that they may. Allowing harm to lynx will not result in establishing "adequate regulatory mechanisms", which

is why the lynx was listed in the first place. (Ltr #334, 365)

Response to PC 253 and 258: In 2001, in response to a request by the President, the FS developed a collaborative approach for reducing wildland fire risks to communities (USDA FS 2001a). In 2003 the FS, BLM, FWS, and NPS signed a memorandum of understanding (MOU) (USDI, USDA 2003) that reflects the national emphasis on collaborative fuel treatments. Fuel treatments are described generally in the FEIS Glossary (Appendix N), which states, "A fuel treatment is a management action that reduces the threat of ignition and fire intensity or rate of spread, or is used to restore fire-adapted ecosystems." We do not say fuel treatments are more environmentally benign than traditional thinning projects.

In Alternative E, Standards VEG S1 and VEG S3 (FEIS, Table 2-1) do not apply to fuel treatment projects identified through a collaborative processes such as described in the MOU. Alternative A has no lynx direction so it does not have these standards. Alternatives B, C, D, and F do not have the language excluding these standards for collaborative fuel treatments. The exclusion in Alternative E is based on the need to treat fuels in high priority areas such as the in the WUI and forests outside the WUI that are in condition classes 2 and 3, as stated in the MOU.

Due, in part, to the concern about the impact the exclusion in Alternative E would have on lynx and lynx habitat we developed Alternative F. In Alternative F, we revised Standards VEG S1, S2, S5, and S6 to incorporate the HFRA and its definition of the WUI. The vegetation standards would not apply to fuel treatments projects within the WUI—within a limit. Only 6 percent of lynx habitat on a unit may have projects that exceed these standards. In addition, we added Guideline

VEG G11 which says for fuel treatment projects within the WUI we should consider the above standards in the design of fuel treatment projects – not just ignore them.

Fuels treatment projects under Alternative F may adversely affect individual lynx on 6 percent of lynx habitat within a unit; however 94 percent of lynx habitat is still bound by standards, therefore, we determined populations would be protected.

Denning - effects

PC #361: The agency should recognize the adverse effects that management actions can have on denning habitat. Any vegetation management activities, such as salvage harvesting and fire controls, may directly affect the quality and quantity of available lynx denning habitat when these activities remove existing debris. The use of such management practices alone could have a significant affect the survival of the lynx by directly affecting the birthing and rearing of their young. (Ltr #511)

Response to PC 361: The FEIS considers the effects of management direction on denning habitat (FEIS p 172-175). The writer of the LCAS developed management recommendations based on their understanding of risks to denning habitat, including salvage harvesting. These recommendations are included in Alternative B, Standards VEG S3 and VEG S4, and Guidelines VEG G2 and VEG G3.

Recent research – since 2003 – in northwest Montana has shown that lynx use a variety of conditions for den sites. These include large trees, windthrown tree piles, slash piles, and even talus. The amount of down woody debris present, not the age of the forest is the primary criterion.

The team reevaluated whether or not denning habitat is a limiting factor for lynx. Based on discussions with researchers, the

team reaffirmed that denning habitat is found in a variety of forest conditions and these habitat elements are generally found across the forest landscape, and lynx denning sites are not believed to be a limiting factor (J. Squires, pers. com. Oct. 30, 2006). In addition, management actions can create denning habitat by strategically leaving piles of woody debris, or leaving residual trees where denning habitat is lacking.

Based on the above, the ID team determined management direction should be incorporated into one guideline, focusing on the important components of denning habitat. The guidance is to: 1) have denning habitat distributed across an LAU (in the form of pockets of large woody debris, either down logs or root wads, or large piles of jack-strawed trees); and 2) if denning habitat is lacking, projects should be designed to retain coarse woody debris – by leaving piles or retaining residual trees that can become denning habitat later. This management direction is included in Alternative F as Guideline VEG G11.

PC #257: The VEG S3 standard in Alternative E allows loggers to comply with the management direction by leaving their logging slash and debris. The agency should recognize that logging slash is not lynx denning habitat. (Ltr #309)

PC #359: The agency should explain how logging can improve denning habitat and disclose what research this is based on. Since denning habitat requires lots of coarse woody debris, and logging will reduce this habitat feature, it seems contradictory to infer that logging can improve denning habitat. (Ltr #1, 3, 67, 105)

Response to PC 257 and 359: As the FEIS (p. 173) explains, “The important component for all lynx den sites appears to be the amount of down woody debris

present, not the age of the forest" (Mowat et al. 2000; USDI FWS, 2003, Appendix P). The structural component of lynx den sites are common features in managed (logged) and unmanaged (e.g. insect damaged, wind-throw) forests (USDI FWS, 2005a). Depending on what is left behind, timber harvest could increase the down woody component.

PC #240: The agency should recognize that locating denning habitat near forage habitat is not a biological necessity (Guideline VEG G1). Lynx have substantial home ranges. The statements are generated to exclude as much lynx Critical Habitat from the viable lynx distribution in America over the past 50 years and today to re-energize your stump-farming, roading, oil-gas, and motorized destruction of our critically declining lynx ranges and populations. (Ltr #226)

Response to PC 240: As discussed in the LCAS (Ruediger et al 2000, p. 1-5) and FEIS (p. 172), for denning habitat to be functional, it must be in or adjacent to foraging habitat. This is because once the kittens are born the hunting range of the female is restricted, but she needs an abundance of prey to feed the kittens.

Critical habitat was designated by FWS, independent of this process, not by the Forest Service.

PC #339: The agency should disclose how old growth standards have been met. Unfortunately, the agency has failed to meet LRMP old-growth standards, does not keep accurate old-growth inventories, and has not monitored population trends in response to management activities as required by LRMPs and NFMA. (Ltr #354)

Response to PC 339: Whether or not a particular unit has met their old growth standards is not at issue here. The Biological Assessment (BA) completed on

existing plans (Hickenbottom et al. 1999) found many plans contained old growth direction or direction to retain dead and down woody material; therefore the 1999 BA found that denning habitat needs were generally met on those units. However, some units did not include this type of direction; therefore additional recommendations were provided to ensure denning habitat was maintained (Ruediger et al. 2000). Alternative B incorporates management direction for denning habitat (Standards VEG S3 and VEG S4, and Guidelines VEG G2 and VEG G3) regardless of existing management direction for old growth or down woody material; therefore it is not necessary to know whether or not old growth standards have been met.

In addition, new information indicates denning habitat can be found in a variety of forest structures – not just old forests. It is the amount of down woody debris present that matters. For further information see the discussion in the FEIS, Chapter 2, *Management direction considered*, pp 79-83.

PC #532: The agency should recognize that the Snowy Mountain Wilderness Study Area (SMWSA) provides excellent denning habitat in many areas. Wind-thrown, tornado-uprooted lodgepole environs at the west and southwest end of SMWSA, as well as other areas. Lynx den in thick, much downed logs, mature subalpine forest (lodgepole, fir, etc.). 50 percent closed canopy with high sapling density. This thick escape cover is selected by the female to benefit the kittens as described in the literature. The mature and high density forest canopies throughout most of the SMWSA, provides the essential denning habitats." (Ltr #226)

Response to PC 532: We recognize the Big Snowy Mountains do have habitat that could be used by lynx (FEIS, Map, Figure 1-1). However, at this time the Snowy Mountains are unoccupied, and considered

peripheral habitat by FWS (USDI FWS 2005).

Effects from over-the-snow recreation

PC #453: The agency should recognize the advancement of snowmobile use and range. In the past half-dozen years snowmobiles have become more capable of going places they simply couldn't go 10 years ago. (Ltr #15)

PC #455: The agency should provide an accurate picture of snowmobiling. The DEIS says, "new machines let people access previously inaccessible backcountry". Most of the long time residences of the Priest Lake area who, have ridden snowmobiles since the "old days", are still going to the same areas they were back in the 70s and 80s. What has changed is that we are able to go to these places earlier in the winter season. In the past when ascending a slope we were forced to take an easy route. Now we are able to climb the steeper portion of the slope, we still end up at the same destination. This statement can be misleading to many who will come away with the impression that snowmobiles are in never ridden locations. (Ltr #100, 202)

Response to PC 453 and 455: For the FEIS we have reviewed the discussion of snowmobiles (pp. 281-283), and believe it accurately reflects the situation, which includes the statement that newer machines DO "let people access previously inaccessible backcountry" areas.

PC #363: The agency should clarify whether "packed snowtrails" as used in the FWS Remand Notice is the same as "snow compaction". If the FWS statement holds merit and the two terms are considered the same, why is snow compaction such a major issue in this DEIS? The main concern is that snowmobiling is being carefully singled out as a significant threat to the lynx habitat. (Ltr #348)

Response to PC 363: Areas of consistent snow compaction include linear routes and adjacent openings, parks, and meadows of compacted snow (FEIS, Glossary, p. 365). Packed snowtrails, therefore, is one of the parts of snow compaction. Snowmobiling is not being singled out as the only threat. All types of wintertime backcountry recreation that lead to snow compaction are considered a risk factor to lynx (Ruediger et al. 2000, pp. 2-6 to 2-12). However, in light of the discussion in the Remand Notice (Appendix P, p. 40098) Standard HU S1 under Alternatives B, C, and D has been changed to Guideline HU G11 in Alternatives E and F. Also Standard HU S2 under Alternative B has been changed to Guideline G 10 in Alternatives C, D, E, and F (FEIS, Table 2-1, pp. 60). These changes allow for adaptive management based on the site-specific situation. See further discussion in the FEIS, Chapter 2, *Management direction considered*, pages 90-93)

PC #323: The agency should discuss what effect rain on snow events and varying snow conditions have on creating packed snow. (Ltr #202, 517, 523)

Response to PC 323: The FEIS (p. 175) considers that snow conditions can vary, and that periods of warm weather can harden snow.

PC #66: The EIS should address human caused impacts to lynx. (Ltr #319)

Response to PC 66: Virtually all the risk factors to lynx identified in the LCAS are human-caused (Ruediger et al. 2000 pp. 2-1 to 3-3). These risk factors have been recognized and addressed in the FEIS (pp. 141-201).

PC #229: The agency needs to be clearer to the general public and local decision-makers, that the alternatives do not apply to off trail or off route riding. (Ltr #100)

Response to PC 229: Standard HU S1 and Guideline HU G11 apply to designated routes and play areas. Standard HU S2 and Guidelines HU G1, G2, and G10 apply to developed ski areas. Guideline HU G3 applies to recreational developments. Standard HU S3 and Guidelines HU G4, G5, and G12 apply to mineral activities. Guidelines HU G6, G7, G8, and G9 apply to roads. None of the Standards or Guidelines apply to off-trail or off-route riding.

PC #372: The agency should enforce the illegal use of motorized equipment in the Snowy Mountain Wilderness Study Area (SMWSA). Motorized equipment and uses specifically violate the ESA-listed lynx population and the lynx habitat in the SMWSA. Lynx are very sensitive to human disturbance, specifically motorized equipment such as snowmobiles, which has been illegally trespassing on the SMWSA for decades. (Ltr #226)

Response to PC 372: To date, most investigations of lynx have not shown human presence to be an influence on how lynx use the landscape (Ruediger et al. 2000, p. 2-8). Den sites may be an exception to that.

According to the Lewis and Clark National Forest Travel Plan for the Big Snowy Mountains, motorized recreation is not illegal. The use of motorized equipment in lynx habitat is not a violation of ESA. The Biological Assessment for the Travel Plan found that the travel management plan set for the Big Snowy Mountains “may affect, but is not likely to adversely affect Canada lynx” (USDA FS, Lewis & Clark NF 2001). FWS concurred with this determination (USDI FWS 2002).

PC #371: The agency should determine the populations of competing predator species in the area before establishing standards, such as HU S1. The agency should determine if predator competition

is even an issue in area before implementing restrictions. (Ltr #303)

PC #451: The agency should address "unmanaged" use of snowmobiles. (Ltr #403)

PC #536: The agency should reevaluate the effects of allowing additional miles of groomed routes within "areas of existing snow compaction". Increased grooming will increase the speed, efficiency, and volume of snowmobile traffic on these routes, each of which is certain to result in increased areas of snow compaction from the many users who will disperse from the groomed routes. Furthermore, there is something contradictory when the Forest Service refuses to manage dispersed snowmobile use to protect lynx, yet at the same time justifies expanding designated routes to include areas of consistent dispersed use because the ecological effects on lynx are the same. Finally, a policy limited to designated snowmobile "play areas" only is clearly deficient, since there are only four designated snowmobile play areas in the entire region (Table 3-43, DEIS, p.207). (Ltr #334)

Response to PC 371, 451, and 536: The LCAS identified the snow compaction from snowmobiles and other winter activities as a potential risk factor to lynx due to possible competition with other predators (Ruediger et al. 2000, pp. 2-6 to 2-12). Since no evidence has been provided to FWS that packed snow trails facilitate competition, they do not consider snow trails a threat to lynx (Appendix P, pp. 40097 and 40098). New recent studies reaffirm the following findings: there is no conclusive evidence that demonstrates that coyote competition is currently negatively affecting lynx populations. (Kolbe et al. 2005; and Bunnell et al. 2006). The competition theory has neither been proven nor disproven.

While some research has been done concerning the predator competition theory (see discussion in the FEIS, Chapter 2, *Management direction considered*, pp. 90-93) data on wildlife populations are not readily available, and expending large amounts of time and resources to determine population levels of coyotes and other potential predators would do nothing to help prove or disprove the theory about competition. Nor would it help in management of winter recreation or lynx.

Based on this information, the ID team reevaluated management direction related to over-the-snow activities. An alternative to prohibit all snow-compacting activities or to limit dispersed use was evaluated, but not considered in detail because current research indicates this level of management direction is unwarranted (USDI FWS 2000a; Appendices O and P).

An alternative to drop all direction limiting snow compaction was not developed in detail because there is evidence competing predators use packed trails, suggesting a potential effect on individual lynx. The ID team decided it was prudent to maintain the status quo and not let over-the-snow routes expand. However, the ID team also decided it was reasonable to retain the direction as a guideline in Alternative F. The intent is to follow the management direction in guidelines. However, there may be some cases where expansion of over-the-snow routes would be warranted and acceptable, or where research indicates there would be no harm to lynx. Guidelines are better suited to adaptive management.

Impacts from dispersed snowmobiling management are analyzed in the FEIS (pp. 175-179). Snowmobiling is covered under our guidelines for groomed trails, designated routes, and areas of consistent snow compaction (see Standards and Guidelines under HU, FEIS, Table 2-1, pp. 58-60).

Over-the-snow recreation - definitions

PC #367: The agency should clarify the difference between designated routes and play areas, areas of consistent snow compaction identified in the baseline years of 1998-2000 and areas of general dispersed use. It appears that these definitions could cause confusion during implementation and affect more areas than intended. (Ltr #73, 498)

PC #446: The agency should review the definition of "designated over-the-snow routes". Under Definition of Designated over-the-snow route this should be clarified to reference "including travel maps". As originally written it can be interpreted that routes recognized as open to snowmobiles by the Agency but not incorporated or printed on the Agency map are not to be counted nor recognized as legitimate and designated routes for purposes of establishing baseline measurements for no net increase. Although neither encouraged nor discouraged, they are legitimate recognized uses. These routes are not officially marked on the ground and are not necessarily identified in official brochures or other media. They are not groomed. Most of these routes and areas are routinely used for dispersed recreation and need to be counted as existing uses when determining no net increases. (Ltr #18)

PC #447: The agency should revisit the definitions related to winter recreation because they can be confusing to the general public, as well as the forest service personnel on the ground charged with making decisions that impact over-the-snow recreation. The terms used should be clearer to the casual observer, and should fit the over-the-snow recreationalists' vocabulary. Clear definitions that comply with everyday usage are necessary for clear discussions and understandings. Specifically: Over-

the-snow route" should be defined as a road, trail, or linear course. Also, over-the-snow area should be defined as everything other than a road, trail, or linear course. The term "play area" is being used to mean a designated area. Snowmobiles do not use play area in that meaning. A snowmobiler uses "play area" to mean any open area that receives use. There are no "designated play areas" or "play areas" on any national forest in our area. Confusion occurs when snowmobilers are told the management direction applies to "play areas", when in fact it does not. This confusion should be avoided, which will foster understanding and public acceptance of the proposal. Definitions for "designated" and "not designated" should then be set forth as the next level of specificity. Then definitions for "groomed" and "ungroomed" should be the next level of specificity. A definition for "areas of consistent snow compaction" should be added. (Ltr #100)

Response to PC 367, 446, and 447: We have reviewed our definitions. For non-technical terms, it appears different groups have differing meanings for some terms. To maintain consistency between the DEIS and the FEIS, we decided to keep the recreation definitions the same in both documents. We define areas of consistent snow compaction, designated over-the-snow routes, designated play areas, designated route, developed recreation, and dispersed recreation in the FEIS, Glossary, pp. xxxx273 to 275. There are four "designated" play areas in the planning area. These are areas where use is encouraged on winter recreation maps (FEIS, pp. 281-282).

Travel maps are not used as a reference in the definition of designated over-the-snow routes (FEIS, p. 284) because the maps may or may not include information on winter recreation. The other documents used in the definition are documents that encourage

winter recreation and they indicate where winter recreation sites can be found.

Over-the-snow recreation - mapping

PC #36: The agency should provide maps of areas of consistent snow compaction. The agency should explain the methodology used to map and monitor this use. The agency should provide a public process for identifying an accurate baseline. (Ltr #100, 334, 365, 398, 456)

PC #270: The agency should explain the process for establishing a baseline for 1998, 1999, and 2000 for HU G11 (or HU S1 in Alt C and D). This would be very subjective because there is no definitive information about the extent of use in either distribution or amount. Also the agency should describe how the units will reconcile the difference in direction between the LCAS and the proposal. (Ltr #498)

PC #277: The agency should explain why Alternatives C, D, and E would allow an increase in designated snowmobile routes and play areas within baseline areas of snow compaction. The agency should explain how these "baseline areas" will be mapped and monitored. The agency should include a map of these areas for the public to evaluate the effects of this expanded snowmobile use. (Ltr #334, 365)

PC #424: The agency should conduct field inventories and data collections as to human encroachments, uses, and abuses with motorized equipment in lynx habitats specifically "on snow", winter actions. The agency should have scientific data on where and when motorized equipment has been used in historical lynx habitat from 1950 to the present. NEPA and ESA mandate accurate, historic and current scientifically collected field data before initiating any NEPA process. (Ltr #226)

PC #452: The agency should reevaluate what would be considered for the baseline

snow compaction data. Baseline data needs to reflect accurately the conditions. There is and has been for years, considerable usage which is neither promoted nor encouraged but is a reality to present uses. To exclude this data would build an automatic bias against existing, historical uses. (Ltr #18)

Response to PC 36, 270, 277, 424, and 452:
At best, any information dating back to 1950 would be very limited and certainly not “scientific”. We used the years 1998 to 2000 as the baseline because these are the years immediately prior to the LCAS and associated conservation agreement. We believe this three year period would reflect the most recent information regarding areas that are heavily used – on a consistent basis.

To this point in time research has not provided any conclusive evidence that snow compacting activities are having adverse effects on lynx. Although expansion of special use winter snow compacting activities could occur under Alternative F, the preferred alternative, expansion is only likely to occur in areas of existing snow compaction identified in the baseline period (1998 to 2000). This would minimize the potential for carnivore competition with lynx over compacted snow routes (FEIS p. 178).

Direction for mapping the baseline areas can be found in the monitoring portion of Table 2-1 (FEIS, Table 2-1, p. 62), which states, “Map the location and intensity of snow compacting activities and designated and groomed routes that occurred inside LAUs during the period of 1998 to 2000. The mapping is to be completed within one year of the decision, and changes in activities and routes are to be monitored every five years after the decision”. The direction would be inserted into the various plans’ monitoring section. The monitoring is to be carried out by each National Forest. We are confident the data collected for the

baseline would accurately reflect the conditions on the ground. As in other forest plan monitoring, the baseline monitoring is to be documented in the various plan monitoring reports.

Mineral and energy development - effects

PC #293: The agency should recognize that the tiered NEPA process currently in place for oil and gas leasing is more than adequate to address potential effects to lynx or its habitat. Should exploration or development activity occur in areas where lynx habitat exists, mitigation measures would be determined by the agency using the appropriate level of NEPA analysis, consistent with the project type, scope, and impacts. (Ltr #736)

Response to PC 293: The NEPA process does adequately address potential effects from projects. In the case of lynx, human developments, including the developments associated with gas and oil leasing were identified as a risk factor (Ruediger et al. 2000, p. 2-14). The FWS found that there was a lack of guidance for the conservation of lynx in our plans (Appendix O). The purpose of our plan direction is to create an awareness of risks at the beginning of the permitting process. In order to do this we developed Objective HU O5, and Guidelines HU G4, G5, and G12 to address concerns about gas and oil leasing. These would help guide the various interdisciplinary teams that do the site-specific project analysis.

PC #383: The agency should evaluate the effects of seismic blasting for oil and gas exploration. How does this affect lynx? (Ltr #356)

Response to PC 383: The FEIS evaluated the effects of these activities (pp. 176-179). The potential for these activities to occur within lynx habitat from these types of activities are very low. Seismic exploration

could displace lynx if they were present in the area during the activity. If a project of this type occurs in lynx habitat site-specific analysis would be conducted to evaluate the effects on lynx and mitigation would be developed as necessary.

PC #381: The agency should evaluate the effects that paved and unpaved roads have on lynx. (Ltr #363)

Response to PC 381: Roads were considered a risk factor for lynx (Ruediger et al. 2000, pp. 2-12 to 2-13). In response to these concerns, the lynx team developed an objective, one standard, and four guidelines: Objective HU O6, Standard LINK S1, and Guidelines HU G6, G7, G8, and G9. Each of the action alternatives includes this direction. The analyses of roads and highways, and the guidance for managing them can be found in the FEIS (pp. 176-185).

Other activities - effects

PC #430: The agency should reevaluate the amount of road construction and maintenance that would be taking place in lynx habitat. The amounts should cover 15 years or longer, not just projects planned right now. The effects analysis on sensitive amphibians from roads should be redone. (Ltr #356)

Response to PC 430: Data for road construction and maintenance projects 15 years into the future is not available. Projections of activities five years into the future were available and more reasonably certain to occur. This is in compliance with the NEPA regulations (40 CFR 1508.7) to analyze *reasonably* foreseeable future actions.

The intent of the analysis in the FEIS is to assess the impact of the proposed management direction in each of the alternatives on other resources. Therefore, the analysis on the various amphibian

species focuses on the impact to those species from the implementation of the standards and guidelines. The management direction does not prescribe building roads. So the impacts of roads on amphibians are beyond the scope of the lynx analysis. We believe the level of analysis is commensurate with the low to non-existent anticipated effects of the management direction on amphibian species.

PC #276: The agency should explain how it is possible to manage for lynx while allowing snowmobile, ski resorts, oil and gas development, recreation sites, utility corridors, special uses, highways etc. in lynx habitat. (Ltr #226)

Response to PC 276: Lynx currently exist where many of these activities occur. These activities are not necessarily precluded just because they may take place within lynx habitat. Effects to lynx related to any of the above listed activities depend on the location, timing, and duration of the activity. Standards and guidelines provide management direction to address these factors and eliminate or minimize detrimental effects to lynx and lynx habitat. Project specific mitigation measures may also eliminate or minimize effects to lynx.

PC #382: The agency should evaluate the effects of ski areas on habitat fragmentation and the effects ski areas have on snowshoe hare populations. (Ltr #379)

Response to PC 382: Ski areas in the Northern Rockies are generally dispersed (FEIS Figure 3-7). Less than 0.2 percent of lynx habitat is affected by ski areas; therefore ski areas have limited effect on habitat fragmentation.

PC #370: The agency should disclose what affect other predators, such as owls have on lynx. The owl family would probably compete with the lynx during different

times of the year. The owl family would probably compete with the lynx during winter and impact of this predation was not analyzed. (Ltr #12)

Response to PC 370: One study near completion in the planning area (the Seeley Lake area) was designed to look at possible competition with coyotes during the winter. Preliminary indications are that competition is minimal. Great-horned owl is probably the only owl that is capable of successfully preying on the main prey of lynx during the winter, snowshoe hare. Great-horned owl occurrence and abundance within lynx habitat is unknown but believed to be low enough to make significant competition between these species unlikely. None of the alternatives would change the dynamics between any species of owls and lynx.

PC #495: The agency should evaluate whether or not wolves should be included in the discussion of predators. (Ltr #296)

Response to PC 495: The FEIS considers gray wolf as a potential predator of lynx (p. 180). The LCAS (Ruediger et al. 2000, p. 1-33) states that predation on adult lynx, from any species other than humans, has been rarely documented, and the magnitude or importance of predation on lynx is unknown. None of the alternatives would change the dynamics between gray wolf and lynx. Until the best available science indicates that gray wolf is a risk to lynx we have no rationale on which to establish guidance for the management of wolves.

Linkage areas - effects

PC #376: The agency should provide migration corridors for lynx. (Ltr #49, 59, 451)

Response to PC 376: Objectives ALL O1 and LINK O1, Standard LINK S1, and Guidelines LINK G1 and G2 specifically address habitat connectivity for lynx movement (FEIS, Table 2-1). The FEIS

analyzes the impact this direction would have on lynx and lynx habitat (FEIS, pp. 181-183). Linkage areas have been identified through a separate process (see FEIS, Appendix B) and are displayed in the map supplied with the FEIS (Figure 1-1).

PC #378: The agency should define connectivity and travel corridors. What are the criteria for these, as per canopy cover, width, and density on the landscape? (Ltr #1, 3, 67)

Response to PC 378: This analysis did not define linkage areas. Linkage areas were defined by the Lynx and Wolverine Steering Committee (see FEIS, Appendix B) as those areas that “provide connectivity between blocks of lynx habitat. Linkage areas occur both within and between geographic areas, where basins, valleys or agricultural lands separate blocks of lynx habitat, or where lynx habitat naturally narrows between blocks”.

The criteria that were considered in recommending lynx linkage areas were: 1) location of high density human developments; 2) linkages between blocks of lynx habitat including shrub/steppe habitat which link forest blocks of lynx habitat; 3) willow riparian habitat across valley bottoms; 4) high percentage of public land within the area; and 5) known information concerning animal crossing locations.

PC #377: The agency should manage the road networks throughout lynx habitat and lynx migration corridors to reduce lynx mortalities. Almost half of known lynx mortalities are human-caused, and roads play a significant role in this trend. Any successful recovery plan must address this. (Ltr #319)

Response to PC 377: According to the LCAS, “There are few records of lynx being killed on highways, but direct mortality

from vehicular collisions may be detrimental to small lynx populations in the lower 48 states” (Ruediger et al. 2000, p. 2-16), and “There is little information available on the effects of [forest] roads and trails on lynx or its prey (p. 2-12). The LCAS does consider highways, forest roads, and trails, as risk factors to lynx (pp. 2-13 and 4-12). We therefore developed objectives, standards, and guidelines to manage highways, roads, trails, and linkage areas. Keep in mind, however, the Forest Service has little to no authority to affect mortality on highways and major roads.

Objectives ALL O1 and LINK O1, Standard LINK S1, and Guidelines LINK G1 and G2 specifically address habitat connectivity for lynx movement (FEIS, Table 2-1). Objective HU O6, and Guidelines HU G6, G7, G8, G9, and G10 are concerned with management of the roads in lynx habitat. The FEIS analyzes the impact this direction would have on lynx and lynx habitat (FEIS, pp. 181-185).

PC #384: The agency should evaluate the effects of utility corridor, pipelines, power lines and wind towers on lynx movement and changes to lynx habitat, hare habitat and red squirrel habitat. Although wind towers may not affect lynx, this should be analyzed in more detail and restrictions placed on the height, number and location where these can be placed and how they operate. (Ltr #356)

Response to PC 384: The LCAS identified utility corridors (e.g. pipelines and power lines) as a potential risk factor (Ruediger et al. 2000, pp. 2-17 to 2-18). It did not identify wind towers as a risk factor, and we have not found any other information to indicate wind towers pose a risk to lynx. In addition most wind towers would likely be located in open areas, devoid of lynx habitat. Until the best available science indicates that wind towers are a risk to lynx we have no rationale on which to establish guidance for

the management of wind towers.

Objective HU O5 states, “Manage human activities – such as exploring and developing minerals and oil and gas, placing utility corridors, and permitting special uses – to reduce impacts on lynx and lynx habitat.” The intent of this proposal is to analyze the impact of the direction on lynx, not analyze site-specific projects.

These activities have a very low likelihood of occurrence within lynx habitat. However, if a utility corridor or wind tower project occurs in lynx habitat, site-specific analysis would be conducted to examine the impact on lynx and their habitat and develop mitigation, if necessary, to eliminate or reduce to the effects on lynx. Based on our consultation with FWS utility corridors, pipelines, power lines, and wind towers are not an issue with lynx, their habitat, or prey.

PC #375: The agency should not establish specific linkage zones because studies show that animals move where they want to rather than along the routes we map out for them. Instead, the agency should manage areas outside core lynx habitat to provide general habitat diversity and age classes. (Ltr #12, 73)

Response to PC 375: We understand lynx move as they wish rather than to follow routes we “map out for them”. The linkage areas are established where our understanding of lynx indicates they are likely to travel. By mapping linkage areas we establish plan direction for those pieces of public land between blocks of lynx habitat. This direction aids in the management of federal land, facilitates the movement of lynx by not adding obstacles, and facilitates the cooperation with adjacent land owners. The Forest Service does manage public lands for a diversity of habitat types and age classes. This proposal does not change that.

Lynx – cumulative effects

PC #486: The agency should consult with the FWS and lynx research scientists regarding effects of individual projects, including cumulative effects. (Ltr #296)

Response to PC 486: The FEIS analysis is not intended to substitute for analysis on individual projects and the consultation with FWS on those projects. All projects in lynx habitat that have a determination of “may affect” lynx would need to go through consultation with the FWS. That consultation would look at the direct, indirect, and cumulative effects to lynx, among other things. Biologist working on individual projects can and do consult with research scientists regarding the effects of their projects.

The FEIS lynx analysis section does evaluate the effects of major activities and their associated program of work, including the cumulative effects of these activities.

PC #396: The agency should fully evaluate the potential cumulative effects of all activities combined on lynx. (Ltr #378)

PC #397: The agency should fully evaluate the cumulative effects of changing standards to guidelines on lynx populations and subpopulations. The DEIS lacks analysis of many potentially low level negative activities occurring in combination in many locations across the landscape of the planning area. (Ltr #378, 514)

PC #485: Many of the standards that were changed to guidelines under the preferred alternative appear to be based on the FWS July 3, 2003 Remand Notice that found that evidence was lacking to demonstrate that grazing, mining, forest roads, and over-the-snow activities posed a threat to the lynx population as a whole (DEIS, page 21). The agency should fully consider and evaluate potential cumulative effects on lynx populations and sub-populations

when many of these potentially low level negative activities occur in combination in many locations across the landscape of the planning area. (Ltr #296)

Response to PC 396, 397, and 485: We fully considered and evaluated the potential effects, including the cumulative effects, to lynx from the proposed direction in each of the action alternatives, and the lack of proposed direction in Alternative A. The analysis is found in the Lynx Section of the FEIS and in the Biological Assessment submitted to FWS.

PC #487: The agency should provide additional disclosure of cumulative effects analysis of proposed management direction. The cumulative effects analysis should evaluate and consider all lynx risk factors and all potential sources of lynx mortality. The agency should describe, if available, the estimated total lynx population in each of the geographic areas. If this data is unavailable then the agency should describe how the effect of loss of individual lynx on overall lynx populations would be assessed. (Ltr #296)

Response to PC 396, 397, 485, and 487: The cumulative effects of the various alternatives considered the lynx risk factors that were discussed in the LCAS (see Chapter 2 of Ruediger et al. 2000), the Listing Notice for Canada lynx, and in the FWS’s Remand Notice (FEIS Appendices O and P).

The FEIS and the associated Biological Assessment evaluates the cumulative effects of the major contributing risk factors, such as precommercial thinning and fuel treatment projects, on lynx. The analysis is based on the foreseeable programs for those actions that may affect lynx.

Data is unavailable at this time to estimate the total lynx population within each geographic area. In addition, lynx populations are expected to fluctuate over

time to some degree in response to changing vegetative conditions and the ability of these areas to provide sufficient habitat for snowshoe hare. Determinations of the effects of specific projects are made on the potential to affect individual lynx. When adverse effects have been determined to likely occur the FWS determines through a Biological Opinion (BO) whether those effects are likely to jeopardize the continued existence of the species. The BA for the planning area concluded there would be adverse effects to lynx. The FWS evaluated this BA and has determined that these effects, within the limits of effects defined in the preferred alternative, are not likely to jeopardize continued existence of lynx within the area defined in the planning area. This information is reflected in the Incidental Take Statement (ITS) issued by the FWS.

PC #459: The agency should consider the effects of lynx that are occurring on private lands. The agency should modify the actions taken on public lands to compensate for the private land's negative effect. Legally, the management direction cannot require management of private lands, but they may be responsible for considering the effects of private liquidation of lynx habitat and be forced to manage federal lands at a higher standard. (Ltr #309)

PC #489: The agency may need to contribute more to lynx conservation to compensate for the loss of lynx habitat on other land ownerships. (Ltr #296)

Response to PC 459 and 489: The standards and guidelines only apply to actions on NFS lands. However, Standard VEG S1 requires analyzing the contribution of private lands on young regenerating forests. For example, if private lands are within a Lynx Analysis Unit (LAU), and the analysis indicates there more than 30 percent of the LAU is in a stand initiation

structural stage – including private land – then we would not do any more regeneration harvest at this time. This ensures an “even-flow” of young regenerating forests – even when considering private lands.

PC #394: The agency should evaluate the cumulative impact of revisions of other forest plans within the Northern Rockies Geographic Area. The Wasatch-Cache and the Uintah, have already adopted plan recommendations into their forest plans, but these plans are inadequate. By dropping all lynx analysis units except for a portion of the ones on the Ashley, the proposal effectively further fragments lynx habitat in Utah. Key sections of the Wasatch-Cache and Uintah National Forests are identified in the plan only as wildlife corridors, which contain no provisions for lynx protection. The agency 'comprehensive' conservation plan should evaluate connected forest plans to analyze cumulative impacts. The management plans implemented by these forests directly impacts the overall conservation effort. (Ltr #36, 319)

Response to PC 394: We have considered the impact to lynx from other plans not included in the Northern Rockies Lynx planning area (FEIS, p. 200-201 and Appendix L).

PC #399: The agency should fully evaluate the cumulative effects of continued motorized access on public lands. (Ltr #16, 354)

Response: Motorized access on public lands is one of the risk factors considered in the FEIS (pp. 176-185 and 200-201).

PC #101: The agency should consider the effects of climate change on lynx habitat and snowshoe hare habitat. Will climate change limit lynx habitat in the lower 48? Will managing for lynx in the lower 48

states, when habitat becomes limiting due to climate change, limit the amount of snowshoe hares to the point where they become endangered? (Ltr #337)

Response to PC 101: Climate change, resulting in global warming could have an effect on the occurrence and distribution of lynx through changes in vegetation structure and composition as well as in the depth, consistency, and persistence of snow packs. The extent, magnitude, and duration of these climatic changes on lynx and lynx habitat are unknown and hard to predict with any degree of certainty. If average snow depths decrease it is possible these areas may become less suitable for lynx. Long-term changes from moist spruce-fir forest types to drier forest types would likely be unfavorable to lynx. Effects to snowshoe hare may also occur. However, the magnitude and extent of these changes is not likely to affect hare populations to the same extent as lynx populations because snowshoe hare are found in a wider variety of habitats and have a larger geographic distribution than lynx (FEIS, pp. 88-89).

Lynx – habitat mapping

PC #401: The agency should reevaluate the lynx habitat mapping for areas that identify lynx habitat lower than 4,000 feet, such as occurs on the Idaho Panhandle and Flathead National Forests. Why does the lynx habitat extend below 4000 feet? (Ltr #202, 358)

PC #402: The agency should reevaluate the lynx habitat mapping. The DEIS excludes large areas of known lynx habitat. Those areas known to support lynx below 4000 feet elevation (e.g. the Palouse District of the Clearwater National Forest and others) need to be included in the scope of this document. The agency should provide a clear definition of what is considered lynx habitat on each National Forest per elevation. The agency

should take a conservative approach as to what constitutes a suitable elevation for lynx, including north and south slopes, be provided in case future monitoring indicates elevation delineations of habitat were wrong. (Ltr #1, 3, 67, 309)

Response to PC 401 and 402: The field units mapped lynx habitat based upon the interagency direction memo of August 2000. Local information and knowledge was part of this mapping effort. Field units are periodically reviewing their habitat mapping, usually as specific planned projects within lynx habitat are proposed. In extreme northern Idaho and northwest Montana the snow conditions and the vegetation types that are important to lynx can drop below 4,000 feet. However the further south one goes the higher in elevation one need to be to find the same suitable habitat (FEIS, p. 142).

PC #407: The agency should include Douglas-fir of any type, elevation or age as lynx habitat. The CMWA does not accept the unsubstantiated contention by the agency that "only moist (whatever that is?) Douglas-fir conifers" are suitable lynx (prey base) habitat. These unscientific statements border on mythology, and don't belong in what must be a scientifically rounded NEPA evaluation. (Ltr #226)

Response to PC 407: The FEIS (p. 141-142) describes lynx habitat as "characterized by abundant moisture, with deep winter snow. Habitat tends to be somewhat drier in the southern and eastern parts of the planning area. These drier areas are less suitable for snowshoe hare, and so the lynx prey base is lower in number and patchier in distribution. With a poorer prey base lynx are less likely to do well in drier habitats (Ruggiero et al. 2000a).

Lynx habitat includes primarily cool, moist subalpine fir and Engelmann spruce forests, and moist lodgepole pine forests. Cool,

moist forests of Douglas-fir, grand fir, western larch and aspen contribute to lynx habitat where intermingled with or adjacent to Engelmann spruce or lodgepole pine. In extreme northern Idaho and in northwestern Montana, cedar-hemlock forests also are considered lynx habitat. Lynx habitat is found generally at mid to upper elevations. Lower elevations range from about 3,500 feet in the north to 7,000 feet in the southern parts of the planning area." This habitat description is not mythology. It is based on the book *Ecology and Conservation of Lynx in the Untied States* (Ruggiero et al. 2000a).

PC #289: The agency should recognize the importance of the Snowy Mountains Wilderness Study Area (SMWSA) as critical to the survival of a viable lynx population. (Ltr #226)

Response to PC 289: The Forest Service and the FWS recognize the Big Snowy Mountains are unoccupied lynx habitat (*Amendment to the Canada Lynx Conservation Agreement*, USDA FS, USDI FWS 2006). In their *Recovery Outline* (USDA FWS, 2005a, p. 20), FWS considered the Snowy Mountains as peripheral habitat, stating the role of peripheral habitat in the recovery of lynx is "unclear: may enable successful dispersal of lynx..." because the "habitat [is] in small patches not well-connected to large patches of high quality habitat." Until such time the Snowy Mountains are occupied by lynx the Lewis and Clark National Forest may consider the standards and guidelines, but they are not required to follow it when managing the Snowy Mountains.

PC #35: The agency should provide detailed maps of lynx analysis units (LAUs) and lynx habitat so the public has the ability to understand the effects of the various alternatives and assess their adequacy. (Ltr #315, 318, 322, 334, 353, 363,

365, 381, 382, 401, 415, 443, 455, 485, 2919, 4280)

Response to PC 35: A map of the planning area is included in the FEIS (Map, Figure 1-1). This map displays lynx habitat and linkage areas. LAUs are intended for site-specific project-by-project analysis (see discussion of LAUs in the LCAS, Ruediger et al. pp. 7-2 to 7-4). LAUs are the smallest scale analysis units and not appropriate for programmatic planning across the Northern Rockies planning area. Supplying maps of all the LAUs would not aid the public or the decision maker in understanding the effects of the alternatives at this planning level. Each National Forest has identified the LAUs for that unit. They are available to the public from the appropriate unit office.

PC #282: The agency should drop the linkage zones on the Shoshone National Forest because these zones cannot be supported by scientific study. (Ltr #341)

PC #409: The agency should explain how linkage zones are delineated. What research or scientific data supports their need or location? How large are they in size, length and width? What do the arrows mean on the map? (Ltr #372)

Response to PC 282 and 409: Lynx linkage areas were delineated through a series of meetings with various state and federal agencies (fish and wildlife agencies, highway departments, etc.) and tribal nations during five separate meetings held in Missoula, MT (July 2001), Boise, ID (November 2001), Cody and Cheyenne, WY (April 2002), and Salt Lake City, UT (April 2002). Maps of these and other linkage areas were available for agency and public review over the following year and the National Lynx/Wolverine Steering Committee approved the map in November 2003 for agency considerations in land management and highway planning efforts, and ESA Section 7 consultations.

Professional knowledge of wildlife movement areas as well as research data from radio-collared lynx were utilized in delineating lynx linkage areas. The arrow locations on the lynx linkage map are intended to provide a means to alert agency to the need to evaluate, assess, and mitigate the effects of project activities on lynx movement (FEIS, Appendix B).

PC #411: The agency should provide a public process for identifying lynx habitat and linkage areas. This review should occur before the agency proceeds with the decision. The entire area identified as "mapped lynx habitat" has been promoted internally based upon theory or supposition. Although theoretical or hypothetical habitat areas might be the place to start the process, it is inappropriate to base plan management direction on this data at this juncture. It is highly likely that additional study, analysis, observation and good science will result in smaller, more defined and more limited areas that might be designated critical habitat for Canada lynx or even more likely, no critical habitat at all. Further, the proposal is equally applicable to all habitats that could support lynx, based on a "decision" by the ID Team, despite acknowledgements in the DEIS that many of those areas are marginal lynx habitat where lynx have always been rare.

The agency should not hand off designation of lynx habitat and LAUs to lynx biologists without incorporating management direction inot the forest plans or without providing an opportunity for public review and comment. This applies to the areas to be managed for lynx recovery and conservation to comply with the ESA and to the areas to be managed for lynx viability to comply with the NFMA. (Ltr #362, 455)

PC #413: The agency should remove the "Reno Point" area (north of crossing of Idaho Highway 22 and 33), map coordinates Range 31 and 32 East, Township 9, 10, and 11 North, from the "travel corridor" because it is an open area of low standing sagebrush and rock with no timber over story. In addition, the agency should review all of the mapped area with local residents to exclude all similar areas. (Ltr #210, 369, 409, 442)

PC #419: The agency should correct the linkage zone map. The arrow indicating movement through the Bondurant, Wyoming area shown in Figure 1-1 is in error. There is a line of lynx habitat along the eastern boundary of the Hoback Drainage that was used by a radio-collared lynx two years ago (20 percent of the known population) that is referred to as the Hoback Rim (the Rim). The Rim forms the only effective strip of forested lynx habitat, between the east slopes of the Wyoming Range, arid the Gros Ventre Mountain Range, as well as the heart of the Greater Yellowstone Ecosystem (GYE). In other words, the Rim is the major movement corridor from the home of Wyoming's only remaining lynx population with the GYE. The strip of lynx habitat associated with the Rim is not depicted in the DEIS. (Ltr #389)

Response to PC 411, 413, and 419: The lynx habitat and the linkage areas are not decisions to be made by this planning effort (FEIS, p. 9). The arrows indicating linkage areas are only general locations. They were determined and reviewed by those representing the various agencies in the mapping effort, including Forest Service, BLM, Federal Highway Administration, National Park Service, tribal governments, private conservation groups, and others (FEIS, Appendix B). The lynx habitat mapping was done by the Lynx Biology Team at the request of the Lynx and Wolverine Steering Team (FEIS, Appendix

B). We will forward these comments to the Lynx and Wolverine Steering committee for their review.

PC #32: The FEIS should recognize linkage corridors between Utah (the Utah/Wyoming mountain ecoregion) and Colorado (Southern Rockies). The agency should consider the random lynx occurrence on the Manti LaSal as part of a meta population that includes central and northern Utah. The Southern and Northern Rockies lynx EISs should more explicitly recognize linkage corridors between the two areas and manage to protect these habitats. It would therefore make sense to add protection to the Manti LaSal, Fishlake, and Dixie National Forests and to strengthen it on all other forests and resource areas, and to provide for and effectively manage forest linkage corridors for lynx between Utah and Colorado. (Ltr #363)

Response to PC 32: As discussed under PC # 410 the lynx linkage effort was not part of the Northern Rockies Lynx planning effort, but was initiated and completed separately through an interagency, intergovernmental effort throughout the four state area including Utah. The maps showing linkage areas in Utah were developed through this process. While there is no evidence to indicate there is a meta population of lynx currently existing in central and northern Utah, the maps do recognize linkage zone between Utah and Colorado. The Manti LaSal, Fishlake, and Dixie National Forests are too far south in Utah to be part of the Northern Rockies planning effort for lynx.

PC #283: The agency should update the lynx habitat and linkage area map to reflect current landownership for the Gallatin National Forest, or at least footnote that changes in landownership may have occurred. (Ltr #495)

Response to PC 283: We do recognize that changes in land ownership and management have occurred and would continue to occur. When a site-specific project is analyzed new information would be taken into account in the project analysis. We have added a footnote to the map saying that recent changes in landownership may not be reflected on the map.

PC #472: The agency should consolidate the habitat linkage efforts of this plan with those of other ongoing federal efforts within the state being headed by Dr. Chris Servheen (FWS). Multiple efforts aimed at accomplishing very similar tasks can reduce efficiency and add confusion when state and federal interagency efforts are involved. We also observe that federal agencies are likely to have limited ability to address wildlife linkage issues at a number of locations where arrows currently are drawn on Figure 1-1. (Ltr #209)

Response to PC 472: The Lynx/Wolverine Steering Committee directed that for lynx the identification of linkage areas be focused only on this species. It was recognized by the Committee there are other efforts underway in regard to wildlife linkage habitat identification and management, but that to incorporate and consolidate these efforts would be a complex undertaking and would take an extended amount of time. The Conservation Agreements signed with the FWS specified that delineation of linkage areas for lynx be completed within a specific time frame. Site-specific project analysis would consider all relevant information, including linkage for other species, as necessary.

We recognize that many of the linkage arrows cross areas where federal agencies have very limited ability to address

management issues. The LINK direction was written with this in mind.

Monitoring

PC #427: The agency should monitor the effects of the management direction to determine if it is helping or harming lynx. Lynx habitat and populations should be monitored. The agency should adopt a rigorous monitoring program to evaluate all aspects of lynx management in the region. That would include careful monitoring of land uses such as snow compaction, road density, lynx activity and trends, including prey habits, denning habits, and other activities. (Ltr #15, 17, 29, 55, 74, 176, 363)

Response to PC 427: The proposal requires monitoring of those aspects of this decision that have potential to impact lynx's use of their habitat and that are not already being covered by other monitoring or research (FEIS, Table 2-1, pp. 63-63). We would monitor snow compacting activities, vegetation management project in winter snowshoe hare habitat, and fuel reduction projects in lynx habitat. The Forest Service already monitors roads and road densities. Various researchers are studying lynx activities, trends, and habits.

PC #425: The agency should study lynx where they are found, such as Seeley Lake, and not areas where they are seldom seen. (Ltr #35)

Response to PC 425: There are a variety of studies being conducted throughout the Northern Rockies, including in the Seeley Lake area (FEIS, Appendix F). Studying both areas of high lynx occurrence and areas of low lynx occurrence can yield important data about lynx and their habitat requirements.

PC #426: The agency should require monitoring to identify occupied snowshoe

hare and lynx habitat. How can you manage either species without any monitoring of their current distribution? (Ltr #1, 3, 67)

Response to PC 426: The Amendment to the Lynx Conservation Agreement between FWS and Forest Service defined occupied lynx habitat as those National Forests where there are at least two verified lynx observations or records since 1999, or there is evidence of lynx reproduction. Verified records include the National Lynx Survey and other research efforts. There is no need to require monitoring to identify occupied habitat since this is already being done through research efforts.

PC #423: The agency should adopt science-based monitoring protocols and adaptive management strategies to ensure future natural resource management decisions are based on facts. (Ltr #736)

PC #490: Since some uncertainty exists with regard to some lynx effects of proposed management direction, and with regard to overall cumulative effects, a monitoring program that identifies land management effects on lynx, its food sources, and habitat is needed. Monitoring results should be provided to managers to assure that adjustments are made in management direction, if necessary, to conserve and restore the lynx. Appendix F identifies past and ongoing lynx research and studies. It is not clear, however, how research results or monitoring information and data are or will be used in an adaptive management program to assure that management will be modified based on research and monitoring results to assure that lynx conservation and recovery is effective. A summary of the monitoring and adaptive management program should be included in the FEIS. (Ltr #296)

Response to PC 423 and 490: What the commenters are asking for in these two

comments is not monitoring of this decision, but research on lynx. Research on lynx, snowshoe hare, and impacts to their habitat has been and continues to be done (FEIS, Appendix F). We incorporated the results of completed research into the standards and guidelines and used the research to help in the analysis of the effects of this management direction. As new research becomes available site-specific projects would use the results to help inform those decisions, and manage lynx on public land.

The monitoring required by this decision focuses on those aspects of this decision that have the potential to impact lynx's use of their habitat and are that not already being covered by other Forest Plan monitoring or research. Those monitoring items can be found at the end of Table 2-1 (FEIS, pp. 62-63). Specifically, the monitoring items concern snow compacting activities, vegetation management projects in snowshoe hare habitat, and fuel treatment projects in lynx habitat within the WUI. Adaptive management is something that is decided at the site-specific project level, not at the programmatic level of plan direction.

Lynx — sightings

PC #333: I have seen what appear to be lynx tracks and their winter kills near our ranch near Jackson, Wyoming, yet I still haven't seen one alive. (Ltr #31)

PC #428: The agency should know that lynx have been sighted in the following locations:

- **Spokane point on Coeur d'Alene Lake in Oct. of 2000**
- **Good Samaritan Center in Silverton, Idaho, near Wallace, Idaho in January 2004**
- **North Idaho near Blue Creek Road, North of Lake Coeur d'Alene**

- **Pyramid peak to the Snow peak and Sherman Peak saddle in the Kettle Range, in Washington in January 2004**
- **Willow Creek Trail below the Palisades of Palisade Mountains on April 3, 2004 (Ltr #145, 147, 199, 215, 311, 439)**

PC #429: In all our years in the mountains we have yet to see a lynx on the Kootenai National Forest, or Gallatin National Forest. (Ltr #132, 135, 466)

Response to PC 333, 428, and 429: Thank you for the information on lynx locations. We have forwarded this information to the lynx researchers at the Rocky Mountain Research Station.

Other species — effects

PC #268: The agency should reevaluate the effects Alternative E would have on woodland caribou, because Alternative E would allow expansion of over-the-snow routes and allows for continued use on snowmobile trails that the agency doesn't recognize as "designated". (Ltr #356)

Response to PC 268: The analysis considered the impact the management direction would have on woodland caribou (FEIS, pp. 202). The proposal does not prescribe any level of site-specific activities. Project proposals would have to be evaluated for effects to listed species and these projects may be modified in order to meet our obligations according to Section 7 of ESA. There is no specific provision that precludes expansion of over-the-snow routes under current management. The LCAS is being considered when projects are planned in lynx habitat but the provisions of the LCAS are not mandatory. Regardless of what this decision may permit in regard to lynx habitat management, under Section 7 of ESA we are still required to analyze the effects on listed species and make a determination of those effects on any

species that may be present for any action we authorize, fund, or implement.

PC #431: The agency should reevaluate the effects on bald eagles and other species. How do you know future projects won't affect bald eagles? Alternative E changes the current direction of no increase in over snow trails to a guideline, which isn't mandatory. That leaves wide open the possibility of increased human uses along rivers and lakes, which are winter bald eagle habitat. Alternative B allows grooming an additional 3,450 miles of snowmobile trails, which aren't currently groomed. Alternatives C and D allow more. How can you say these won't affect bald eagles, caribou, wolves, bog lemmings, or other species? (Ltr #356)

Response to PC 431: Alternatives B, C, and D allow grooming of additional miles of snowmobile trails that are *already* currently designated. Some of these routes are already heavily used and compacted each winter. This was taken into account in the analysis of effects on all of these species.

The direction in Alternative F is similar to the direction in Alternative E, and it, too, is a guideline. Guidelines are assumed to be followed unless there is a conflict with the guideline and the protection of other species at risk or the protection of public safety. In those cases, it is required that there is documentation of the compelling reasons why the guideline could not reasonably be followed.

PC #497: The agency should fully consider the potential vegetation management effects on bald eagle nest and roost sites and food sources. (Ltr #296)

Response to PC 497: The analysis considered the impact the management direction would have on bald eagle (FEIS, p. 202). The management direction does not prescribe any level of site-specific activities.

The management direction provides sideboards to guide project activities that would occur with lynx habitat. Although there could be an instance where a bald eagle nest or a roost may be found within lynx habitat this situation is believed to be a very limited occurrence in the planning area. In addition, vegetation management activities within lynx habitat are very unlikely to occur in vegetative stands which provide suitable bald eagle nesting or roosting habitat. Specific projects planned within lynx habitat would still require the appropriate level of NEPA analysis including an analysis of effects on Threatened, Endangered, and Proposed species as well as any other species where there are issues related to the project.

PC #437: The agency should add the Coeur d'Alene salamander and northern leopard frog to the list of sensitive species that could be affected by the proposed management direction. Snow compaction affects the rate and timing of snowmelt. This affects hydrologic regimes, which can definitely affect habitat for these two species. Compacted snow melts later than uncompacted snow. Any alternatives which allow an increase in compacted snow areas have the potential to affect these species by preventing the natural hydrologic cycles which deliver snowmelt to amphibian habitats, including breeding ponds and migration corridors, at the right time of year for successful breeding and migration to winter habitats. (Ltr #356)

Response to PC 437: The analysis considered the impact the management direction would have on Coeur d'Alene salamander and northern leopard frog (FEIS, pp. 205-206). Highly compacted snow areas occur each winter within portions of the planning area. Management direction in the alternatives is designed to limit compacted snow conditions to designated routes or designated play areas

identified in each Forest's baseline established for the years of 1998 to 2000.

The connection between effects on these species from snow compacted conditions and management direction is speculative. According to the NatureServe Explorer DTB, habitat loss and fragmentation are the primary threats to the Coeur d'Alene salamander. This species appears to be limited to less than 5,000 feet in elevation in Northern Idaho and western Montana. Much of those areas where snow compaction is the greatest within lynx habitat tend to occur at elevations above 5,000 feet. Similarly, NatureServe Explorer does not list snowmelt issues as a threat to northern leopard frogs. If there is any effect related to the timing of snowmelt and hydrologic cycles, climate warming with the associated earlier melting of snow and ice fields may well play a more important role than human induced compacted snow areas.

PC #470: The agency should reevaluate the effect on Swainson's thrush. How does Alternative E allow vegetation management projects to help maintain multistoried conditions for species such as the varied thrush? The following paragraph states that Guideline VEG G8 allows more activities to create more open, forested habitat. Alternative E allows fuels treatments in lynx habitat. This paragraph should state that these activities and Alternative E will reduce (not could reduce) habitat quantity and quality for Swainson's thrush on treated acres. (Ltr #356)

Response to PC 470: Alternative E and the other alternatives (except Alternative A) provide a degree of protection for multistoried mature or late successional forests that does not currently exist in land management plans and may, therefore, benefit these species. The management direction does not prescribe any level of

site-specific activities and until a project is proposed it is difficult to say with any certainty what the effects would be to any species in a specific situation. If a site-specific project is proposed in lynx habitat the effects of that activity would be evaluated at that time in the project-level NEPA document.

PC #312: The agency should correct the effects analysis related to the effects of grazing on frogs and toads (DEIS, pg 152). They should add a statement that grazing removes vegetation where frogs and toads' food is produced, cattle grazing tramples burrows which are important resting and over-wintering habitat for toads, and sheep and cattle drain ponds and other water sources where frogs and toads breed, raise their young and over-winter. (Ltr #356)

Response to PC 312: The effects of grazing on various wildlife species is not the focus of the proposal or the analysis of effects on terrestrial and aquatic wildlife species. The analysis is based on the effects that may result from the proposed management direction for lynx that may affect grazing and other activities. All alternatives provide some management direction, coupled with existing management direction in plans for grazing that should help to improve vegetation conditions resulting from livestock grazing in lynx habitat.

PC #435: The agency should reevaluate the effects of the management direction on bog lemmings, fisher, marten, wolverine, Townsend's big-eared bat, and common loon, especially under Alternative E. (Ltr #356)

Response to PC 435: The commenter is confusing the site-specific analysis of a project with the analysis here on programmatic direction. This FEIS is analyzing the effect of the management

direction on various species, not the effects of a particular project or activity.

- **Bog lemming -This meadow species would be affected by increased snowmobile use areas.**
- **Response:** Although bog lemmings could (rather than would) conceivably be affected by increased snowmobile use it is unlikely because this species is subnivien during the winter. However, it must be understood that the decision here in NOT deciding what activities would take place. The management direction does not make any decisions regarding increasing snowmobile use. It does provide some management direction for areas (designated routes and play areas) where snow compacting activities occur. The proposal provides management direction for those activities in lynx habitat that are believed to be risk factors to lynx. It is the effect of the management direction on various species that is being analyzed not the effects of the activities. Direction for snow compacting activities is, in most cases, an improvement in the situation that presently occurs under existing plans. We have reviewed the FEIS affects analysis in this light and found it to be adequate.
- **Townsend's big-eared bat -Alternative E allows fuels projects near mines, which could be roosts for this species and other bats. Fires and timber removal would change the microclimate at Townsend's big-eared bat roosts and could make them less suitable for bats, especially hibernacula. They would also make the mines more visible to the public, and more susceptible to human disturbance, which is very harmful to this species.**

Response: Fuel treatments, wherever they occur, would have to comply with any direction in forest plans specific to the management of Townsend's big-eared bat. At the project level site specific mitigation can be implemented to minimize or reduce affects to this species. If a particular mine adit provides the appropriate conditions and temperature stability to serve as a roost or hibernaculum it is unlikely that vegetation removal around these would have much influence on the interior microclimatic conditions inside. However, it must be understood that the decision here is NOT deciding what activities would take place. The management direction does not make any decisions regarding where fuel treatments would or would not occur. It does provide management direction for fuel treatments that could affect lynx and lynx habitat. The proposal provides management direction for those activities in lynx habitat that are believed to be risk factors to lynx. It is the effect of the management direction on various species that is being analyzed not the effects of specific activities. Direction provided for fuel treatment activities is, in most cases, an improvement in the situation that presently occurs under existing forest plans. We have reviewed the FEIS affects analysis in this light and found it to be adequate.

- **Wolverine -Alternatives which allow increased groomed snowmobile trails or more snow play areas don't protect critical wolverine denning habitats. Guidelines HUG3 and HU G9 reduce disturbance to fisher, marten and wolverine. HUG3 doesn't mention or imply anything about disturbance. HUG9 addresses building new roads. How does building new roads reduce**

disturbance? How does using heavy equipment to reclaim new roads reduce disturbance to these species?

Response: Guideline HU G3 is direction for recreation developments and operations that should be planned in ways that both provide for lynx movement and maintain the effectiveness of lynx habitat. This was designed in part to reduce disturbance associated with recreational activities. Guideline HU G9 provides direction for new roads constructed for projects. The management direction does not make any decision regarding the construction of any roads. Any project that would propose building new roads would require the appropriate level of NEPA analysis and site-specific effects would be analyzed at that time. Road reclamation does have beneficial long-term effects for a variety of species.

- **Common loon** -Alternative E allows fuels projects near lakes which are potential loon nesting habitats. Increased human activity associated with timber harvest and removing vegetative cover degrades loon nesting habitat and can cause nest abandonment. This is critical for a species which is only known to nest at 1 or 2 locations in the whole state of Idaho each year.

Response: The effects to common loon or any other species would depend on a number of factors including degree of habitat modification, location of activity in relation to nesting loons, and timing and duration of the activity. Where forest plan direction exists for common loon it would be applicable, and site specific mitigation could be implemented to eliminate or reduce the effects to common loon. However, it must be understood that the decision

here is NOT deciding what activities would take place. The management direction does not make any decisions regarding where fuel treatments would or would not occur. It does provide management direction for fuel treatments that could affect lynx and lynx habitat. The proposal provides management direction for those activities in lynx habitat that are believed to be risk factors to lynx. It is the effect of the management direction on various species that is being analyzed, not the effects of specific activities. Direction provided for fuel treatment activities is, in most cases, an improvement in the situation that presently occurs under existing plans. We have reviewed the FEIS affects analysis in this light and found it to be adequate.

PC #436: The agency should reevaluate the effects Guideline HU G6 has on boreal toads' or northern leopard frogs' breeding sites, migration corridors, or wintering sites. Upgrading paved roads may result in direct mortality of these species. This is especially true in July and August when young toads are moving from the ponds where they were born to upland habitats in the forest. Road maintenance could include applications of magnesium chloride and other salts which are deadly to amphibians crossing the roads where they have been applied. This includes Coeur d'Alene salamanders during the breeding season when they are above ground. (Ltr #356)

Response to PC 436: This plan direction is not designed to conserve toads and frogs. The proposal provides programmatic management direction for activities that have been determined to provide some risk to lynx. The management direction does not authorize any specific project activities. Within lynx habitat the objective of

Guideline HU G6 is to minimize effects to lynx which should also provide benefits for a host of other wildlife species.

#433: The agency should reevaluate the effects the management direction would have on pileated woodpeckers. Explain why it is unlikely that large losses of pileated woodpecker habitat would occur with mortality from insects and disease, and how VEG G7 ensures this? It isn't a standard, so it has no real weight. Federal agency' track record, the Healthy Forests Initiative, the National Fire Plan all indicate older forests and snags will be removed when insects and disease occur in these forests. VEG G7 only applies to areas smaller than 5 acres. Most insect and disease patches are larger than that, and would be harvested in the name of "forest health" rather than be retained to maintain viable populations of pileated woodpeckers and other native wildlife species. Home ranges of the black-backed woodpecker, white-headed woodpecker and pileated woodpecker are each hundreds of acres and are not protected by this guideline. If it were changed to a standard, it still wouldn't protect enough habitat for woodpeckers or other species which nest in snags. (Ltr #356)

Response to PC 433: The management direction itself does not prescribe any level of activity. The proposal is designed to address those risk factors for lynx and provides management direction to address those risks. It is not designed to address all of the other issues related to the species you have mentioned. When a specific project is proposed an appropriate level of NEPA analysis would need to be completed and Forest Plan direction for other wildlife species would be followed. The FEIS evaluated the effects on all those species identified as threatened, endangered, sensitive, or management indicator species (MIS).

Red squirrels - effects

PC #313: The agency should explain how Standard VEG S3 could result in retaining mature forests, red squirrel habitat. If there is no effect to red squirrels, say so. The agency should explain how Standard VEG S3 could retain habitat for bluebirds, woodpeckers and kinglets and nuthatches. The standard could result in the loss of habitat for species that use snags. (Ltr #30, 356)

Response to PC 313: Standard VEG S3 provides management direction to ensure that adequate denning habitat is provided within lynx habitat. Research by John Squires (pers. comm. Oct. 30, 2006) has concluded that denning habitat for lynx is generally not a limiting factor. Based on that, Standard VEG S3 has been changed to a guideline (Guideline VEG G11) in Alternative F. Standard VEG S3 does not replace other forest plan direction related to the retention of mature forests or snags that maintains habitat for other species, unless of course the lynx standard is more restrictive.

PC #342: Guideline VEG G5 says habitat for red squirrels should be provided in each LAU. The agency should explain how red squirrel habitat will be provided for. Have red squirrel habitats been mapped? Do habitat definitions or management guidelines for red squirrels exist? Does this mean one acre of red squirrel habitat per section is adequate? Is 2 trees per acre considered red squirrel habitat? The agency should develop criteria for red squirrel habitat, including how much is needed on the landscape to ensure viability, so that guidelines will maintain this species. (Ltr #1, 3, 67, 356)

Response to PC 342: Red squirrel is a secondary prey item for lynx. They are common and well distributed throughout lynx habitat. The staple in the lynx diet is snowshoe hare and it is believed by some in

the research community that lynx prey on red squirrel opportunistically rather than actively hunting them. There is no information available that indicates there is a specific minimum density of red squirrel which is necessary and critical in providing a secondary food source to lynx. Providing for the viability of red squirrel is beyond the scope and purpose and need.

Forest vegetation

PC #347: The agency should reevaluate the effects of limiting precommercial thinning. The proposed restrictions on precommercial thinning would have much more significant effects on the long-term management, outputs and health of the national forests than are analyzed or disclosed in the DEIS. Despite acknowledged uncertainties about silvicultural techniques to provide short-term and long-term snowshoe hare habitat, the proposed restrictions on precommercial thinning would significantly reduce the presence of larch and white pine in forested ecosystems, significantly reduce the growth of sawtimber, squander past reforestation investments, increase the long-term risks of insects, disease and fire, and have significant social and economic consequences. (Ltr #332, 381, 382, 401)

PC #443: The agency should reevaluate the magnitude of effects on the long-term management, outputs and health of the national forests. Despite-acknowledged uncertainties about silvicultural techniques to provide short-term and long snowshoe hare habitat, the proposed restrictions on precommercial thinning will significantly reduce the presence of larch and white pine in forested ecosystems, significantly reduce the growth of sawtimber, squander past reforestation investments, increase the long-term risks of insects, disease and fire,

and have significant social and economic consequences. (Ltr #73, 357, 362, 455)

Response to PC 347 and 443: Researchers found precommercial thinning decreased snowshoe hare abundance, compared to unthinned patches (Griffen and Mills, in press). We also know snowshoe hare utilize young forests with dense horizontal cover and do not utilize young forests that are more open. Therefore, precommercial thinning was identified as one of the major risk factors affecting lynx populations. We also know that limiting precommercial thinning has consequences on tree species at risk, growth and yield, and future insects and disease. Because of these consequences the effects of limiting precommercial thinning was identified as an issue.

Alternatives B and C basically preclude precommercial thinning. Alternative D allows precommercial thinning to restore tree species and structures in decline. Alternative E, the preferred alternative in the DEIS, also precluded precommercial thinning unless done for fuel treatment purposes. Based on the comments, we evaluated what were the priorities for precommercial thinning and what would be the effects to lynx based on those priorities.

The preferred alternative in the FEIS, Alternative F, would allow precommercial thinning for planted rust-resistant white pine, whitebark pine, and aspen. These species were chosen because: (1) they are the species most at risk (FEIS, forest section) and generally have benefits to other wildlife; and (2) precommercial thinning on these limited areas should not affect overall lynx populations (FEIS, lynx section).

The ID team considered allowing thinning in western larch, specifically western larch stands with over 10,000 trees per acre (Project Record, FEIS Alternatives, Oct 19, 2004 meeting notes and November 15, 2004 proposal). The purpose would be two-fold:

(1) to release larch so they could grow into big trees which are more beneficial than small diameter trees; and (2) to favor other species on the site that may provide better winter snowshoe hare forage. However, at this time information does not exist on whether or not allowing this thinning would harm lynx by substantially reducing winter snowshoe hare habitat. Information indicates lynx use young regenerating forests with a strong component of larch. We included an exception to the precommercial thinning standard that says if new information indicates thinning can be done that would not harm lynx, or could in fact be beneficial, then the thinning would be allowed. Alternative F also allows for precommercial thinning to restore whitebark pine and aspen.

Except possibly in lodgepole pine forests, delaying thinning should have no long term affect on growth and yield. This is because in other mixed forest conditions, tree species that need more sun, like larch and western white pine, would be replaced by other species such as Douglas-fir, grand fir, and lodgepole pine. The overall volume would be the same. In forests that are predominately lodgepole pine, there could be a reduction of long-term growth and yield because the lodgepole tends to stagnate - basically it stops growing. Only the Beaverhead-Deerlodge and Bridger-Teton National Forests have a majority of their precommercial thinning program in lodgepole pine young stands in lynx habitat.

It is possible new information may become available over the next ten to fifteen years that indicates some precommercial thinning in lodgepole pine forests would be beneficial to snowshoe hare, especially in large areas of young regenerating forests where thinning could increase diversity and possibly retain winter snowshoe hare habitat over a longer period. One

commenter, a student writing a thesis provided information which may support this theory; however, additional study needs to be completed. Alternative F, Standard VEG S5, allows for incorporation of this new information.

PC #444: The agency should discuss the short or long term effects on the annual timber sale program, ASQ [Allowable Sale Quantity] or LTSY [Long-Term Sustained Yield]. There is some limited discussion about jobs lost as a result of reducing precommercial thinning but no serious analysis regarding the long-term consequences to the overall forest management programs or outputs. (Ltr #427, 455)

Response to PC 444: Limiting precommercial thinning in lodgepole pine forests could affect long term sustained yield because it reduces growth and yield on these sites. The Beaverhead-Deerlodge and the Bridger-Teton are the only units that have substantial acres of precommercial thinning scheduled over the next ten years in lodgepole pine; therefore, they are the only units likely to see a reduction to LTSY (Appendix K, Table K-5). However, it should be noted that under current programs, the units only have funding for about 34 percent of their thinning program, so it is difficult to tease out the effects from the management direction in this proposal from effects of budgets. In addition, under Alternative F, Standard VEG S5 allows for consideration of new information. Over the next ten years information may become available that indicates some precommercial thinning in lodgepole pine forests may be beneficial to snowshoe hare; therefore it is uncertain whether or not LTSY would be affected for the long-term.

Both the Beaverhead-Deerlodge and Bridger-Teton National Forests are in

revision. The Beaverhead-Deerlodge should complete the revision process in 2007. Their DEIS for the Forest Plan recognizes the cumulative contribution the Northern Rockies Lynx Management Direction may have on reducing growth and yield (DEIS, page 326). The Bridger-Teton should complete its revision in 2008.

The allowable sale quantity should not be affected because the management direction does not preclude timber harvest. Standards VEG S1 and S2 may defer regeneration harvest in some areas, but Guideline VEG G1 encourages projects creating winter snowshoe hare habitat where it is lacking. It is likely there would be no change in overall timber outputs, but there may be changes in what material is harvested and where.

PC #448: The agency should evaluate the effects on vegetation management options, as well as, other current and continuing forest uses. (Ltr #341)

Response to PC 448: The effects on vegetation management are evaluated in the FEIS Forests section. Each alternative could affect forest management differently.

PC #541: The agency should disclose that the proposal is NOT limited in scope. It appears that the proposal would shut down virtually any timber harvest on national forest lands based on flawed data and associated risk factors. (Ltr #375)

Response to PC 541: The management direction would not shut down virtually any timber harvest. This is based on our past six years of experience of considering the LCAS. In very few cases, if any, has the LCAS recommendations caused a **project** to be dropped. In a couple cases, some **units** were dropped or modified due to the considerations of lynx. In addition, the management direction encourages timber

harvest that is beneficial to lynx (Objective VEG O4, Guideline VEG G1).

PC #67: The agency should provide evidence that fuel treatment work in lynx habitat is necessary. (Ltr #28, 319)

Response to PC 67: In general, forests in lynx habitat are in condition class 1, meaning they have not missed a fire cycle (FEIS, fire section). However, that does not mean it may not be necessary to modify the structure and composition in these areas to change fire behavior. For example, lodgepole pine forests generally follow a natural fire cycle. Because their cones need fire to open and release seeds, they generally are established by fire. They grow into mature forests, and generally at some point in time are the target of mountain pine beetle infestations. These infestations can create large areas of dead and dying trees that are prone to stand-replacing fires. If a fire starts in these forests at this stage, and they are near human communities the fires can have dire effects. Therefore, in lodgepole pine forests it may be necessary to break up the continuity of available fuels to reduce the potential fire size and severity.

PC #47: The agency should remove more timber out of our forests to control wildfires. (Ltr #426)

Response to PC 47: Lynx habitat, in general, is not in the priority areas for reducing hazardous fuels, although there are situations when it is necessary. The ability to treat hazardous fuels was identified as an issue. Alternative E, the preferred alternative in the DEIS, would have allowed any fuel treatments in lynx habitat if developed in a collaborative manner. Many comments on the DEIS were concerned this allowance would harm lynx because it did not include any sideboards. Worst case – and very unlikely – is that all lynx habitat could have been

treated. Based on these comments we modified the direction when developing Alternative F to: (1) focus on the areas most at risk – the WUI; and (2) to set a cap on how much lynx habitat could be modified and not be consistent with the standards (6 percent of lynx habitat on a unit).

PC #369: The agency should explain how the management direction would affect fire suppression efforts. (Ltr #453)

Response to PC 369: The management direction does not affect fire suppression efforts. Fire suppression efforts can be conducted according to existing plan direction. Objective VEG O1 says to “Conduct fire use activities to restore ecological processes and maintain and improve lynx habitat”. This objective pertains to naturally ignited fires managed to accomplish resource objectives – and in lynx habitat one of the objectives would be to restore ecological processes and maintain and improve lynx habitat.

Recreation

PC #368: The agency should reevaluate the effects of Standard HU S1 or Guideline HU G11 on winter recreation; the effects are underestimated.

Alternatives B, C, D, and E would allow forest managers to limit or eliminate snowmobiling off of groomed trails where use would produce a packed trail defined as any area where an individual track cannot be distinguished. These alternatives would also allow managers to close all areas to all winter recreational activity where motorized travel, as described in the travel plans and travel maps, is in effect. This could include areas outside wilderness boundaries. Consolidation of groomed trails would allow the forest managers to close groomed trails in what is considered lynx habitat and open new ones in more

congested areas which would not be as desirable to the snowmobile community and would increase safety concerns by increasing machine traffic density. With adoption of Alternative B, C, D, or E the managers would be able to institute any change they desired without any further input from the public. This would be a serious mistake and a violation of the intent and terms of NEPA requirements concerning public participation. Decisions could also affect a large number of undefined linkage areas that are not designated as lynx habitat. (Ltr #224, 313)

Response to PC 368: Decisions to designate new snowmobile trails, close existing trails, or consolidate trails would require site-specific NEPA analysis whether or not we modify the plans. The management direction does not change our requirement to do site-specific NEPA on projects.

Standard HU S1 (in Alternatives B, C, and D) and Guideline HU G11 (in Alternatives E and F) do not require managers to eliminate snowmobiling. HU S1 states, “Allow **no net increases** in **designated** over-the-snow routes or play areas...”. HU G11 states, “**Designated** over-the-snow routes or play area **should not expand** outside baseline areas...”. In both cases the direction is limiting future expansion, not limiting or eliminating existing use. We would like to point out as a matter of clarification that line officers have always had the authority to make decisions about recreational activities, in compliance with NEPA. This includes closing areas to all activities or closing trails. This proposal, or the lack of lynx management direction, would not change or limit that authority.

PC #450: The agency should state that the management direction would have no effect on summer uses by motorized vehicles. (Ltr #48, 50, 51, 70)

Response to PC 450: The FEIS analyzed the impacts to lynx from new guidance on motorized use, linkage areas, and human uses, which includes summer transportation, and the impact the guidance would have on the transportation system (FEIS, pp. 284-301). There are no objectives, standards, or guidelines giving direction on summer use of public land by motor vehicles. There are a number of objectives, standards, and guidelines that are concerned with building and maintenance of roads in one way or another (see Objectives ALL O1, HU O6, and LINK O1; Standards ALL S1 and LINK S1; and Guidelines ALL G1, HU G6, G7, G8, and G9 on Table 2-1). HU G9 may have some impact on summer motorized use because it calls for the roads built for projects to be closed after the project is complete, unless the road is needed for other objectives (FEIS, Table 2-1). In all likelihood the impact on summer use motorized vehicles would be imperceptible.

PC #456: The agency should provide accurate, updated figures to accurately reflect today's expenditures and the economic impact of the snowmobiling industry. These figures are way short of reflecting the true economic impact on this state. Economic impact can very easily be estimated at \$200 million. The Forest Plan Revision Team for the Lolo National Forest has comparative data for comparison of economic input into our state and others in the area. (Ltr #15, 18, 100)

Response to PC 456: We have reviewed and updated the economic data.

PC #457: The agency should correct Figure 3-7. The indicator for Big Sky ski area is missing. (Ltr #494)

Response to PC 457: Thank you. We have corrected Figure 3-7 in the FEIS.

PC #449: The agency should modify Idaho's snowmobile data in the EIS. Specifically: Idaho's snowmobile registration numbers in Table 3-42. The registration numbers were obtained from our Registration Information System.

The table compared snowmobile registrations in 1989 with snowmobile registrations in 2000. The implementation of non-resident certificates greatly increased Idaho snowmobile registrations in 2000. These non-resident certificates were not included in the 1989 registrations. Adding the non-resident certificates in the 2000 registrations greatly increases the average growth. We suggest that the Table use the following information listed below.

Registered Snowmobiles -

1989-1991: Idaho 21,532 in 1991

2000-2001: 38,158 in 2001

Average Growth -

Registered Snowmobiles: 2.3%

State Population: 2.5%

The table also listed the Idaho Department of Motorized Vehicles as a reference. There is no such agency within Idaho. The correct reference is the Idaho Department of Parks and Recreation. Table 3-61 needs the same updates as Table 3-42.

These updates will present a more accurate picture of actual growth of Idaho resident snowmobile registrations than trying to compare total registration designations between 1989 and 1991. We believe that it is important to provide the public with the most accurate information possible. (Ltr #380)

Response to PC 449: Thank you. We have made the requested changes to the two tables in the FEIS (see Recreation section, p. 281).

Landownership

PC #390 (part 1): The agency should explain what effect linkage habitat would have on activities on federal lands. The linkage referred to in the DEIS would halt virtually any activities on all nine national forests located in Montana. (Ltr #375)

Response to PC 390 (part 1): Objectives, standards, and guidelines for linkage areas can be found in Table 2-1. In fact the LINK objectives, standards, and guidelines would not require halting activities on the National Forests. Objective LINK O1 calls for working with adjacent landowners to pursue conservation easements, conservation plans, and land exchanges to reduce potential adverse impacts to lynx and lynx habitat.

Standard LINK S1 concerns highway and forest highway construction. It requires that potential highway crossing be identified. The FEIS (pp. 275-279) explains that state and federal highway officials are already identifying potential wildlife crossings, and that placing more emphasis on wildlife crossings may result in higher construction costs, but this should facilitate wildlife movement and reduce accidents, injuries, and fatalities.

Standard LINK S2 and Guideline LINK G2 concern livestock grazing in shrub-steppe habitat on federal land. The FEIS (pp. 275-279) discusses the effects on grazing. "About 85 percent of the active grazing allotments with lynx habitat already have management directions that provides similar protection to what is proposed in this proposal" (p. 275). "The Proposed Action and its alternatives would have only minimal effects...this would mostly consist of changing the timing, intensity, duration or frequency of livestock use in a specific area" (p. 277).

Guideline LINK G1 states, "NFS lands should be retained in public ownership." This guideline would not change the management activities on federal lands, but could prevent activities that might have occurred if the ownership had changed to private.

PC #390 (part 2): The agency should also explain the double speak in the DEIS. On page 231, Land Ownership, it is very confusing if, on one hand, the DEIS states, "The LCAS says, 'connectivity with habitats and source populations in Canada is critical to the conservation of populations in the U.S.'" while the next sentence of the DEIS says, "At this time there are no natural human-caused barriers that effectively prohibit movement of lynx between Canada and the northern Rockies (USDI FWS, 2003)."

Response to PC 390 (part 2): In the FEIS (p. 320) we have rewritten the confusing paragraph to more clearly explain the situation with ownership, barriers, connectivity with lynx source populations in Canada.

PC #391: The agency should not affect private development with the lynx planning area. (Ltr #5)

Response to PC 391: The management direction does not apply to private lands; therefore, it would not directly affect private development on private land. Management direction does include Standard HU S3 (in Alternatives B, C and D) or Guideline HU G12 (in Alternative E and F), which concerns winter access for non-recreation special uses, and mineral and energy exploration and development on federal land (FEIS, Table 2-1, p. 57). Standard HU S3 states, "Winter access for non-recreation special uses and mineral and energy exploration and development, shall be limited to designated routes or designated over-the-snow routes."

(Guideline HU G12 substitutes the word *should* for *shall*. Otherwise the wording is the same as Standard HU S3.) As the FEIS discusses (p. 317), this could increase the cost of development on public lands. The opportunity for private development, however, would still exist, depending on other existing language in the applicable plan.

Rights-of-way

PC #284: The agency should address how the management direction would affect access across public land to private lands (ANILCA). (Ltr #284, 495)

PC #464: The agency should not encumber access to private property with any restrictions. In most cases these permits are for low use averaging less than 2 trips per day. Low use forest roads are not even a problem according to the Remand Notice. The acreage involved is infinitesimal so loss of habitat is insignificant. The virtually non-existent benefits of lynx restrictions for property access SPUs are far outweighed by the need to comply with ANILCA and by the attendant loss of property rights and values as well as the economic hardship that lynx regulation places on in holders. (Ltr #6, 358)

Response to PC 284 and 464: Rights-of-way are discussed in the FEIS under special use permits (pp. 316-317). Some private tracts are in-holdings, that is, they are completely surrounded by federal land. In-holders are guaranteed access for reasonable use under the Alaska National Interests Land Conservation Act of 1980 (ANILCA). All objectives, standards, and guidelines are subject to valid existing rights. That would include ANILCA. The action alternatives (Alternatives B, C, D, E, and F) do not preclude access and other special uses, but they do require lynx habitat needs be

considered and connectivity provided. Objectives HU O3 and HU O5, Standards ALL S1, HU S1, and HU S3, and Guideline HU G 12 (Table 2-1 in Chapter 2) concern special uses. You will note Standard HU S1 and Guideline HU G11 specifically exempt accessing private inholdings from meeting those items.

The FEIS (p. 317) found that more conditions of approval and mitigation measures to reduce effects on lynx could be required for special use permits. This could increase costs of development. The standards could limit the options for where access roads and authorized facilities would be located; however, the FEIS found no cumulative effects for access. It is not possible to predict the outcome of every conceivable access request, but we would fully comply with the requirements of ANILCA.

Mineral resources

PC #80: All alternatives and management prescriptions should be subject to valid existing rights for oil and gas leasing and conditions of approval for projects. (Ltr #736)

Response to PC 80: All objectives, standards, and guidelines are subject to valid existing rights (see the bold heading at the beginning of each section in Table 2-1 (FEIS, pp. 55).

PC #496: The agency should reevaluate the extent of reasonably foreseeable future oil and gas well development within the 820,000 acres under oil and gas lease in the planning area. Given the recent push for energy development, is it still the same? (Ltr #296)

Response to PC 496: We have re-evaluated and revised the reasonably foreseeable future for oil and gas development in the planning area (FEIS, pp. 308-311).

Special designations

PC #461: The agency should attribute adequate value of roadless and wilderness areas for lynx. (Ltr #354)

Response to PC 461: Approximately 57 percent of lynx habitat in the planning area is in non-development land allocations such as roadless and wilderness (FEIS p. 137). Except for fire management and snow compaction, the majority of human-related effects to lynx are in development land allocations, where such actions as ski areas and timber harvest are allowed (Hickenbottom et al. 1999). We recognize the importance of wildlands and non-developmental lands as providing lynx habitat that is buffered from many human impacts, creating lynx strongholds or areas without most human activities. Except for possibly wildland fire suppression, management direction in these roadless and wilderness areas are not likely to affect lynx. Therefore, while it applies to all occupied lynx habitat, we have focused the management direction for lynx on the developmental lands.

PC #404: The agency should specifically review the roadless areas entirely within the Deerlodge National Forest, and those roadless areas shared with other National Forests. (Ltr #315)

Response to PC 404: Reviewing roadless area mapping is not the purpose and need of this proposal (FEIS, p. 137). At this time the Beaverhead-Deerlodge National Forest is in the process of revising their Forest Plan (the DEIS was released in June, 2005). Reviewing roadless areas on the Beaverhead-Deerlodge National Forest is part of that Forest's planning effort.

The lynx management direction in this analysis is not concerned with existing or draft forest plan direction on the inventorying of roadless areas. With the

court order in the Northern District of California reinstating the 2001 Roadless Rule (USDA FS 2001c) it is likely that most of the inventoried roadless areas would remain unroaded and undeveloped (Appendix L). This was considered in the cumulative effects to lynx.

Special uses

PC #463: The agency should correct the special use section to reflect snowmobile guiding and renting companies. This should be mentioned and impacts specifically affecting these companies should be displayed. (Ltr #496)

Response: Snowmobile rental, tour packages, and guide services are included in the Economics & Social analysis section (FEIS, pp. 336-340) and in the recreation section (FEIS, pp. 281-282).

Social values

PC #393: The agency should fully evaluate the cumulative impact of this proposal on each county's socio-economic health, custom, culture, and heritage along with any civil rights implications. (Ltr #6, 34, 73, 357, 375)

PC #49: The agency should evaluate the effects to the cultural and historic properties including traditional cultural properties associated with the ranching industries. (Ltr #357)

Response to PC 49 and 393: The FEIS did a social and economic analysis (FEIS, pp. 324-344). The analysis considered the potential effects of the alternatives on employment, income, and other financial aspects, as well as on lifestyles and other factors.

Economics

PC #535: The agency should recognize

that there would be very few jobs lost due to restricting precommercial thinning. (Ltr #334, 365)

Response to PC #535: The employment and labor income effects related to precommercial thinning for each of the alternatives are displayed in the FEIS (Tables 3-65 and 3-69, pp. 332 and 334). The FEIS states, "Compared to the no-action alternative under the average-funding scenario, Alternatives B, C or E would represent a loss of about two-thirds of the jobs and labor income." (FEIS, p. 334). That is, 1,830 jobs under Alternative A would drop down to 611 jobs under Alternatives B, C, or E (Table 3-65, p. 332). "Alternative D would represent a loss of about one-third of the jobs and labor income" (FEIS, p. 335). That is, 1,830 jobs under Alternative A would drop to 1,132 jobs under Alternative D. " Compared to the no-action alternative [Alternative A] under the average funding scenario, Alternative F would represent a loss of about 55 percent of the jobs and labor income" (FEIS, p. 335). That is, 1,830 jobs under Alternative A would drop to 832 jobs under Alternative F (Table 3-65, p. 332).

PC #539 (in part): The agency should disclose that the cost/benefit analyses do not shed any light on the proposal to advance Alternative E over B in this NEPA process. Again, analysis by the Predator Conservation Alliance indicates that, in terms of over-the-snow recreation, the Forest Service's own analysis finds no significant increased cost to recreation between Alternatives B and E. In regard to precommercial thinning, the Forest Service analysis projects almost no difference in jobs and income between Alternative B and Alternative E. (Ltr #363) (The rest of PC 539 is in the Fuels Section.)

Response to PC #539: The cost effects by alternative are outlined in the FEIS (p. 340-341). The FEIS indicates that implementing the various standards and guidelines are

projected to affect costs of some activities regardless of the alternative chosen:

Over-the-snow recreation – The FEIS indicates that all action alternatives could possibly increase the costs of expanding downhill ski areas, but these increases would not be significant. All action alternatives would not change the contributions of snowmobiling to the economy.

Precommercial thinning – The FEIS indicates only a slight difference in the projected employment and labor income effect among Alternatives B, C, and E (pp. 331-335 and 251-252). The small difference between Alternatives B and E in the economic effects is due to the small difference in the total acres thinned for the two alternatives. The similarity of acres thinned holds for the average funding and full funding scenarios.

PC #466: The agency should evaluate the economic benefits of restoring forests to ecologically sustainable conditions. Clean water, non-motorized recreation, clean air, hunting, and fishing are activities or resources best served or found on public lands in the Northern Rockies. (Ltr #354)

Response to PC #466: The FEIS addressed economic issues related to precommercial thinning and winter motorized use (FEIS, p. 330-340) because these uses may be impacted by the management direction. The uses and resources referred to in the comment letter are very important benefits from, and uses of, public land that are already covered in the existing plans. These would not be changed or impacted by the newly adopted management direction. Since they would not be changed and are already considered in existing plans, we did not analyze the economic benefits of clean water, non-motorized recreation, clean air, hunting, and fishing.

PC #299: The agency should reevaluate the potential effects the management

direction has on the custom, culture, and economic viability. Winter recreation both on trails and dispersed, mineral development, grazing, timbering, fuels management, and improved transportation systems are important. A strict interpretation of the management direction could have a major negative impact to the custom, culture, and economic viability of states affected. (Ltr #392, 453, 482, 483, 736)

Response to PC #299: The social and economic effects of winter recreation, precommercial thinning, grazing, and mineral development have been updated and the new Alternative F has been analyzed in the FEIS. The largest effects are related to precommercial thinning (see response to comment #535, above). While there is an impact, none of the alternatives would have a major impact to the custom, culture, and economic viability of the affected states (see Economic and Social analysis in the FEIS, pp. 330-341).

PC #336: The agency should evaluate the economic and social effects the management direction would have on the management of the forests. How will thinning, salvage timber harvest, and wildfires suppression be affected by this decision, as well as limiting winter recreation? (Ltr #366, 517, 523)

Response to PC #336: The economic and social effects were analyzed in the FEIS (pp. 230-344). All the action alternatives (B, C, D, E, and F) would result in fewer employment opportunities than Alternative A due to the deferral of precommercial thinning until stands no longer provide snowshoe hare habitat (FEIS, pp. 334-336). Depending on the alternative, there would be minor impacts on the ability to conduct salvage timber harvest. Under Alternative A there is no restriction on salvage. Under Alternatives B and C salvage harvest in burned areas less than 5 acres would be

prohibited, but the limit does not apply to larger fires. Under Alternatives D and E salvage harvest could take place when there are reasons to deviate from Guideline VEG G7. Under Alternative F salvage could be done, but if denning habitat was a limiting factor some dead trees and/or piles of logs should be left (FEIS, p. 260). The management direction would not affect wildfire suppression, which is an emergency situation (FEIS, p. 41). None of the action alternatives B, C, D, E and F would change the contributions snowmobiling would make to the economy and the impact to skiing would be negligible (FEIS, p. 339-340).

PC #465: The agency should reevaluate the economic effects. Several of the direct and cumulative effects show little or no impacts to the economy as a result of fewer acres of precommercial thinning and other commercial thinning. Are you assuming that the logging and precommercial thinning contractors will all find gainful employment in restoration burning efforts or in lynx monitoring studies? The DEIS states that:

- **Half of multi-storied habitat that could provide snowshoe hare habitat is also in the suitable timber base.**
- **Salvage of burned or bug killed timber, less than 5 acres in size, would not be allowed unless more than 10% of the LAU is already well distributed mapped and field verified lynx denning habitat.**
- **At least 13% of LAUs in Montana have more than 15% unsuitable lynx habitat resulting from recent fires and the proposed Alternative "B" limits the amount of lynx habitat that can be made unsuitable to 15% over a 10 year period in a single LAU. (Ltr #73, 362)**

Response to PC #465: We have reviewed the economics analysis and added the effects of Alternative F to it. The economic

effects related to precommercial thinning can be found in the FEIS (p. 330-336). The economic analysis did not assume that the jobs affected would find employment in any other sector of the economy. The results are therefore a worse case scenario.

PC #467: The agency should complete a more thorough analysis of the economic impacts of the management direction. The DEIS fails to mention how drastically reductions in multiple use of federal lands has impacted the economy of central Idaho. Livestock grazing, timber industries, and tourism comprise most of the industry of the area. Although the EIS touches the surface of the matter of jobs and dollars potentially lost to our economy, nowhere is the economic multiplier for these industries listed. If the actual impact of the management direction to our area is to be measured, such multipliers must be part of the equation. The lack of such a calculation results in a vastly underrated effect on our community. One example of these types of effects is the potential restriction of snowmobile usage on federal lands. Central Idaho is rapidly becoming known as an excellent area for snowmobile-oriented tourism, and the City of Salmon is exploring the possibility of advertising itself as a destination for these recreationalists. Obviously, restricting further usage by snowmobiles could have a detrimental effect on this part of the local economy. (Ltr #196)

Response to PC #467: The FEIS addressed the economic impacts to local economies from the new standards and guideline that would be added to the plans concerning precommercial thinning and winter recreation (pp. 330-343). The cumulative effects considered the other impacts of other programmatic actions (FEIS, Appendix L). The economic impacts presented in the FEIS do include the multiplier effects to all

sectors of the economy. As the FEIS points out, the action alternatives would not change the current economic contributions to the economy from snowmobile-oriented tourism (FEIS, pp. 339-340).

PC #468: The agency should update the economic analysis to reflect an economic study of the Uintah basin. Uintah County, and our sister counties, recently commissioned an economic study of the Uintah Basin with the results broken down for the three counties (Daggett, Duchesne, and Uintah). The Basin is tremendously different from the state of Utah, in both demographics and economics. As the counties being affected by this proposal, this data should be used as a baseline for the "Utah" economics and social section within the DEIS (pp. 235-253). For example, Table 3-53 would be tremendously affected by the change in demographics, regarding race, if the correct County data were to be used. (Ltr #484)

Response to PC #468: The economics and social analysis was reviewed and revised to add Alternative F. We reviewed the documents Uintah County sent to us. However, since the FEIS analysis is based on state-wide information for each of the states, county specific information has already been included in the analysis. Fourteen counties in Utah are included in the lynx analysis area, not just Daggett, Duchesne, and Uintah Counties. All of the counties in the states of Utah, Idaho, Montana, and Wyoming do not have the same level of data that the Counties of Daggett, Duchesne, and Uintah have. Given the extensive geographic area of the planning area, a state-wide approach using equal quality data was needed to analyze the social and economic affects of the management direction.