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Route To:

Subject: Northern Rockies Lynx Management Direction Appeal Decision

To: Regional Foresters, R-1, R-2, and R-4

This is my decision on the appeals of the Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) for the Northern Rockies Lynx Management Direction amending Land and Resource Management Plans (LRMP Amendments) in your Regions. All appeals of this decision have been consolidated into one set of issues and one decision is being rendered. The issues were sufficiently similar to allow consolidation (36 CFR 217.13(b)). The appeal reference numbers are abbreviated throughout this decision document by the last four digits of the tracking number for the notice of appeal (NOA).

Three appeals were submitted under 36 CFR 217: Montanans for Multiple Use (NOA #0084), Native Ecosystems Council, et al (NOA #0085), and Friends of the Wild Swan, et al (NOA #0086). Each appellant will receive notification of my decision. The final appeal decision is available via the Web at <http://www.fs.fed.us/emc/applit/nhappdec.htm> or in hard copy, upon request.

The ROD for the LRMP Amendments was signed on March 21, 2006, by the Regional Forester for the Rocky Mountain Region and on March 23, 2006, by the Regional Forester for the Intermountain Region and Acting Regional Forester for the Northern Region. The ROD added management direction in the form of a goal, objectives, standards, and guidelines to all 18 land management plans in the planning area. The LRMP Amendments conform to the 1982 planning regulations at 36 CFR 219 [1982, as amended] (ROD, p. 32). The 1982 planning regulations referenced in the ROD were last published in the Code of Federal Regulations (CFR) on July 1, 2000. The record for the appeal to the Chief of the Forest Service was transmitted in conformance with the regulations at 36 CFR 217.15(a).

Northern Rockies Lynx Management Direction

The LRMP Amendments add management direction to the resource management plans for the Beaverhead-Deerlodge, Bitterroot, Clearwater, Custer, Flathead, Gallatin, Helena, Idaho-Panhandle, Kootenai, Lewis and Clark, Lolo, and Nez Perce National Forests in the Northern Region; the Bighorn and Shoshone National Forests in the Rocky Mountain Region; and the Ashley, Bridger-Teton, Caribou-Targhee, and Salmon-Challis National Forests in the Intermountain Region.¹

¹ The 18 LRMPs were prepared under the Multiple-Use Sustained Yield Act (MUSYA) (16 U.S.C. 528 et seq.), the Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974 as amended by the National Forest Management Act (NFMA) of 1976 (16 U.S.C. 1600 et seq.), the September 30, 1982 implementing regulations of the NFMA (36 CFR 219, as amended September 7, 1983), and the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.) and its implementing regulations (40 CFR 1500-1508).



Issues

This appeal decision is the outcome of a deliberative and extensive review process. My review of the appellants' concerns provides a response to issues involving complex regulatory and management issues. Although not every contention made in the appeals is cited in the same order or format in this decision, all appellants' concerns have been considered. My appeal review focused mainly on compliance of the ROD and FEIS with applicable law, regulation, and policy as cited by appellants or as determined through the agency's review of the appeals.

Appellants raised appeal issues concerning procedural and planning requirements, as well as natural resource issues regarding wildlife and vegetation management. Appellants contended the decision violates the National Environmental Policy Act (NEPA), National Forest Management Act (NFMA), Endangered Species Act (ESA), and the Multiple Use-Sustained Yield Act.

Appeal Decision

I find your decision meets the requirements of applicable federal law, regulations, and policy, except in the two instances discussed in the remainder of this letter and for which I have provided instruction. Attachment 1 describes the remaining issues raised by appellants, and where the record provides evidence to address those issues. I affirm your decision to select Alternative F, Scenario 2 from the FEIS and approve the amendments to 18 land management plans.

- Occupied lynx habitat

One appellant contends arbitrary criteria are used to define occupied habitat (NOA #0086, p. 2). As the appellant notes, the criteria used to define occupied lynx habitat are defined in the 2006 amendment to the Canada Lynx Conservation Agreement. See Appeal Record (AR), Doc. #2399, p. 2. See also FEIS, Vol. 1, pp. 3, 142-144; ROD, p. 29; AR, Doc. #2398. Those criteria specify that habitat on an entire national forest is considered occupied when, 1) There are at least two verified lynx observations or records since 1999 on the national forest unless they are verified to be transient individuals; or, 2) There is evidence of lynx reproduction on the national forest" (ROD, p. 29). The criteria were developed jointly between the US Fish and Wildlife Service (FWS) and Forest Service. Information from the FWS Lynx Recovery Outline was considered during development of the definition of occupied habitat. See AR, Doc. # 2400, pp. 2-7.

The appellant contends using the date of 1999 for verified observations is arbitrary. Discussion in the final Biological Opinion (BO) provides background information on mapping of lynx habitat and efforts to determine the presence of lynx on National Forest System lands:

In 1999, lynx habitat maps were developed using the best information regarding lynx habitat types, as well as best mapping resources available to the Forest Service at that time. The types of mapping resources and technology available on each Forest varied, and thus the accuracy and precision varied as well. Further examination and refinement of lynx habitat mapping followed. ...It is important to note that lynx habitat types, were identified on all National Forests, without consideration at that time, of whether or not lynx were actually present in those areas. ...Between 1999 and 2002 the Forest Service conducted an extensive National Lynx Survey to detect the presence of lynx on National

Forests throughout the range of the United States lynx Distinct Population Segment (AR, Doc. #2397, pp. 3-4).

These findings highlight the on-going nature of information collection and research related to lynx conservation and the Forest Service's use of the best information available at the time on lynx habitat types (see also FEIS, Vol. 1, Appendix F, Lynx research in the contiguous United States). The reference to the National Lynx Survey that began in 1999 provides a suggestion of why 1999 might have been selected as a threshold date for verified lynx observations for the purpose of determining occupied lynx habitat. However, this review of the appeal record found no specific explanation for the selection of this date nor indication of whether records of earlier sightings had been reviewed for their relevance or why those earlier records would not be otherwise considered in determining occupied lynx habitat.

I am therefore instructing you to provide documentation for the record that more fully describes the rationale for establishing that verified lynx observations or records since 1999, and not earlier, may be used as a basis for determining occupied lynx habitat. This documentation must be provided to all appellants. If the documentation was not in existence at the time the ROD was signed, you will utilize Forest Service Handbook 1909.15, Chapter 18, to determine any subsequent actions that may be necessary as a result of this new information.


- Economic effects

Another appellant contends no analysis of economic effects is provided, particularly as the effects would apply to limitations on commercial harvest caused by standard VEG S6 (NOA #0084, p. 2). Standard VEG S6 establishes substantial limitations on vegetation management projects that reduce snowshoe hare habitat in multi-story mature or late successional forests. See ROD, Attachment 1, p. 4. Clearly, the FEIS provides a disclosure of the economic effects expected from each alternative. See FEIS, Vol. 1, pp. 330-341. The analysis focused on the economic effects resulting from potential changes in the amounts of pre-commercial thinning and winter recreation use. The reasoning for this narrowed focus was not well explained in Chapter 3 of the FEIS, but it is explained in the responses to Public Concerns #466 and #299 that “[t]he FEIS addressed economic issues related to pre-commercial thinning and winter motorized use because these uses may be impacted by the management direction” [reference omitted] (FEIS, Vol. 2, pp. 155-156).

Following the line of reasoning given for what activities and uses were subject to an analysis of economic effects, it would be expected that vegetation management projects in multi-story mature or late successional forests were found to not be impacted by the management direction in the selected alternative, and therefore not included in the economic analysis. In fact, the FEIS does disclose that “[t]he management direction would likely have no change in overall timber harvest outputs . . .;” however, the FEIS goes on to explain that the direction may change what material is harvested. Nowhere is it made clear whether a change in the type of materials harvested would have economic effects.

It is the constraints in Standard VEG S6, as they apply to the older multi-storied forests, which are most likely to affect commercial timber harvest. The FEIS discloses that typically even-age, two-age, and some uneven-age harvests in this type of forest remove winter snowshoe hare habitat, habitat that is vital to lynx. See FEIS, Vol. 1, p. 252. I presume, therefore, that the vegetation management constraints imposed on occupied lynx habitat by Standard VEG S6 would have some effect on the ability to carry out these types of commercial harvests and, in turn, would have an economic effect associated with timber harvesting.

For the above reasons I instruct you to supplement the FEIS with an analysis of the economic effects associated with commercial timber harvest, in accordance with NEPA regulations at 40 CFR 1502.9. Utilize Forest Service Handbook 1909.15, Chapter 18, to determine any subsequent actions that may be necessary as a result of the new information.


GLORIA MANNING
Reviewing Officer for the Chief

Enclosures: Attachment 1 – Issues Reviewed and Decision Affirmed

cc: R1 Appeals, R2 Appeals, R4 Appeals

Attachment 1: Issues Reviewed and Decision Affirmed

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National Environmental Policy Act (NEPA)

Range of Alternatives

Appellants contend additional alternatives should have been considered for the limitation on the amount of unsuitable lynx habitat and for the application of lynx management direction to travel corridors that are currently unoccupied by lynx (NOA #0085, pp. 13-14). In particular, appellants contend alternatives to the “30% standard” (VEG S1) and one that maintains “lynx habitat management within known travel corridors” whether or not they are in unoccupied habitat should have been considered.

The implementing regulations for NEPA require agencies to “rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated” (40 CFR 1502.14(a)).

The Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) describe the basis for the range of alternatives considered (i.e. the purpose and need for the proposed amendment, public comment, primary issues, scientific information and research, the U.S. Fish and Wildlife Service (FWS) decision to federally list Canada lynx, the Remand Notice, and the Endangered Species Act). See FEIS, Vol. 1, p. 25; ROD, p. 35. The FEIS then describes the six alternatives developed and considered in detail (pp. 26-69), and other management direction considered but not made a part of the alternatives considered in detail (pp. 71-102). I found this documentation to be very thorough. The reason for using a criterion of 30 percent in Standard VEG S1 rather than a higher or lower percentage is discussed at pp. 71-72, and Alternative F included

two variations, one of which would require application of the lynx management direction to all mapped lynx habitat, whether or not it is considered occupied, thereby including known travel corridors in unoccupied habitat (pp. 35-36). For these reasons I disagree with appellants' contentions concerning range of alternatives and find no violation of NEPA regulations as they pertain to range of alternatives.

Environmental Consequences

The NEPA implementing regulations require that an FEIS will include "the environmental impacts of the alternatives including the proposed action" (40 CFR 1502.16). This section of an FEIS (Chapter 3 of the FEIS, Vol. 1, for the Northern Rockies Lynx Management Direction) forms the scientific basis for the comparison of alternatives and includes discussions of direct and indirect effects and their significance. Appellants make various contentions that the requirements for disclosure of effects are inadequate or lacking. These contentions are addressed as follows:

- *Connectivity*

Appellants contend the FEIS fails to analyze the effects of management activities, including treatments related to the WUIs (Wildland/Urban Interface areas), on connectivity of lynx habitat (NOA #0086, p. 8).

I disagree. The effects of management activities on connectivity of lynx habitat are disclosed in the FEIS (Vol. 1, pp. 181-185) and ROD (pp. 27-28). A summary of effects by alternative is provided in Table 3-21 of the FEIS (Vol. 1, p. 187). For the selected alternative, the FEIS analysis discloses the effects from specific fuel treatments related to the WUI (Vol. 1, pp. 193-200). Specifically, for occupied habitat, the discussion states "Fuel treatment projects within the WUI that do not meet standards may occur on no more than 6 percent (cumulatively) of the lynx habitat on a national forest. This cap ensures that 94 percent of lynx habitat would have management direction to address risks to lynx" (FEIS, Vol. 1, p. 193). Table 3-24 in the FEIS (Vol. 1, p. 196) discloses the amount of unoccupied lynx habitat that could be affected by fuel treatments in the next decade under the selected alternative (see also FEIS, Vol. 1, Appendix B, pp. 439-452; FEIS, Vol. 1, pp. 512- 518; FEIS, Vol. 1, Appendix N, pp. 519-531; AR, Doc. #238, Figure 1-1 Northern Rockies Lynx Planning Area Lynx Habitat & Linkage Areas; Doc. #255, Wildlife Linkage Areas: An Integrated Approach for Canada Lynx; Doc. #2371, Concurrence from Experimental Forests with Management Direction Attachment and Map).

I find the FEIS for the Northern Rockies Lynx Management Direction complies with NEPA by adequately disclosing the environmental impacts of management activities on the connectivity of lynx habitat.

- *Unsuitable habitat*

Appellants contend, "The Amendment contradicts recommendations in Brittel et al. (1989) regarding distribution of lynx habitat. The Amendment allows 3 LAUs [lynx analysis units] in a row to exceed the 30% unsuitable habitat standard. ... The impacts of a potential for 3 out of every 4 LAUs across a Forest to contain more than 30% unsuitable habitat was never addressed in the Amendment." Appellants further contend the impacts of increasing fire risk due to global warming on LAUs already containing the allowed maximum of 30 percent unsuitable habitat have not been disclosed (NOA #0085, pp. 10).

Discussions of the recommendations of the Brittel et al. research paper and the intent of Standard VEG S1 are included in the NFMA section of this appeal decision. In this case, the appellant appears to have misconstrued the intent of Standard VEG S1 by introducing the fuel treatment requirements identified in the FWS's terms and conditions (TC). See AR, Doc. #2397, BO-Final, pp. 81-83. See also ROD, pp. 29-30. Specifically, the appellant appears to refer to TC #2, which states that fuel treatment projects shall not result in more than three adjacent LAUs exceeding Standard VEG S1. See ROD, pp. 20-21. See also AR, Doc. #2397, BO-Final, pp. 81. VEG S1 applies to regeneration harvest. See FEIS, Vol. 1, p. 222. The ROD notes (page 20) that “[u]nder Standards VEG S1 and S2 it is likely very few projects would exceed the 30 percent ... criteria because many fuel treatment projects are not regeneration harvest.”

Additionally, a limit of 6 percent of each national forest is placed on the amount of acres that can exceed the standards. See ROD, p. 20. See also effects analysis in FEIS, Vol. 1, pp. 154-172, 188-197, 199; Appendix L, Cumulative Effects, effects related to projects implemented under the Healthy Forests Restoration Act (HFRA), pp. 507; 219, 222, 225-230, 243-260. As explained in the ROD (page 21), “We found that although we would limit adverse effects to 6 percent of lynx habitat, it is more likely only 1.4 percent or less of lynx habitat would have adverse effects. This is because the fuel treatment program of work within the WUI only amounts to 1.4 percent of lynx habitat and many projects can be designed to meet the vegetation standards.”

Finally, FWS findings outlined on page 21 of the ROD state, “Collectively, application of these standards for vegetation management is expected to avoid adverse effects on lynx and promote the survival and recovery of lynx populations.” The Northern Rockies Lynx Management Direction FEIS and ROD clearly consider the impacts of fuel treatments on lynx habitat.

The contention that the “potential impact of increasing fire risk due to global warming on LAUs already containing the allowed maximum of 30 percent unsuitable habitat have not been disclosed” is inaccurate. A discussion of climate change, including potential increased fire risk, is disclosed in the FEIS (Vol. 1, pp. 88-89). Further, the FEIS states “In Region 1, less than 13 percent of the LAU's currently exceed 30% unsuitable, mostly due to large wildfires (Hillis et al. 2003)” (FEIS, Vol. 1, p. 222). I find the Northern Rockies Lynx Management Direction decision considers the environmental impacts of the alternatives on the Canada lynx in connection with fire risk and unsuitable habitat, and provides adequate mitigation measures to avoid adverse effects; and complies with NEPA.

- *Unoccupied habitat*

Appellants contend the FEIS fails to evaluate the effects of fuel treatments and other activities on unoccupied lynx habitat and the importance of that unoccupied habitat for recovery of lynx, in violation of NEPA and the Endangered Species Act (NOA #0086, pp. 7).

The decision applies Northern Rockies Lynx management direction to mapped lynx habitat on National Forest System lands presently occupied by Canada lynx (ROD, p. 1); this is consistent with the current Conservation Agreement (ROD, p. 29). The value of unoccupied lynx habitat to the recovery of the species is discussed in detail within the ROD (see “Canada Lynx Recovery Outline” section, pp. 31-35).

In compliance with NEPA, the effects of management activities on unoccupied lynx habitat are considered and disclosed in the FEIS (Vol. 1, pp. 194-200) and ROD (pp. 1, 29-35, 41-42). Table 3-24 in the FEIS (Vol. 1, p. 196) discloses the amount of “unoccupied” lynx habitat that could be affected by fuel treatments in the next decade under the selected alternative (see also FEIS, Vol. 1,

Appendix M, pp. 512- 518; AR, Docs. #2036, #2037, #2038, and #2039). The analysis (FEIS, Vol. 1, p. 198) also evaluates the effects of not applying the management direction to unoccupied areas and discloses that there would be “minimal effects, especially to linkage areas because similar management direction or the intent of the direction already exists” (ROD, p. 31).

In their Biological Opinion (BO) (2007), the FWS concludes that the management direction would not jeopardize the continued existence of lynx, and goes on to state, “No critical habitat has been designated for the lynx on Federal lands with the NRLA area, therefore none will be affected” (AR, Doc. #2397, p. 75). They conclude “the selected alternative will allow lynx populations to persist on lands in occupied core and secondary areas within the foreseeable future, and unoccupied secondary and peripheral habitat is likely to retain habitat that provides opportunistic foraging habitat and connectivity adequate for dispersal of lynx, despite the lack of specific direction for lynx management.” See ROD, pp. 41-42. See also AR, Doc. #2400, *Recovery Outline: Contiguous United States Distinct Population Segment of the Canada Lynx*; Doc. #2397, pp. 75-82). Further, in the discussion of amount or extent of take anticipated, the FWS states, “We also anticipate that there is a small risk that Forest management actions may result in take of lynx that could occupy what is currently unoccupied habitat, sometime in the future during the life of the proposed action” (AR, Doc. #2397, p. 78). Finally, the Forest Service commits to working with the FWS to develop and complete an acceptable protocol to survey currently unoccupied lynx habitat in secondary areas as described in the BO, TC #4. See ROD, p. 29-30. See also AR, Doc. #2397, p. 82.

I find the FEIS discloses the effects of management activities on unoccupied lynx habitat, in compliance with NEPA, and the decision was made with consideration of those effects. I also find the role unoccupied lynx habitat plays in lynx protection and recovery was given consideration consistent with the requirements of the Endangered Species Act.

- *Wildland/Urban Interface (WUI)*

Appellants contend the impact to lynx habitat from exempting WUI areas from lynx management direction is underestimated because WUIs are not clearly defined (NOA #0085, p. 4). The management direction contained in the amendments is required to be used within occupied lynx habitat. See ROD, p. 29. The management direction should be considered, but is not required, in areas of unoccupied lynx habitat. Exceptions to Standards VEG S1, VEG S2, VEG S5, and VEG S6 are provided for fuel treatment projects within the WUI as defined by the HFRA. See ROD, Attachment 1, pp. 2-4. The definition of WUI is further referenced and summarized in the ROD, Attachment 1, p. 15. The areas are variable depending on whether or not a community has a wildfire protection plan in place and, if not, the landscape conditions around each at-risk community. Depending on these conditions, the boundaries can extend from 0.5 mile to 1.5 miles. For analysis purposes WUIs were considered to extend one mile from at-risk communities. See FEIS, Vol. 2, p. 74. Appellants provide no specific basis for the contention that improper consideration of WUIs has led to an underestimation of impacts to lynx habitat, and I find no violation of law, regulation, or policy.

- *Private land*

Appellants contend lynx analysis units (LAUs) do not “address the landscape conditions and availability of lynx habitat because intermingled private lands are not included” and thereby fail to provide required public disclosure and involvement (NOA #0085, pp. 6, 14). Appellants are not specific, and the review of the appeal record was not revealing, as to the basis for the contention that intermingled private lands are not included in LAUs. The mapping criteria disclosed in the

FEIS specify that land ownership patterns are to be evaluated when delineating an LAU; it does not say anything about excluding them. Additionally, the Forest Service explains that if private lands are within an LAU, the amount of young regenerating forest on those lands will be considered as part of applying Standard VEG S1 and determining whether or not regeneration harvest is permissible on the National Forest System lands within that LAU. As projects are proposed and analyzed, habitat conditions within the project analysis areas will be assessed and disclosed, as appropriate. I find no violation of law, regulation, or policy with respect to analysis associated with LAUs.

Cumulative Effects

Cumulative impacts comprise part of the scope of an environmental impact statement (40 CFR 1508.25(c)) and are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions” (40 CFR 1508.7). Contentions regarding the analysis and disclosure of cumulative effects were raised in two appeals.

Appellants contend the analysis of cumulative effects is inadequate as it relates to the effects on lynx and lynx habitat from fuel reduction, pre-commercial thinning, clearcutting, salvage harvest, logging in unoccupied habitat, and past logging (NOA #0085, pp. 14-16; #0086, pp. 10-11). The FEIS adequately evaluates impacts of management activities, including fuel treatments, pre-commercial thinning, and commercial timber sales (e.g., salvage harvest) by alternative, on lynx and lynx habitat. See FEIS, Vol. 1, pp. 154-172, 188-197, 199, 200-201. See also FEIS, Vol. 1, Appendix L, p. 507. Impacts of precommercial thinning on unoccupied habitat are presented in Table 3-23 in the FEIS (Vol.1, p. 195). Additional effects of activities (e.g., fuel treatments and vegetation management) on lynx and lynx habitat, are disclosed throughout the FEIS (Vol. 1, pp. 219, 222, 225-228, 232, 234, 236, 238, 240, 243-260, 265; FEIS, Vol. 1, Appendix M, pp. 512-514; see also AR, Doc. #2032, BA, pp. 24-27, 35-43, 46; FEIS, Vol. 1, Appendix L, pp. 501-511; AR, Doc. #2036, p. 1; Doc. #2037, 3 pp; Doc. #2039, 1 p; and Doc. #2397, pp. 9-14; ROD, p. 8). The “Cumulative effects” discussion (FEIS, Vol. 1, pp. 200-201) notes that those activities identified as risk factors for lynx are incorporated into the analysis presented in the “Effects Summary” section (see also AR, Doc. #2032, BA, pp. 44-52; AR, Doc. #2397, pp. 73-74; and FEIS, Vol. 1, pp. 229-230, 262-263 for cumulative effects analysis regarding timber and fuels management). Additionally, the FWS Remand Notice states, “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” (AR, Doc. #1966, p. 40083). See also ROD, p. 3. The Northern Rockies Lynx Management Direction FEIS adequately discloses the cumulative effects of management activities, including fuel treatments, pre-commercial thinning, and commercial timber sales, on lynx and lynx habitat, in compliance with NEPA.

Appellants contend cumulative impacts to winter snowshoe hare habitat from timber and fuels management activities are not disclosed (NOA #0085, pp. 4-5). The terms “foraging habitat” and “winter snowshoe hare habitat” are used interchangeably in the analysis. See FEIS, Vol. 1, p.145. The analysis explains that foraging habitat may be affected by landscape patterns, precommercial thinning, other vegetation management practices (e.g., fuel treatments and commercial timber sales) and grazing. See FEIS, Vol. 1, pp. 145, 153. The FEIS adequately evaluates impacts of these management actions, by alternative, on winter snowshoe hare habitat (Vol. 1, pp. 154-172, 188-197,

199, 200-201; see also FEIS, Vol. 1, Appendix L, p. 507). Additional effects of activities (e.g., fuel treatments and timber management) on winter snowshoe hare habitat are disclosed throughout the FEIS (Vol. 1, pp. 219, 222, 225-228, 232, 234, 236, 238, 240, 243-260, 265; FEIS, Vol. 1, Appendix L, pp. 501-511; FEIS, Vol. 1, Appendix M, pp. 512-514; see also AR, Doc. #2032, BA, revised, pp. 11, 17, 24-27, 31, 41-43, 46; FEIS, Vol. 1, Appendix F, BA, p. 105; ROD, p. 8). The agency's disclosure of cumulative effects notes that those activities identified as risk factors for lynx are incorporated into the analysis presented in the "Effects Summary" section (FEIS, Vol. 1, p. 200). Additionally, in the Remand Notice, the FWS concludes, "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" (AR, Doc. #1966, p. 40083). See also FEIS, Vol. 1, Appendix P; ROD, p. 3. I find the Northern Rockies Lynx Management Direction FEIS adequately discloses the cumulative effects of fuel and timber management activities on winter snowshoe hare habitat in compliance with NEPA.

National Forest Management Act (NFMA)

Amendment

Appellant contends the amendment does not meet the criteria of a non-significant amendment because the analysis generalizes the effects across all national forests covered by the management direction and does not disclose that they will be significant on certain forests. Additionally, the appellant contends a reduced value of timber products and increased fire hazards were not recognized as significant changes in determining the amendment to be non-significant (NOA #0084, p. 3).

Planning regulations at 36 CFR 219.10(f) (1982) require a forest supervisor, when amending a plan, to "determine whether a proposed amendment would result in a significant change in the plan." If the change is determined to be significant, the Forest Supervisor shall carry out the amendment by following the same procedure as that required for development and approval of a plan; otherwise, the amendment can be implemented following appropriate public notification and compliance with the NEPA. The Forest Service Manual (FSM) at section 1926.5 (effective January 31, 2006) provides examples of changes considered non-significant and others considered significant.

The Regional Foresters document their significance determination for the plan amendments in the FEIS (pp. 347-350) and the ROD (pp. 37-40). They compare the amendments for lynx management direction to the FSM examples of non-significant changes and contrast the amendments with the FSM examples of significant changes. This assessment considers the magnitude of the changes for the entire planning area (lynx habitat in 18 national forests) where it is appropriate to do so, and also notes where the changes may result in disproportionate effects on certain national forests; e.g. restrictions on pre-commercial thinning on the Beaverhead-Deerlodge and Bridger-Teton National Forests. The assessment addresses potential changes to timber outputs, describing them as essentially unchanged. The FSM examples of significant changes refer to changes in levels of multiple use goods and services, and not economic factors; therefore it was not necessary for the Regional Foresters to assess changes to timber values as part of making their significance determination. Although the determination of plan amendment significance does not specifically address how it may affect fire risk, this is disclosed in the FEIS (pp. 228-230), including how those effects may differ for certain national forests, and there is nothing in that analysis to suggest these effects could rise to a level of significance.

I find the Regional Foresters documented their determination of whether the amendment would result in a significant change to the plans, as required by NFMA regulation, and that they followed the procedure for doing so outlined in the Forest Service directives.

Management Direction

Various contentions were made regarding the management direction developed for protection and recovery of Canada lynx. The NFMA regulations define management direction as: “A statement of multiple-use and other goals and objectives, the associated management prescriptions, and standards and guidelines for attaining them” (36 CFR 219.3). Included with the multiple-use goals and objectives are descriptions of the desired future condition of the forest or grassland. See 36 CFR 219.11(b). Management requirements for land management plan implementation, based on those specified in 36 CFR 219.27, are usually given the names “standard” or “guideline”, however the regulations do not define these terms.

- *Desired future condition*

Appellants contend a landscape-wide desired future condition for lynx is not identified. More specifically, appellants contend the necessary amount and distribution of habitat, the locations of suitable and unsuitable habitat, and how lynx will be able to expand their range are not disclosed (NOA #0086, p. 9).

The proposed action applies “only to lynx habitat in lynx analysis units (LAUs) (for a discussion of LAUs see the Lynx section in Chapter 3), and to lynx linkage areas” (FEIS, Vol. 1, p. 9; see also p. 137). The FEIS states, “More than 38 million acres of National Forest System (NFS) lands are inside the planning area. Of these, nearly 18,500,000 acres are lynx habitat” (FEIS, Vol. 1, p. 137). Maps and tables contained in the appeal record and FEIS display lynx habitat within the 18 national forest planning area (AR, Doc. #238 is Figure 1-1 from the FEIS entitled “Northern Rockies Lynx Planning Area: Lynx Habitat and Linkage Areas”) as well as occupied and unoccupied lynx habitat (Doc. #2371 indicates occupied versus unoccupied habitat, linkage areas, and further breaks the occupied habitat into the three major categories of “core”, “secondary” and “peripheral” habitat; see also Doc. #2036). Characterizing habitat across such a large region is difficult; however, factors known or believed to be important in providing lynx habitat are listed in Volume 1 of the FEIS (p. 139). The difficulty in determining “exact” habitat conditions across such a vast landscape is considered in the appeal record (Doc. #1955, “Ecology and Conservation of Lynx in the United States”, p. 438; see also pp. 445-453).

Lynx management direction (objectives, standards, and guidelines) contained in the amendment applies to occupied lynx habitat (AR, Doc. #2397, BO, p. 6), and relates to specific lynx and lynx habitat risk factors (FEIS, Vol. 1, p. 9; see also FEIS, Vol. 1, p. 145 and ROD, pp. 2-3). Factors and risks affecting lynx movement across habitats are disclosed in the FEIS (Vol. 1, pp. 181-185). The amendment includes adequate vegetation management direction in the form of objectives and standards that conserve snowshoe hare and lynx habitat in all core area and occupied secondary area in the Northern Rockies Lynx Amendment area. See ROD, Attachment 1, Standard ALL S1, p.1; and Standards VEG S1, S2, S5, and S6, pp. 2-4. See also AR, Doc. #2397, Biological Opinion, pp. 67, 68; FEIS, Vol. 1, p. 199. Additional management direction in the form of objectives, standards, and guidelines maintain or enhance lynx habitat connectivity. See ROD, Attachment 1, Objective ALL 01 and Standard ALL S1, p. 1; Objective LINK 01, Standard S1, and Guidelines G1 and G2, p. 8. See also AR Doc. #2397, Biological Opinion, pp. 8, 9.

While the FEIS does not explicitly provide a desired future condition for lynx habitat across the planning area, management direction incorporates conservation measures from the Lynx Conservation Assessment Strategy (LCAS) that are deemed essential to lynx conservation. See FEIS, Vol. 1, p. 145. See also AR, Doc. #2397, BO, p. 56. Terms and conditions issued by FWS are also included in the lynx conservation measures. See ROD, p. 7. See also AR, Doc. #2397, BO, pp. 81-82. I find this direction to be in compliance with planning regulations.

- *Lynx habitat*

Appellants contend achievement of standards that limit the creation of unsuitable habitat cannot be verified because unsuitable lynx habitat is not clearly defined in the FEIS or ROD. Appellants further contend not defining suitable and unsuitable lynx habitat makes it impossible to determine when currently suitable habitat is being degraded by management activities. Other appellants contend standards necessary to protect and restore lynx habitat are either lacking or inadequate as they pertain to limitation of salvage logging, limitation of forest opening size, maintenance of denning habitat, and protection of lynx from snowmobiles and snow compaction. (NOA #0085, pp. 3-4; #0086, p. 11).

The contention that lynx habitat conditions are not defined is simply incorrect. The ROD and FEIS clearly explain that the selected alternative, specifically standards VEG S1 and S2, was reworded to clarify what “unsuitable habitat” entails and what types of vegetation projects create this condition. See ROD, p. 9; FEIS, Vol. 1, p. 149; FEIS, Vol. 2, pp. 36, 59, 60, 63, 64, and 113. The phrase “lynx habitat in an unsuitable condition” is meant to clarify the meaning of unsuitable habitat. See FEIS, Vol. 1, pp. 370-371. See also ROD, Attachment 1, p. 12. The agency’s response to comments on the Draft Environmental Impact Statement discusses the term “unsuitable habitat” and addresses modifications to standards VEG S1 and S2 in greater detail: “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. . . . 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” (FEIS, Vol.2, PC#106, 191, 246, and 341, p. 59, 60).

The contention that standards necessary to protect and restore lynx habitat are either lacking or inadequate is also unfounded. Management direction necessary to protect and restore lynx habitat is described in the ROD (Attachment 1, pp. 1-8) and FEIS (Vol. 1, pp. 169-185; see also FEIS, Vol. 1, p. 187). In 2000, the FWS concluded “if Plans are amended or revised incorporating conservation measures in the LCAS or the equivalent thereof . . . the Plans would likely not jeopardize the continued existence of lynx” (FEIS, Vol. 1, p. 8). The selected alternative incorporates only those elements of conservation measures recommended in the LCAS that are deemed essential to lynx conservation. Detailed rationale for the inclusion and/or change of recommendations from the LCAS in the selected alternative is provided in the Biological Assessment (Appendix E, pp. 83-97) and FEIS (Vol. 1, pp. 71-102; see also FEIS, Vol. 1, Appendix A, pp. 401-438).

Based upon the above and a review of the planning record, it is apparent that the Forest Service has provided adequate management direction, in compliance with NFMA regulations, that conserves and promotes recovery of Canada lynx while preserving the overall multiple-use direction in existing plans.

- *Snowshoe hare habitat*

Appellants contend the definition of winter hare habitat is not supported by any science and therefore it is not clear whether the lower limit on numbers of small trees is sufficient to provide adequate hare habitat. Appellants further contend the allowance of salvage harvesting is not supported by any science demonstrating those activities would not degrade snowshoe hare habitat (NOA #0085, p. 5).

A review of the appeal record indicates that the Northern Rockies Lynx Amendment (NRLA) management direction and effects analysis are based on current scientific literature and documentation. See FEIS, Vol. 1, pp. Summary-1, 9; FEIS, Vol. 1, Appendix F: Lynx Research in the Contiguous United States, pp. 457-464; FEIS, Vol. 1, References, pp. 380-396; FEIS, Vol. 2, Response to Comments, pp. 29-39. See also AR, Docs. #1977 through 2027; Doc. #2012, Snowshoe hare habitat relationships ... in northwest Colorado, 58 pp.; Doc. #39, LCAS update to include guideline for multistory forests; approved by the Lynx Steering Committee, p. 1; Doc. #2397, BO-Final, pp. 1-3, 67, 75.

The term “winter snowshoe hare habitat” as defined in the FEIS (Vol. 1, pp. 69, 379; see also AR, Doc. #2032, BA, revised, pp. 9-11, 101; and Doc. #2397, BO – Final, pp. 9-11, 41) is consistent with definitions found in literature and documentation contained in the appeal record. The impacts of vegetation management activities, including the effects of salvage harvesting, on winter snowshoe hare habitat are adequately analyzed in the FEIS (pp. 154-172, 188-197, 199; see also FEIS, Vol. 1, pp. 200-201, 138, 219, 222, 225-228, 232, 234, 236, 238, 240, 243-260, 262) and elsewhere in the appeal record (AR, Doc. #2032, BA revised, pp. 9-11, 23-27, 29, 32, 34, 36, 42, and 51; Doc. #2397, BO – Final, pp. 9-11, 41-46, 71-75). Further, concerning the impact of timber harvest on lynx habitat, the FWS states in their *Notice of Remanded Determination of the Status for the Contiguous United States Distinct Population Segment of the Canada Lynx; Clarification of Findings; Final Rule*, “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” (FEIS, Vol. 1, Appendix P, p. 40083). See also ROD, p. 3. Additionally, the appellant is concerned the NRLA ignores the value of coarse woody debris; however, management direction in the form of a guideline specifically addresses the need to retain some coarse woody debris, piles, or residual trees to provide lynx denning habitat in the future. See ROD, Attachment 1, p. 5, VEG G11. See also AR, Doc. #2397, BO – Final, pp. 9-11. A review of the FEIS and appeal record demonstrate that NRLA management direction and effects analysis are based on current scientific literature and documentation. Specifically, the definition of winter snowshoe hare habitat is well-supported and the impacts of salvage harvesting on winter snowshoe hare habitat are adequately disclosed. I find no violation of law or regulation.

- *Occupied and unoccupied lynx habitat*

Appellants make various contentions regarding the establishment of management direction for occupied lynx habitat. One of these contentions, that arbitrary criteria were used to define occupied lynx habitat, is addressed in the appeal decision memo to the Regional Foresters. Other related contentions are addressed as follows:

It should first be noted that the appeal record and planning documents clearly identify the uncertainties related to lynx conservation. See AR, Doc. #1954, Hickenbottom et al. 1999, Biological Assessment of National Forest and Resource Management Plans and Bureau of Land

Management Land Use Plans on Canada Lynx, pp. 15, 33, 40; Doc. #1959, Fish and Wildlife Service BO, pp. 17-20; Doc. #2400, Lynx Recovery Plan Outline and cover letter, pp. 1, 3, 4. For example, the Science Report discusses the “dilemma of conserving lynx without adequate knowledge of lynx ecology” (AR, Doc. #1955, Ruggiero et al. 2000a. Ecology and Conservation of Lynx in the United States, pp. 9-11). Further, the record demonstrates that as new information and research became available, revisions and refinements were made to better respond to lynx habitat information. See AR, Doc. #2397, Final BO, pp. 3-4; FEIS, Vol. 1, Appendix O – Determination of Threatened Status for the Contiguous U.S. Distinct Population Segment of the Canada Lynx and Related Rule; Final Rule, p. 16063.

Appellants contend protections afforded by the amendments are lessened because habitat differences in northern Idaho and northwestern Montana, and lynx occurrence records in the three national forests of northern Idaho (Clearwater, Nez Perce, and Idaho Panhandle) have not been recognized (NOA #0086, pp. 3-6). Lynx habitat was mapped in accordance with interagency direction. See FEIS, Vol. 1, Appendix B. Further explanation of the mapping process is provided in Volume 2 of the FEIS: “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” (FEIS, Vol. 2, p. 136). In fact, because the Clearwater and Idaho Panhandle National Forests are considered to be occupied by Canada lynx based on the established criteria discussed in the decision letter to which this document is attached, the lynx management direction applies to LAUs on these national forests. See ROD, Attachment 1, p. 1. See also FEIS, Vol. 1, Figure 1-1, Occupied and Unoccupied Lynx Habitat (separate map). Although the Nez Perce is mapped as unoccupied habitat in the FEIS, it is considered secondary habitat. It “had not been surveyed for lynx presence but is currently being surveyed.” See FEIS, Vol. 1, Figure 1-1; FEIS, Vol. 1, p. 101. The survey results will determine whether it remains designated as unoccupied until the criteria have been met, or is re-designated as occupied. In the meantime, the lynx management direction will be considered when proposing projects on that national forest. See ROD, Attachment 1, p. 1.

Other appellants contend that various records of lynx presence exist in databases that were not considered by the Forest Service in their determination of occupied habitat (NOA #0085, pp. 8-9). The FWS Recovery Outline provides rationale in regards to this contention: “Lynx are highly mobile and have a propensity to disperse long distances, particularly when prey becomes scarce (Mowat et al. 2000). Lynx also make long distance exploratory movements outside their home ranges (Aubry et al. 2000; Squires et al. 2001; Moen et al. 2004). Areas or habitats used by lynx during dispersal or exploratory movements are poorly understood at this time. Dispersing lynx may colonize suitable but unoccupied habitats, augment existing resident populations, or disperse to unsuitable or marginal habitats where they cannot survive. Numerous lynx mortality records exist from anomalous habitats or habitats where no records support evidence (either current or historical) of a reproducing population (McKelvey et al. 2000a). Many of these records correspond to post-population peaks in Canada, with some lag time for immigration (McKelvey et al. 2000a). We find no evidence of lynx populations becoming established in such areas” (AR, Doc. #2400, p. 3).

The appellant also claims no rationale is provided for why the application of lynx management direction is not required for unoccupied lynx habitat (NOA #0085, pp. 8-9). In fact, the ROD is very clear in stating rationale for the decision. The decision criteria include “meeting the Purpose and Need to provide management direction that conserves and promotes the recovery of Canada lynx while preserving the overall multiple use direction in existing plans” (ROD, p. 1). Thus, the Regional Foresters are seeking management direction that will achieve an appropriate balance

between conservation and recovery of a threatened species and meeting the other aspects of multiple use management as reflected in the forest plans.

The value of unoccupied lynx habitat to the recovery of the species is discussed in detail within the FWS Recovery Outline (AR, Doc. # 2400) and is further summarized in the ROD (see section "Canada Lynx Recovery Outline", pp. 31-35). The description of the selected alternative states that management direction should be considered for projects within unoccupied habitat, but is not required until such a time as that habitat is deemed occupied. See ROD, p. 7. See also FEIS, Vol. 1, p. 194. The FEIS, (Vol. 1, pp. 194-200) discloses the effects on lynx of not applying the management direction to unoccupied areas. The Regional Foresters considered those effects and concluded there would be "minimal effects, especially to linkage areas because similar management direction or the intent of the direction already exists" (ROD, p. 31). In reference to findings made in the BO, the ROD also states "the selected alternative will allow lynx populations to persist on lands in occupied core and secondary areas within the foreseeable future, and unoccupied secondary and peripheral habitat is likely to retain habitat that provides opportunistic foraging habitat and connectivity adequate for dispersal of lynx, despite the lack of specific direction for lynx management" (pp. 41-42). Thus, the rationale for not requiring management direction to be applied to unoccupied habitat is clearly stated and is in compliance with NFMA regulations pertaining to establishment of management direction.

Finally, appellants contend no evaluation was conducted of how and when newly occupied habitat will be identified (NOA #0085, pp. 8-9). In fact, in its BO the FWS included four non-discretionary Terms and Conditions. Term and Condition #4 specifies that the Forest Service will work with the FWS "to develop and complete an acceptable protocol to survey currently unoccupied lynx habitat in secondary area [sic] within 18 months of the date of the Forest Service's Record of Decision for the amendments" (AR, Doc. #2397, BO-Final, p. 82). The ROD illustrates the Regional Foresters' recognition of this requirement by stating that "we agree to work with the FWS to develop and complete an acceptable protocol to survey currently unoccupied lynx habitat in secondary areas as described in the Biological Opinion, Terms and Conditions #4" (pp. 29-30).

Based upon the above and a review of the appeal record and planning documents, I find the decision that management direction is not required for unoccupied lynx habitat is well supported in the planning documents. Additionally, the Forest Service has committed to the Term and Condition that requires development and completion of an acceptable protocol within 18 months to identify newly occupied habitat through surveys. I therefore find no violation of NFMA regulations with regard to the management direction associated with occupied and unoccupied lynx habitat.

Public Involvement

Appellants contend the Forest Service failed to provide adequate public involvement in the development of the lynx management direction, specifically in regard to the mapping of lynx analysis units, mapping of occupied lynx habitat, and the determination of future fuels management projects (NOA #0085, pp. 12-13). Public involvement activities for the development of the lynx management direction amendment are described in the FEIS (pp. 18-19) and the ROD (pp. 4-5). In general, these activities were consistent with the public participation requirements for land management planning found at 36 CFR 219.6 (1982).

The concern with the adequacy of public involvement in the mapping of lynx analysis units was raised in comments on the Draft Environmental Impact Statement (DEIS) and an adequate response was provided in the FEIS. See FEIS, Vol. 2, p. 137. These analysis units are intended for site-

specific analysis of projects and are not directly related to the effects of the management direction alternatives.

Mapping of lynx habitat was conducted by Forest Service field units using criteria developed by an interagency (Forest Service, Bureau of Land Management, FWS) team of biologists and scientists. See FEIS, Vol. 1, Appendix B, pp. 444-449. See also FEIS, Vol. 2, p. 136. A number of public comments on the DEIS pertained to lynx habitat mapping. These were acknowledged and appropriate responses provided in the FEIS. See FEIS, Vol. 2, pp. 136-140.

Future fuels management projects were not determined by this amendment as it did not make any project-level decisions. See FEIS, Vol. 1, p. 135. The 10-year fuel treatment program summarized in FEIS Appendix M reflects a combination of projects already decided and those projected by field units, but not yet decided. See FEIS, Appendix M, pp. 512-514; AR, Doc. #1812, Fuel Treatment Data Request Attachment, pp. 1-5. The future projects will be subject to appropriate public involvement at the times they are advanced as proposed actions. I find the public involvement was compliant with the requirements of NFMA regulations.

Coordination

Appellant contends none of the “habitat standards were coordinated with local, State, and Tribal Governments as required by U.S. Code 1604(a)” (NOA #0084, p. 3). The section of the NFMA cited by the appellant states “As a part of the Program provided for by Section 4 of this Act, the Secretary of Agriculture shall develop, maintain, and, as appropriate, revise land and resource management plans for units of the National Forest System, coordinated with the land and resource management planning processes of State and local governments and other Federal agencies” (16 U.S.C. 1604(a)). A review of the FEIS, including the description of public participation efforts (Vol. 1, pp. 18-19), the preparers and distribution lists for the DEIS (pp. 259-271) and FEIS (Vol. 1, pp. 351-364), and the list of those who commented on the DEIS (FEIS, Vol. 2, pp. 5-18), demonstrates an extensive effort to inform and involve Federal agencies and local, State, and Tribal governments in the planning process for the Northern Rockies Lynx Management Direction. The appellant did not provide any specific examples of which of these governmental entities’ planning processes the Forest Service did not coordinate with, and so no further response is possible. I find no violation of NFMA with regard to coordination.

Consistency

Appellants contend the lynx management direction creates consistency violations under NFMA by potentially conflicting with management area direction already established in individual plans and not requiring a written rationale when a guideline is not going to be utilized (NOA #0085, p. 16). I disagree with the appellants. The description of the purpose and need for action clearly states an intent to conserve and promote recovery of Canada lynx “while preserving the overall multiple-use direction in existing plans” (ROD, p. 2). See also FEIS, Vol. 1, p. 1. The management direction is programmatic and there are no project-level decisions made as part of the amendment. If a conflict between the lynx management direction and other management direction in a plan is found while developing project proposals, the more restrictive management direction will apply. See FEIS, Vol. 1, p. 135; ROD, p. 1.

Appellants are mistaken in contending the lynx management direction amendment does not require a written rationale for not utilizing a guideline. This requirement is found in the ROD, Attachment 1, p. 9. I find no violation of NFMA.

Scientific Basis

The NFMA regulations require the interdisciplinary team to “collect, assemble, and use data, maps, graphic material, and explanatory aids, of a kind, character, and quality, and to the detail appropriate for the management decisions to be made” (36 CFR 219.12(d)). NEPA regulations require that “[a]gencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements” (40 CFR 1502.24).

- *LCAS Recommendations*

Appellants contend the selected alternative fails to utilize best available science because recommendations of the Lynx Conservation Assessment and Strategy (LCAS) were not fully utilized. Specific examples provided by appellants include a lack of supporting information for not including standards related to grazing, that some standards were changed to guidelines, and that “over half of the risk factors for lynx survival and recovery are not addressed in the selected alternative” (NOA #0085, p. 10; NOA #0086, pp. 8-9).

A review of the FEIS (FEIS, Vol. 1, p. Summary-1, 9; FEIS, Vol. 1, Appendix F, pp. 457-464; FEIS, Vol. 2, pp. 29-39), BO (AR, Doc. #2397, pp. 1-3, 67, 75) and other appeal record documentation (AR, Docs. #1977 through 2027) indicates that the lynx management plan is based on current scientific literature and documentation. In 2000, the FWS concluded “if Plans are amended or revised incorporating conservation measures in the LCAS or the equivalent thereof ... the Plans would likely not jeopardize the continued existence of lynx” (FEIS, Vol. 1, p. 8). The Forest Service incorporates those conservation measures recommended in the interagency LCAS that are deemed essential to lynx conservation and which meet the purpose and need for lynx management direction. See FEIS, Vol. 1, p. 1. See also ROD, p. 1. Detailed rationale for the inclusion and/or change of recommendations from the LCAS is provided in the Biological Assessment (FEIS, Vol. 1, Appendix E, pp. 83-97) and FEIS (Vol. 1, pp. 71-102). Further, discussion in the FEIS provides a clear explanation as to why not all LCAS recommendations are included in the proposal. See FEIS, Vol. 1, pp. 101-102. See also FEIS, Vol. 1, Appendix A, pp. 401-438.

Appellants specifically mention a lack of standards related to grazing, standards being changed to guidelines, and state that “over half of the risk factors for lynx survival and recovery are not addressed in the selected alternative” (NOA #0086, p. 9). Findings by FWS published in the “Remand Notice” (AR, Doc. #1966, *Notice of Remanded Determination of the Status for the Contiguous United States Distinct Population Segment of the Canada Lynx; Clarification of Findings; Final Rule*) narrow the focus from the concerns first published in the LCAS about what management direction is needed to maintain or improve Canada lynx habitat; and this information is considered in the selected alternative. See FEIS, Vol. 1, Appendix P; FEIS, Vol. 1, p. 7; ROD, p. 3. Specifically in regards to grazing the FWS stated, “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” (AR, Doc. # 1966, p. 40083). Additionally, the response to comments on the DEIS notes “... some factors were not found as risks in the Ecology and Conservation of Lynx in the United States (Ruggiero et al. 200a). 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” (FEIS, Vol. 2, p. 34).

I find the Forest Service has complied with NFMA and NEPA by utilizing information appropriate for the decision being made. The best available science was considered in developing a lynx

management plan that meets the purpose and need of incorporating management direction into land management plans to conserve and promote recovery of Canada lynx while preserving the overall multiple-use direction in the existing plans.

- *Logging*

Appellants contend the claim is made that logging will improve lynx habitat without providing any supporting research or monitoring data (NOA #0085, pp. 9-10).

A review of the appeal record (e.g., Docs. #1977 through 2027; Doc. #1945, pp. 1-5; Doc. #2011, 15 pp.; Doc. #2012, 58 pp., Doc. #39, p. 1; see also FEIS, Vol. 1, Appendix F: Lynx Research in the Contiguous United States, pp. 457-464; FEIS, Vol. 1, pp. 380-396; and FEIS, Vol. 2, pp. 29-39) and planning documents (AR, Doc. #2397, BO- Final, pp. 1-3, 67, 75; see also FEIS, Vol. 1, pp. Summary-1, 9) indicates that the NRLA management direction and effects analysis are based on current scientific literature and documentation, and include the use of monitoring data from research (e.g., AR Doc. #1992, 2002, 23 pp).

The FEIS and Biological Assessment adequately disclose the effects of logging and timber management activities on lynx habitat. See FEIS, Vol. 1, pp. 154-172, 188-197, 199, 200-201, 219, 222, 225-228, 231-260, and 265; AR, Doc. #2032, pp. 220-21, 6-27, 36-37, 39-42. In the Remand Notice the FWS states, “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” (FEIS, Vol. 1, Appendix P, p. 40083) (ROD, p. 3). It is noted in the ROD that the FWS concludes in their BO “the management direction would overall be beneficial, but that some adverse effects to lynx would still be anticipated. It determined the management direction would not jeopardize the continued existence of lynx” (ROD, p. 29). See AR, Doc. #2397, BO-Final. The FWS identifies three reasonable and prudent measures for fuels and timber management activities that are necessary to minimize the impacts of the take and terms and conditions which must be complied with in order to implement the reasonable and prudent measures. See AR Doc. #2397, BO – Final, pp. 81-82. See also ROD, p. 30; ROD, Attachment 1, p. 9. The NRLA management direction incorporates the required terms and conditions. See ROD, Attachment 1, pp. 1-9. I find that the NRLA management direction and the FEIS effects analysis are based on current scientific literature and documentation; and comply with NFMA.

- *Over-the-Snow Activity Constraint*

Appellants contend the decision to not manage over-the-snow activities was not adequately supported by science and was therefore arbitrary (NOA #0085, p. 9). I find no basis for this contention. The FEIS, ROD, and supporting documents in the appeal record all reflect a thorough consideration of the available data on the effects over-the-snow human activities could have on lynx, acknowledge the uncertainties existing in the study results, describe consideration of more restrictive direction than that ultimately selected, and explain the rationale for the relevant management direction in the selected alternative. See FEIS, Vol. 1, pp. 175-176; FEIS, Vol. 2, pp. 76-81; ROD, pp. 22-25; AR, Doc. #2032, Biological Assessment, pp. 12-14; AR, Doc. #1966, *Federal Register Notice of Remanded Determination of Status for the Contiguous United States Distinct Population of Canada Lynx*, pp. 40097-40098. Also contrary to appellants’ contention, the selected management direction does provide for management of over-the-snow activities and

provides a basis for constraining future expansion of these activities, at least until research provides for more definitive conclusions. I find no violation of law, regulation, or policy.

- *Unsuitable Habitat*

Appellants contend the limitation on unsuitable lynx habitat is not adequately supported by science. Appellants further contend management direction does not consistently incorporate the recommendations of an important scientific reference (NOA #0085, p. 8). Another appellant contends the vegetation standards “will produce only harm to forest resources like roads, create a public safety hazard on those roads and harm segments of the populace who participate in mining, winter recreation and grazing without a concurrent benefit to lynx” (NOA #0084, pp. 2-3).

Relevant and current scientific literature and documentation containing analysis used in the development of the lynx management plan is summarized in the BO (AR, Doc. #2397, pp. 1-3, 67, 75; see also FEIS, Vol. 1, pp. Summary-1, 9) and referenced in the appeal record (Docs. #1977 through 2027; see also FEIS, Vol. 1, Appendix F, pp. 457-464; and FEIS, Vol. 2, pp. 29-39).

While not specifically stated, the appellants appear to be concerned with Standard VEG S1 (NOA #0085, pp. 7-8). Standard VEG S1, which limits the creation of unsuitable habitat to 30 percent, was “developed to address the quantity of winter snowshoe hare habitat by providing a distribution of age classes across an area” (FEIS, Vol. 1, p. 71). Rationale for Standard VEG S1 is provided in the FEIS. See FEIS, Vol. 1, pp. 71-102. As noted in the FEIS, the 30 percent standard is based upon recommendations from the interagency “Canada Lynx Conservation Assessment and Strategy” (LCAS) (FEIS, Vol. 2, Response to PCs 152 and 522, p. 36), which represents the best available science to date (AR, Doc. #2397, BO, p. 75). In the agency’s response to comments on the DEIS it is specifically stated, “[N]o 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. ...[T]he purpose of the 30 percent level in Standard VEG S1 is to ensure blocks of quality lynx habitat are maintained in each LAU. ... 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” (FEIS, Vol. 2, pp. 36-37). See also FEIS, Vol. 1, Appendix A, p. 405. A review of the appeal record demonstrates the 30 percent standard is well-supported by rationale provided in the FEIS and in the recommendations from the LCAS.

Another appellant contends the vegetation standards “will produce only harm to forest resources like roads, create a public safety hazard on those roads and harm segments of the populace who participate in mining, winter recreation and grazing without a concurrent benefit to lynx” (NOA #0084, pp. 2-3). The Purpose and Need for the lynx management direction is clearly stated in the FEIS (Vol. 1, p. 1) and ROD (p. 1). It includes the intent to both conserve and recover Canada lynx, and preserve the overall multiple-use direction in the forest plans to be amended. Thus, there is a necessary compromise between elements of lynx conservation and multiple-use. In 2000, the FWS concluded “...if Plans are amended or revised incorporating conservation measures in the LCAS or the equivalent thereof ... the Plans would likely not jeopardize the continued existence of lynx” (FEIS, Vol. 1, p. 8). The Forest Service incorporates conservation measures recommended in the interagency LCAS that are deemed essential to lynx conservation, but in consideration of the cost of other Forest programs does not apply all recommendations. Detailed rationale for the inclusion

and/or change of recommendations from the LCAS is provided in the Biological Assessment (Appendix E, pp. 83-97) and FEIS (Vol. 1, pp. 71-102; FEIS, Vol. 1, Appendix A, pp. 401-438). Additionally, findings by the FWS published in the “Remand Notice” (AR, Doc. #1966; FEIS, Vol. 1, Appendix P) narrow the focus from the concerns first published in the LCAS about what management direction is needed to maintain or improve Canada lynx habitat; and this information is considered in the selected alternative (ROD, p. 3).

I find the Forest Service has utilized best science in the development of the lynx management plan and that the decision meets the purpose and need. There is no violation of NFMA.

Monitoring

Appellants contend the FEIS violates NFMA by not including a monitoring plan for determining lynx occupancy or reproduction so that it can be determined when unoccupied habitat becomes occupied. Appellants also contend the monitoring plan must include monitoring of fuels treatments and other timber sale activities for their effects on lynx and lynx habitat (NOA #0086, pp. 2, 11-12). Land management plan monitoring requirements are established in the NFMA regulations at 36 CFR 219.12 (k).

The Northern Rockies Lynx management direction applies to occupied habitat. The ROD clearly states “... as noted in the Biological Opinion, the FWS said, and we agree that lynx detection is needed to assess whether further management direction is warranted (USDI FWS 2007). Therefore, we agree to work with the FWS to develop and complete an acceptable protocol to survey currently unoccupied lynx habitat in secondary areas as described in the Biological Opinion, Term and Condition #4” (p. 29). That non-discretionary term and condition specifies the monitoring protocol is to be developed and completed within 18 months of the date of the ROD. See AR, Doc. #2397, BO-Final, pp. 81-82.

The appellant also contends the monitoring plan must include monitoring of fuels treatments and other timber sale activities for their effects on lynx and lynx habitat (NOA #0086, pp. 2, 11-12). The FWS Reasonable and Prudent Measures (RPM) specifically require minimizing impacts of fuels management (RPM 1) and vegetation management (RPM 2) activities, and monitoring unoccupied or secondary habitat (RPM 3) (ROD, pp. 29-31; AR, Doc. #2397 BO-Final, pp. 81-82). The FWS terms and conditions also require monitoring of fuel treatment and timber management activities (ROD, pp. 29-31; AR, Doc. #2397 BO-Final, pp. 81-82). A summary of monitoring and reporting requirements, including requirements related to the terms and conditions identified by the FWS, are listed in the ROD (Attachment 1, p. 9). The monitoring identified in the ROD is adequate for the scope of the action (FEIS, Vol. 1, p. 13), and includes requirements that respond to the Purpose and Need for action (ROD, p. 2; see also FEIS, Vol. 1, p. 1) as well as the terms and conditions identified by the FWS. I find the FEIS and ROD comply with NFMA as it pertains to monitoring.

Endangered Species Act (ESA)

Several appellants make contentions questioning the new management direction’s sufficiency for achieving its purpose. One appellant contends no evidence is presented to demonstrate that new management direction will lead to increased lynx populations. Other appellants contend the decision violates the ESA because the objective of recovery of lynx cannot be met when management direction is lacking for many areas of historical lynx habitat and areas connecting occupied lynx habitat, and because lynx habitat is made secondary to ski area expansion and road improvements (NOA #0084, p. 1; #0085, p. 16; #0086, pp. 6, 7, 9-10).

The Purpose and Need for action is clearly identified in the ROD (p. 2). A review of the appeal record indicates that the Northern Rockies Lynx Management Direction is based on current scientific literature and documentation. See AR, Docs. #1977 through #2027; AR, Doc. #2397, pp. 1-3, 67,75; FEIS, Vol. 1, Appendix F, pp. 457-464; FEIS, Vol. 2, pp. 29-39; FEIS, Vol. 1, p. Summary-1, 9. The amendment incorporates those conservation measures recommended in the interagency LCAS that are deemed essential to lynx conservation and which meet the purpose and need for lynx management direction. See FEIS, Vol. 1, p. 1. See also ROD, p. 1. Detailed rationale for the inclusion and/or change of recommendations from the LCAS is provided in the Biological Assessment (FEIS, Vol.1, Appendix E, pp. 83-97) and FEIS description of alternatives (FEIS, Vol. 1, pp. 71-102). Additionally, findings by the FWS published in the “Remand Notice” (AR, Doc. #1966) narrow the focus from the concerns first published in the LCAS about what management direction is needed to maintain or improve Canada lynx habitat. See also FEIS, Vol. 1, Appendix P; FEIS, Vol. 1, p. 7. This information is considered in the selected alternative. See ROD, p. 3. For example, regarding the impacts of ski area expansion, the Regional Foresters cite the FWS Biological Opinion in concluding, “There is no information that indicates removal of ski areas is warranted, nor is limiting their expansion, as long as lynx needs are considered. The selected alternative includes standards to provide for lynx habitat connectivity, and includes guidelines to be used in the development of ski area expansion” (ROD, p. 25).

The FWS concludes in the final BO that the lynx management direction would not jeopardize the continued existence of lynx (AR, Doc. #2397, p. 75), and identifies several factors important in the assessment of jeopardy including the statements, “We have determined that the proposed action is compatible with our understanding of the recovery needs for lynx” and the proposed action is “consistent with section 7 (a)(1) of the Act through Forest Service commitments to undertake proactive management actions to benefit lynx” (AR, Doc. #2397, pp. 75-78). The amendment includes management direction, in the form of objectives, standards, and guidelines, that is specifically designed to maintain connectivity of lynx habitat. See ROD, Attachment 1, p. 1: ALL 01, ALL S1, ALL G1, and p. 8: LINK 01, LINK S1, LINK G1, LINK G2. See also FEIS, Vol. 1, pp. 184-185, 194. The FWS concludes that “the objectives, standards and guidelines ... would reduce or minimize the potential for adverse effects to lynx in most cases, and therefore the Plans would ultimately conserve adequate connectivity with occupied lynx habitat. Therefore, the proposed action, related to effects on connectivity, would not contribute to appreciably diminishing survival or recovery of lynx within occupied lynx habitat in the NRLA area” (AR, Doc. #2397, p. 41). I find the Northern Rockies Lynx Management Direction decision meets the Purpose and Need for action and is in compliance with the ESA.

Multiple Use-Sustained Yield Act

Appellant contends the decision violates the Multiple Use-Sustained Yield Act of 1960 (MUSYA) because the vegetation standards eliminate timber harvest as a “viable use” (NOA #0084, p. 3). I disagree with the appellant’s contention. The MUSYA defines multiple use as “the management of all the various renewable surface resources of the National Forests so that they are utilized in the combination that will best meet the needs of the American People; making the most judicious use of the land for some or all of these resources ... that some land will be used for less than all of the resources ... with consideration being given to the relative values of the various resources” (16 U.S.C. 531(a)).

The purpose and need for the proposal includes the preservation of “the overall multiple-use direction in existing plans” (FEIS, Vol. 1, p. 1). Management direction added to land management

plans in the northern Rockies by this decision will necessarily impose some constraints to timber harvest activities when they are necessary for the conservation of the Canada lynx; however, this management direction certainly does not preclude all timber harvest. All existing management direction in the land management plans for the purpose of providing a variety of forest resources and uses remains in those plans. See FEIS, Vol. 2, pp. 106-107.

The FEIS explains that the new management direction only applies to occupied lynx habitat and that in those areas of unoccupied habitat it is likely there would be no change in the overall timber harvest outputs, although the products harvested and locations of harvests could change. See FEIS, Vol. 1, pp. 260-261. In its assessment of effects to allowable sale quantity (ASQ), the FEIS states “there would be no change to ASQ on any unit” (FEIS, Vol. 1, p. 261), and it further determines that the proposal “would have a limited cumulative effect on the timber program” (FEIS, Vol. 1, p. 263).

I find the decision is intended to provide for an appropriate balance of forest resources, including timber management, and that there is no violation of MUSYA.

Agency Decision Making

One appeal includes various contentions regarding perceived allowances within the lynx management direction to make certain changes that would otherwise require additional measures to comply with NEPA, NFMA, and ESA. Through my review I find that there is no inherent conflict with these laws. The bases for these findings are explained below.

Appellants contend the provision allowing the Forest Service to “unilaterally” amend Lynx Analysis Unit (LAU) boundaries, occupied habitat boundaries, and core habitat boundaries without undergoing NEPA analysis and ESA compliance is a violation of those laws. Appellants contend such changes constitute an agency decision that would require compliance (NOA #0086, pp. 6, 10). The contention does not include a specific reference to where these provisions are found.

The LAU mapping units are delineated areas used to evaluate effects of management activities on individual lynx. See FEIS, Vol. 1, pp. 137, 144. They are the smallest scale analysis units used in lynx management and are intended for site-specific project-level analysis. See FEIS, Vol. 2, p. 137. Their delineation does not have to result in the creation of completely new analysis units; rather, their boundaries can rely on other already established ecological units. See AR, Doc. #28, p. 7-2. The process used for mapping lynx habitat and LAUs is described in the FEIS, Volume 1, Appendix B (pp. 446-449). Although Standard LAU S1 includes criteria for when changes to LAU boundaries can be made (ROD, Attachment 1, p. 1), the expectation is that the boundaries will remain constant (ROD, Attachment 1, p. 12).

Core habitat is one of three categories (core, secondary, and peripheral) of lynx habitat and occurrence identified in the *Recovery Plan Outline for the Contiguous United States Distinct Population Segment of Canada Lynx*, and generally encompasses areas of lynx habitat with the strongest long-term evidence of persistence of lynx populations. See AR, Doc. #2400, pp. 3-6. Core habitat is discussed in the FEIS and ROD, but is not mentioned as part of the management direction amended into land management plans.

The concept of occupied and unoccupied lynx habitat was added to the Lynx Conservation Agreement when it was renewed in 2005 (AR, Doc. #2398), and a definition of occupied habitat was added through an amendment to the agreement in 2006 (AR, Doc. #2399). It is that definition, in the form of two criteria, which is carried forward into the Northern Rockies Lynx Management

Direction (ROD, p. 29) and is used as the basis for where the amended management direction is applicable (ROD, Attachment 1, p. 1). The mapping of occupied and unoccupied habitat (FEIS, Vol. 1, Figure 1-1) simply reflects the application of these criteria using the currently available data. Therefore, the application of updated data, using the same criteria, does not constitute a programmatic decision. Changing of those criteria for occupied habitat would require a new programmatic decision supported by appropriate NFMA, NEPA, and ESA compliance measures.

The same appellants also contend the management direction permits the changing of Standard VEG S6 without meeting the compliance requirements of NEPA and NFMA, including public involvement and environmental analysis (NOA #0086, p. 12). Although the statement references Standard VEG S6, the argument appears more applicable to Standard VEG S5, and so the review was conducted on that basis.

Contrary to the appellants' contention, the management direction does not include a provision for amending Standard VEG S5 without NFMA and NEPA compliance. The standard describes where and under what circumstances the constraint on precommercial thinning projects is applicable. See ROD, Attachment 1, p. 3. It is possible that precommercial thinning could be used to provide long term benefits to snowshoe hare habitat; therefore, a criterion was included that does not require the constraining standard to be applied if new peer reviewed information accepted by the regional level of the Forest Service and the state level of the Fish and Wildlife Service supports a written determination that a project is, a) not likely to adversely affect lynx, or; b) likely to have short term adverse effects on lynx or its habitat, but would result in long-term benefits to lynx and its habitat. See ROD, pp. 12-13.

The 1982 land management planning regulations at 36 CFR 219.11(c) require forest plan contents to include "multiple-use prescriptions and associated standards and guidelines," but the regulations do not include a definition for standard. The Northern Rockies Lynx Management Direction FEIS does define standard as "a required action ... specifying how to achieve an objective or under what circumstances to refrain from taking action" (FEIS, Vol. 1, p. 376). The structure of standard VEG S5 is consistent with this definition. It should also be noted that application of the exceptions provision of this standard will be in conjunction with a project-level proposal and decision, which itself will be subject to compliance with NEPA (including appropriate public involvement) and ESA. I find that standard VEG S5 can be applied without violating NEPA or NFMA.