

Chapter 2 – Issues and Alternatives

Introduction

Chapter 2 describes the proposed action developed in response to the purpose and need identified in Chapter 1. It includes descriptions of alternatives to the proposed action, identifying options for resolving issues raised during scoping. It also describes a no action alternative, defined as no change from the direction already provided in existing plans.

The proposed action and its alternatives are programmatic in nature – they do not prescribe any site-specific activities on the ground. They are not irreversible decisions; they may be amended again or revised as needed, subject to Endangered Species Act (ESA) consultation with the USDI Fish and Wildlife Service (FWS).

After a decision has been made that selects an alternative, a site-specific activity would be subject to separate National Environmental Policy Act (NEPA) review and a separate decision. Separate ESA consultation with the FWS would have to take place if analysis showed a proposed project may affect lynx or its habitat.

Scoping

The Notice of Intent to prepare an Environmental Impact Statement for the proposed amendment was published in the *Federal Register* (USDA FS 2000a). A revised notice was published in the *Federal Register* (USDA FS 2000b).

An official website was started at www.fs.fed.us/r2/lynx/index.html.

Comments were solicited from individuals and organizations, and from federal, state and local agencies interested in or affected by the proposed action.

Issues

The National Environmental Policy Act directs that federal agencies shall “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflict concerning alternative uses of available resources.” Three key issues were identified that reflect conflicts that may be resolved by developing alternatives that meet the purpose and need.

The following describes the significant and key issues identified for this analysis and factors used to describe the effects of the alternatives.

Significant Issues

Three significant issues were identified. These issues drove the formulation of alternatives and the subsequent environmental analysis of the alternatives.

1. **Lynx Productivity, Mortality and Movements**—brought forward from the purpose and need discussion in Chapter 1:
 - a. Forest management activities such as timber harvest, precommercial thinning, grazing, fire, salvage harvest may impact lynx productivity by affecting denning and foraging habitat.
 - b. Human use activities resulting in snow compaction may reduce lynx productivity by reducing the prey resource as a result of allowing competing predators into lynx habitat areas during the winter.
 - c. Landscape connectivity can be affected by management activities, which can negatively impact lynx movements (and therefore productivity), and can increase mortality.

2. **Public Safety**

The proposed amendment may negatively affect public safety by limiting vegetation treatments to create defensible fuels profiles in support of the Fire Use Program.

3. **Human Uses**

The proposed amendment may negatively impact human uses of the forest by limiting winter recreation (i.e. snowmobiling, cross country skiing, ski area expansion), minerals, timber harvest, land adjustments, and lands special use activities and practices.

Key Issues

Two key issues were identified. These issues did not drive the formulation of alternatives, but were considered in alternative development and the subsequent environmental analysis of the alternatives.

1. **Management Indicator Species (MIS)**

The proposed action may result in negative, beneficial or no effect to MIS found in lynx habitat.

2. **Other Threatened, Endangered, and Proposed Species**

The proposed action may affect listed species (plant and animal), other than the lynx.

Alternatives

An environmental impact statement must “rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for why they were eliminated” per 40 CFR 1502.14(a). The courts have established that this direction does not mean every conceivable alternative must be considered, but that the selection and discussion of alternatives must permit a reasoned choice and foster informed public participation and decision-making. A reasonable alternative is one that meets the purpose and need and responds to one or more of the key issues.

The range of alternatives presented in this chapter was developed by evaluating comments in the context of the purpose and need. Other considerations included available scientific information on conserving the Canada lynx, the listing decision, and Endangered Species Act (ESA) requirements. Within these parameters, the alternatives display a reasonable range of programmatic direction to guide future project implementation, while responding to the issues and still meeting the purpose and need.

In addition to the four alternatives considered in detail, six alternatives were considered but eliminated from detail study. There is a brief explanation for each of the eliminated alternatives stating why they were not considered in detail. A comparison of the proposed action and the three other considered alternatives is displayed in Table 2-1.

Alternative A - No Action

Analyzing a no action alternative is a requirement of NEPA and Forest Service planning procedures. In this case, it means no change in current management (i.e., no amendment to current Forest Plans). However, this alternative may not provide for lynx persistence and recovery in the Southern Rocky Mountains Geographic Area (SRMGA).

The no action alternative is based on the management areas, standards and guidelines in the current Forest Plans. The no action alternative is also based on policies and analysis requirements in the current Code of Federal Regulations and Forest Service Manual and Handbook direction including the road analysis requirements.

The no action alternative does not include the conservation measures in the Lynx Conservation and Assessment Strategy (LCAS). While the Forest Service has been using the LCAS to evaluate projects, in accordance with their Conservation Agreements with the FWS, the measures have not been adopted as plan direction.

Alternative B - Proposed Action

Alternative B provides for the conservation and recovery of the Canada Lynx. Alternative B is based on the *Canada Lynx Conservation Assessment and Strategy* (LCAS) and includes management direction for vegetation and human use management activities and practices in lynx habitat and linkage areas. Alternative B is designed to address activities on NFS lands that can affect lynx and their habitat.

Timber and wildland fire management

Timber and wildland fire management both can affect the amount of lynx forage and denning habitat. The proposed action would add management direction to provide certain habitat conditions.

Objectives describe desired conditions.

- ☞ Objectives VEG O1 and VEG O3 focus on using fire and timber management to emulate historic processes.
- ☞ Objective VEG O2 notes forage habitat should be near denning habitat.
- ☞ Objectives VEG O3 and VEG O4 encourage using fire and timber management to develop lynx foraging habitat.

Standards set sideboards for projects.

- ☞ Standard VEG S1 limits to 30 percent in an LAU, the amount of lynx habitat that should be in an unsuitable condition. “Unsuitable habitat” is very young forests, where the trees are generally less than 15 to 20 years old, and the vegetation has not yet grown up enough to support snowshoe hares during all seasons. Over time, it will grow into foraging habitat. The standard is meant to ensure lynx habitat is maintained at the scale of a lynx home range. Standard VEG S1 is not intended to imply wildfires should be suppressed where the result of a fire would be that the standard was exceeded. The standard is based on general information about historic conditions, and does not apply if a broadscale assessment substantiates different historical levels.
- ☞ Standard VEG S2 limits to 15 percent in 10 years the amount of lynx habitat in an LAU that can be made unsuitable because of timber harvest. Timber harvest is not an exact ecological substitute for natural disturbance processes (LCAS pp. 2-2 through 2-3). Limiting the amount of timber harvest would allow room for the natural disturbance processes – fire and insect and diseases – to play their historic roles producing unsuitable habitat, and later, foraging conditions.
- ☞ Standards VEG S3 and VEG S4 direct denning habitat be maintained.
- ☞ Standard VEG S5 limits precommercial thinning so that existing lynx foraging habitat will be maintained. Exceptions are made for safety and protecting property.
- ☞ Standard VEG S6 provides for the management of older Engelmann spruce-subalpine fir stands to provide snowshoe hare habitat.

Guidelines identify ways to meet the objectives.

- ☞ Guideline VEG G1 encourages managers to create foraging habitat where it’s lacking.

- ~~☞~~ Guidelines VEG G2 and VEG G3 note denning habitat needs and proximity to foraging habitat should be considered when timber and fire projects are designed.
- ~~☞~~ Guideline VEG G4 notes using fire should not create new trails that will lead to more snow compaction, and permanent firebreaks should not be built on ridges and saddles.
- ~~☞~~ Guideline VEG G5 notes habitat for red squirrels should be provided.

Livestock grazing

Livestock grazing may reduce lynx foraging habitat, especially where very young forests are re-growing, in stands of aspen and in wet areas. Livestock grazing also may reduce shrub-steppe habitat, which provides cover and prey for lynx when they're traveling.

- ~~☞~~ Objective GRAZ O1 notes grazing should be managed in a way that maintains or improves lynx habitat.
- ~~☞~~ Standard GRAZ S1 notes to manage so that shrubs and trees can re-grow.
- ~~☞~~ Standard GRAZ S2 notes to manage so aspen can survive.
- ~~☞~~ Standards GRAZ S3 and GRAZ S4 note that in wet areas and shrub-steppe habitats, historic conditions should be emulated.

Human uses

Recreational use, forest backcountry roads and trails and other human developments may reduce lynx habitat connectivity or, by compacting snow, may provide a way for other predators to move into lynx habitat.

- ~~☞~~ Objective HU O1 and Guideline HU G4 discourage snow-compacting activities in lynx habitat.
- ~~☞~~ Objectives HU O2, HU O4 and HU O5, and Guidelines HU G1, G2, G3 and G5, note to provide lynx habitat.
- ~~☞~~ Objectives HU O2, HO O3, HU O4, HU O 5 and HU O6, and Guidelines HU G2, HU G3, HU G6, HU G7, HU G8 and HU G9 note to maintain lynx habitat connectivity.
- ~~☞~~ Standard HU S1 maintains the status quo for snow-compacted areas. This would not limit dispersed use.
- ~~☞~~ Standard HU S3 controls where winter access other than for recreation may occur.
- ~~☞~~ Standard HU S2 notes ski area expansions will maintain and provide diurnal security habitat where needed.

Highways and private land developments

Highways and private land developments may affect lynx connectivity or mortality.

- ~~☞~~ Objectives ALL O1, LINK O1 note to provide lynx habitat connectivity.
- ~~☞~~ Objective LINK O1 encourages working with private landowners to reduce impacts to lynx.
- ~~☞~~ Standard ALL S1 ensures developments and vegetative management projects provide lynx habitat connectivity.
- ~~☞~~ Standard LINK S1 notes to identify potential highway crossings.
- ~~☞~~ Standard LINK S2 directs managing shrub-steppe habitats to provide habitat connectivity.

- ~~§~~ Guideline ALL G1 notes to use highway-crossing structures to provide habitat connectivity.
- ~~§~~ Guideline LINK G1 notes to retain National Forest System lynx habitat in public ownership.

Alternative C

Alternative C was designed to respond to key issues, while still providing for the conservation and recovery of the Canada lynx. The changes from Alternative B are:

- ~~§~~ Standard VEG S1 is changed to increase the scale at which it's applied. Alternative C would apply the 30 percent standard to either an LAU or a combination of adjacent LAUs, so disturbance processes like fire could be factored in. In Alternative C, the standard would no longer limit the use of prescribed fire.
- ~~§~~ Standard VEG S2 is changed to a guideline to allow additional flexibility in project planning.
- ~~§~~ Standard VEG S4 changed to allow salvage logging in disturbed areas smaller than 5 acres, when such areas are within 200 feet of administrative sites, dwellings, and outbuildings. Would provide for most fire and fuel management activities and practices.
- ~~§~~ Standard VEG S5 was changed to apply to all vegetation management and to allow projects for research and genetic tests, to learn more about the effects of thinning and continue the genetic tree improvement program. Would provide for most fire and fuel management activities and practices.
- ~~§~~ Standard VEG S6 would provide for carrying out most fire and fuel management activities and practices.
- ~~§~~ Standard HU S1 is changed to increase the scale at which it's applied. The no-net-increase standard for groomed or designated routes may be applied to either an LAU or a combination of immediately adjacent LAUs, to manage winter recreation more effectively.
- ~~§~~ Standard HU S2 is changed to a guideline. Not all ski areas need to provide diurnal security habitat. Diurnal security habitat can be provided adjacent to ski areas, not just inside them. However, diurnal security does need to be taken into consideration when ski areas are developing or expanding.
- ~~§~~ Guideline HU G6 changed emphasis from "avoid" to reduce effects of upgrading roads, if upgrading leads to substantial increases in traffic volumes or speeds. Some roads may be proposed for upgrades to reduce pollution, or to ensure safety and reduce maintenance.
- ~~§~~ Guideline HU G10 was added to mitigate the effects from projects that result in winter forage habitat conversions by improving "other lynx habitat."

Alternative D

Alternative D was designed to go further in responding to the key issues than Alternative C while still contributing to the conservation of lynx. It was developed to provide a broader range of alternatives and provides greater flexibility for multiple use management. The changes from Alternative C are:

- ~~✍~~ Standard ALL S1 was modified to provide assurance that collaborative fuels reduction and fossil fuels projects would not be affected by the standard.
- ~~✍~~ Standard ALL S2 was added to allow a project to go forward under certain circumstances without a Forest Plan amendment if it deviates from a lynx standard but is determined to not likely to adversely affect lynx or if it may result in short-term adverse effects to lynx but if long-term benefits to lynx and its habitat would result.
- ~~✍~~ Standards VEG S1 and S3 were modified to provide assurance that collaborative fuels reduction projects would not be affected by the standard.
- ~~✍~~ Standard VEG S4 was changed to a guideline (VEG G8) noting salvage logging should be limited after a disturbance kills trees in areas of 5 acres or less.
- ~~✍~~ Standard VEG S5 was changed to allow projects that would encourage lodgepole pine forests to develop old-growth characteristics. This standard provides assurance that collaborative fuels reduction projects would not be restricted by this standard.
- ~~✍~~ Guideline VEG G6 that addressed managing for mature and late successional stage spruce-fir stands was added in place of the Standard VEG S6.
- ~~✍~~ Guideline VEG G8 was added for disturbances in place of Standard VEG S4.
- ~~✍~~ Guidelines GRAZ G1, G2, G3 and G4 that pertain to livestock grazing management were added in place of the Standards GRAZ S1, S2, S3 and S4 in response to the U.S. Fish and Wildlife Service's determination that grazing is not a threat to lynx.
- ~~✍~~ Guideline HU G10, as it appears in Alternative C was dropped. This guideline mitigated the effects from projects that result in winter forage habitat conversions.
- ~~✍~~ Guideline HU G10 was added in place of Standard HU S1 in response to the U.S. Fish and Wildlife Service's determination that snow compaction is not a threat to lynx.
- ~~✍~~ Guideline LINK G2 was added in place of Standard LINK S2 in response to the U.S. Fish and Wildlife Service's determination that livestock grazing is not a threat to lynx.

Table 2-1. Displays the differences between Proposed Action and the Alternatives.

Table 2-1 Description of the Action Alternatives

Southern Rockies Lynx Amendment DEIS Descriptions of the Action Alternatives		
<p>Bold words are defined in the glossary. Differences between the alternatives are <i>italicized</i>. O=objective; S=standard; G=guideline</p>		
<p>Features common to all Alternatives.</p> <p>1. The following goals, objectives, standards, and guidelines would be incorporated into existing Forest Plans. Where there is a conflict between this management direction and the existing Forest Plan, the direction that is the most restrictive would apply except for the Medicine Bow National Forest. For example, if there is a conflict between a standard in this amendment and a standard in the existing Plan, the standard that would most restrict the proposed management activity or practice must take precedent. However, for the Medicine Bow National Forest, the measures listed below would supercede the management direction for lynx incorporated in the recently Revised Forest Plan regardless of whether or not it was more or less restrictive.</p> <p>2. The following goals, objectives, standards, and guidelines apply only to National Forest System lands.</p> <p style="padding-left: 40px;">Goals describe desired end results and are expressed in broad general terms;</p> <p style="padding-left: 40px;">Objectives are concise statements of measurable desired results intended to promote achievement of goals;</p> <p style="padding-left: 40px;">Standards are limitations on management activities that are within the authority and ability of the agency to meet or enforce. Standards are mandatory. Deviation from standards requires a Plan amendment and;</p> <p style="padding-left: 40px;">Guidelines are preferred or advisable courses of action. Deviations from guidelines are permissible if the responsible official documents the reasons for the deviation.</p> <p>NA indicates not applicable.</p>		
ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
<p>GOAL: Conserve the Canada lynx.</p>		
<p>ALL MANAGEMENT ACTIVITIES AND PRACTICES (ALL) - Applies to lynx habitat in Lynx Analysis Units (LAUs), and in linkage areas subject to valid existing rights.</p>		
<p>ALL O1. Maintain or restore lynx habitat connectivity.</p>	<p>(Same)</p>	<p>(Same)</p>
<p>ALL S1. New or expanded permanent developments and vegetation management practices and activities must maintain habitat connectivity.</p> <p>This standard does not apply to: 1. <i>Wildland Fire Use practices and activities that restore ecological processes</i></p>	<p>ALL S1. New or expanded permanent developments and vegetation management practices and activities must maintain habitat connectivity.</p> <p>This standard does not apply to: 1. <i>Wildland Fire Use practices and activities that restore ecological processes</i></p>	<p>ALL S1. New or expanded permanent developments and vegetation management practices and activities must maintain habitat connectivity.</p> <p>This standard does not apply to: 1. <i>Fire Use practices and activities that restore ecological processes.</i></p>

ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
<p><i>processes.</i></p> <p>2. Wildfire suppression.</p>	<p><i>processes.</i></p> <p>2. Wildfire suppression.</p>	<p>2. Wildfire suppression.</p> <p>3. <i>Fuel treatments 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.</i></p> <p>4. <i>Fossil fuel exploration and development practices and activities.</i></p> <p>5. <i>Energy transmission facilities associated practices and activities.</i></p>
NA	NA	<p>ALL S2. A project proposal that deviates from one or more lynx standards may proceed without amending the Plan, subject to ESA requirements, either:</p> <p>1. If a written determination is made that the project is not likely to adversely affect lynx; or</p> <p>2. If it may result in short-term adverse effects to lynx but if long-term benefits to lynx and its habitat would result.</p>
<p>ALL G1. Techniques to avoid or reduce effects on lynx should be used when constructing or reconstructing highways. Techniques could include underpasses or overpasses.</p>	(Same)	(Same)
<p>LAU S1. LAU boundaries would not be adjusted except through agreement with the US Fish and Wildlife Service, based on new lynx habitat information.</p>	(Same)	(Same)
<p>VEGETATION MANAGEMENT ACTIVITIES AND PRACTICES (VEG) - Applies to lynx habitat in LAUs subject to valid existing rights.</p>		
<p>VEG O1. Manage vegetation to be consistent with historical succession and disturbance processes while maintaining habitat components necessary for the conservation of lynx.</p>	(Same)	(Same)
<p>VEG O2. Maintain or improve lynx habitat, with an emphasis on continued availability of high-quality foraging habitat in juxtaposition to denning habitat.</p>	(Same)	(Same)

ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
VEG O3. Conduct fire use activities to restore ecological processes and maintain or improve lynx habitat.	(Same)	(Same)
VEG O4. Design regeneration harvest , reforestation, and thinning to develop characteristics suitable for lynx and snowshoe hare habitat .	(Same)	(Same)
<p>VEG S1. Unless a broad scale assessment has been completed that substantiates different historical levels of unsuitable habitat, limit disturbance within each LAU as follows: if more than 30 percent of lynx habitat within a LAU on NFS lands is currently in unsuitable condition, no further reduction of suitable conditions shall occur as a result of vegetation management activities or practices.</p> <p>This standard does not apply to:</p> <ol style="list-style-type: none"> 1. Wildland Fire Use practices and activities that restore ecological processes, or maintain or improve lynx habitat. 2. Wildfire suppression. 	<p>VEG S1. Unless a broad scale assessment has been completed that substantiates different historical levels of unsuitable habitat, limit disturbance within each LAU or <i>in combination with immediately adjacent LAUs on NFS lands</i> as follows: if more than 30 percent of lynx habitat within a LAU or <i>combination of LAUs</i> is currently in unsuitable condition, no further reduction of suitable conditions shall occur as a result of vegetation management activities or practices.</p> <p>This standard does not apply to:</p> <ol style="list-style-type: none"> 1. Fire Use practices and activities that restore ecological processes, or maintain or improve lynx habitat. 2. Wildfire suppression. <p>Use the same analysis boundaries for all future vegetation management projects subject to this standard.</p>	<p>VEG S1. Unless a broad scale assessment has been completed that substantiates different historical levels of unsuitable habitat, limit disturbance within each LAU or <i>in combination with immediately adjacent LAUs on NFS lands</i> as follows: if more than 30 percent of lynx habitat within a LAU or <i>combination of LAUs</i> is currently in unsuitable condition, no further reduction of suitable conditions shall occur as a result of vegetation management activities or practices.</p> <p>This standard does not apply to:</p> <ol style="list-style-type: none"> 1. Fire Use practices and activities that restore ecological processes, or maintain or improve lynx habitat. 2. Wildfire suppression. 3. <i>Fuel treatments identified through a process such as that described in <u>A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment 10-Year Comprehensive Strategy Implementation Plan.</u></i> <p>Use the same analysis boundaries for all future vegetation management projects subject to this standard.</p>
VEG S2. Timber management practices , such as timber harvest and salvage sales, shall not change more than 15 percent of lynx habitat within a LAU to an unsuitable condition within a 10-year period.	(See VEG G7.)	(See VEG G7.)
VEG S3. Maintain denning habitat within a LAU in patches generally larger than 5 acres comprising at least 10 percent of the lynx habitat. Where less than 10 percent denning habitat is present in a LAU, defer	(Same as Alternative B)	VEG S3. Maintain denning habitat within a LAU in patches generally larger than 5 acres comprising at least 10 percent of the lynx habitat. Where less than 10 percent denning habitat is present in

ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
<p>vegetation management practices and activities in stands that have the highest potential to develop denning-habitat.</p> <p>This standard does not apply to:</p> <ol style="list-style-type: none"> 1. Wildland Fire Use practices and activities that restore ecological processes. 2. Wildfire suppression. 		<p>a LAU, defer vegetation management practices and activities in stands that have the highest potential to develop denning-habitat.</p> <p>This standard does not apply to:</p> <ol style="list-style-type: none"> 1. Wildland Fire Use practices and activities that restore ecological processes. 2. Wildfire suppression. 3. <i>Fuel treatments identified through a process such as that described in <u>A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment 10-Year Comprehensive Strategy Implementation Plan.</u></i>
<p>VEG S4. Following a disturbance, such as blowdown, fires, insects, or pathogens mortality that could contribute to lynx denning habitat, salvage harvest may only occur when the affected area is smaller than 5 acres in the following situations:</p> <ol style="list-style-type: none"> 1. Developed recreation sites, administrative sites, or authorized special use structures or improvements; 2. Designated road and trail corridors where public safety or access has been or may be compromised; and 3. LAUs where denning habitat has been mapped and field validated, provided that at least 10 percent denning habitat is retained and is well distributed. 4. <i>Within the structure ignition zone (200 feet of administrative sites, dwellings and/or associated outbuildings).</i> 5. Wildfire suppression. 6. Removal of dead or down trees for personal use (i.e., firewood collection). 	<p>VEG S4. Following a disturbance, such as blowdown, fires, insects, or pathogens mortality that could contribute to lynx denning habitat, salvage harvest may only occur when the affected area is smaller than 5 acres in the following situations:</p> <ol style="list-style-type: none"> 1. Developed recreation sites, administrative sites, or authorized special use structures or improvements; 2. Designated road and trail corridors where public safety or access has been or may be compromised; 3. LAUs where denning habitat has been mapped and field validated, provided that at least 10 percent denning habitat is retained and is well distributed. 4. Conducted within the structure ignition zone (200 feet of administrative sites, dwellings and/or associated outbuildings); <i>landscape settings critical for the creation of defensible fuels profiles to reduce the wildland fire threat to communities and associated infrastructure, developments and municipal watersheds; or to facilitate fire use practices and activities that restore ecological processes, or that maintain or improve lynx habitat.</i> 	<p>(See VEG G8)</p>

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	<p>5. Wildfire suppression. 6. Removal of dead or down trees for personal use (i.e., firewood collection).</p>	
<p>VEG S5. Precommercial thinning may be allowed only when stands no longer provide snowshoe hare habitat (e.g., self-pruning processes or stand composition and/or stand structure do not provide snowshoe hare cover and forage availability during winter conditions with average snow pack).</p> <p>The following precommercial thinning activities may occur prior to the stands no longer providing snowshoe hare habitat:</p> <ol style="list-style-type: none"> 1. Conducted within the structure ignition zone (200 feet of administrative sites, dwellings and/or associated outbuildings). <p>This standard does not apply to:</p> <ol style="list-style-type: none"> 1. Livestock grazing practices and activities. 2. Wildfire suppression. 3. Wildland Fire Use. 4. Developed recreation sites, administrative sites, or authorized special use improvements including within permitted ski area boundaries. 	<p>VEG S5. Precommercial thinning may be allowed only when stands no longer provide snowshoe hare habitat (e.g., self-pruning processes or stand composition and/or stand structure do not provide snowshoe hare cover and forage availability during winter conditions with average snow pack).</p> <p>The following precommercial thinning activities may occur prior to the stands no longer providing snow hare habitat:</p> <ol style="list-style-type: none"> 1. <i>Research studies and genetic tests (i.e., performance tests) necessary to evaluate genetically improved reforestation stock.</i> 2. <i>Conducted within the structure ignition zone (200 feet of administrative sites, dwellings and/or associated outbuildings); landscape settings critical for the creation of defensible fuels profiles to reduce the wildland fire threat to communities and associated infrastructure, developments and municipal watersheds; or to facilitate fire use practices and activities that restore ecological processes, or that maintain or improve lynx habitat.</i> <p>This standard does not apply to:</p> <ol style="list-style-type: none"> 1. Livestock grazing practices and activities. 2. Wildfire suppression. 3. Wildland Fire Use. 4. Developed recreation sites, administrative sites, or authorized special use improvements including within permitted ski area boundaries. 	<p>VEG S5. Vegetation management practices and activities that reduce snowshoe hare habitat may occur in forest stands with a structure and species composition that provides snowshoe hare cover and forage during winter only in the following situations:</p> <ol style="list-style-type: none"> 1. <i>Associated with research studies and genetic tests (i.e., performance tests, long-term field tests and realized gain trials) necessary to evaluate genetically improved reforestation stock.</i> 2. <i>Conifer removal within aspen clones and/or daylight thinning around individual aspen trees.</i> 3. <i>Stands identified as “replacement” or “future” lodgepole old growth in the Forest Plan to provide structural and species diversity.</i> 4. <i>When a broad scale assessment has determined that early seral stages of forested habitat exceed what would be expected under the normal range of historic conditions.</i> 5. <i>Pruning, transplants, and Christmas tree and ornamental tree harvest if done so as to not measurably reduce lynx forage habitat.</i> 6. <i>Salvage and regeneration harvests.</i> 7. <i>Precommercial thinning conducted within the structure ignition zone (200 feet of administrative sites, dwellings and/or associated outbuildings).</i> <p>This standard does not apply to:</p> <ol style="list-style-type: none"> 1. Livestock grazing practices and activities. 2. Wildfire suppression. 3. <i>Fire use practices and activities that restore ecological processes.</i> 4. Developed recreation sites, administrative sites, or authorized special use improvements including

ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
		<p>within permitted ski area boundaries.</p> <p><i>5. Fuel treatments identified through a process such as that described in <u>A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment 10-Year Comprehensive Strategy Implementation Plan.</u></i></p>
<p>VEG S6. Management practices and activities in mature and late successional, multi-layered Engelmann spruce-subalpine fir stands shall provide for winter snowshoe hare habitat.</p> <p>This standard does not apply to:</p> <ol style="list-style-type: none"> 1. Designated road and trail corridors where public safety or access has been or may be compromised; 2. Practices and activities conducted within the structure ignition zone (200 feet of administrative sites, dwellings and/or associated outbuildings). 3. Wildfire suppression. 4. Wildland Fire Use. 5. Developed recreation sites, administrative sites, or authorized special use improvements including within permitted ski area boundaries. 	<p>VEG S6. Management practices and activities in mature and late successional, multi-layered Engelmann spruce-subalpine fir stands shall provide for winter snowshoe hare habitat.</p> <p>This standard does not apply to:</p> <ol style="list-style-type: none"> 1. Designated road and trail corridors where public safety or access has been or may be compromised; 2. Practices and activities conducted within the structure ignition zone (200 feet of administrative sites, dwellings and/or associated outbuildings); <i>landscape settings critical for the creation of defensible fuels profiles to reduce the wildland fire threat to communities and associated infrastructure, developments and municipal watersheds; or to facilitate fire use practices and activities that restore ecological processes, or that maintain or improve lynx habitat.</i> 3. Wildfire suppression. 4. Wildand Fire Use. 5. Developed recreation sites, administrative sites, or authorized special use improvements including within permitted ski area boundaries. 	<p>(See VEG G6)</p>
<p>VEG G1. Where little or no habitat for snowshoe hares is currently available, vegetation management practices should be planned to recruit a high density of conifers, hardwoods, and shrubs preferred by</p>	<p>(Same)</p>	<p>(Same)</p>

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snowshoe hares. Preference should be given to mesic sites and mid-seral stage stands. Provide for continuing availability of lynx foraging habitat in proximity to denning habitat .		
VEG G2. Where recruitment of additional denning habitat is desired, vegetation management practices should retain sufficient standing dead trees and coarse woody debris , consistent with the likely availability of such material under natural disturbance regimes. The juxtaposition of denning and foraging habitat should be maintained or improved.	(Same)	(Same)
VEG G3. Vegetation management should provide for the retention or restoration of denning habitat on landscape settings with a low probability of loss from stand replacing fire events.	(Same)	(Same)
VEG G4. Fire management activities should not create permanent travel routes that would facilitate snow compacting activities. Construction of permanent firebreaks on ridges or saddles should be avoided.	(Same)	(Same)
VEG G5. Habitat for alternate prey species (primarily red squirrel) should be provided in each LAU.	(Same)	(Same)
(NA)	(NA)	VEG G6. <i>Mature and late successional, multi-layered Engelmann spruce-subalpine fir stands should be managed to provide for winter snowshoe hare habitat.</i>
(NA - See VEG S2.)	VEG G7. <i>Timber management practices should not change more than 15 percent of lynx habitat within a LAU to an unsuitable condition within a 10-year period.</i>	(Same as Alternative C)
(NA - See VEG S4.)	(NA - See VEG S4.)	VEG G8. Following a disturbance, such as blowdown, fires, insects, or pathogens mortality that could contribute to lynx denning habitat , salvage harvest should not occur when the affected area is smaller than 5 acres, unless denning habitat

ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
		has been mapped and field validated, provided that at least 10 percent denning habitat is retained and is well distributed.
LIVESTOCK GRAZING MANAGEMENT ACTIVITIES AND PRACTICES (GRAZ) - Applies to lynx habitat in LAUs subject to valid existing rights.		
GRAZ O1. Manage livestock grazing to be compatible with the improvement or maintenance of lynx habitat.	(Same)	(Same)
GRAZ S1. In fire- and harvest-created openings, manage livestock grazing to ensure impacts do not prevent successful regeneration of shrubs and trees.	(Same)	(See GRAZ G1)
GRAZ S2. In aspen stands, manage livestock grazing to ensure impacts do not prevent or inhibit sprout survival sufficient to perpetuate the long-term viability of the clones.	(Same)	(See GRAZ G2)
GRAZ S3. Manage livestock grazing in riparian areas, and willow carrs , to contribute to maintaining or achieving a preponderance of mid- or later-seral stages , similar to conditions that would have occurred under historic disturbance regimes.	(Same)	(See GRAZ G3)
GRAZ S4. Manage livestock grazing in shrub steppe habitats, in the elevational ranges that encompass forested lynx habitat (within LAUs) to contribute to maintaining or achieving a preponderance of mid- or late-seral stages, similar the conditions that would have occurred under historic disturbance regimes.	(Same)	(See GRAZ G4)
(NA – See GRAZ S1)	(NA – See GRAZ S1)	GRAZ G1. In fire- and harvest-created openings, livestock grazing should be managed so impacts do not prevent shrubs and trees from regenerating.
(NA – See GRAZ S2)	(NA – See GRAZ S2)	GRAZ G2. In aspen stands, livestock grazing should be managed to contribute to long-term viability of the clones.
(NA – See GRAZ S3)	(NA – See GRAZ S3)	GRAZ G3. In riparian areas and willow carrs , livestock grazing would be managed to contribute to maintaining or achieving a preponderance of mid- or later-seral stages , similar to conditions

ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
		that would have occurred under historic disturbance regimes.
(NA – See GRAZ S4)	(NA – See GRAZ S4)	GRAZ G4. Livestock grazing in shrub steppe habitats, in the elevational ranges that encompass forested lynx habitat (within LAUs) should be managed to contribute to maintaining or achieving a preponderance of mid- or late-seral stages, similar the conditions that would have occurred under historic disturbance regimes.
HUMAN USES MANAGEMENT ACTIVITIES AND PRACTICES (HU) - Applies to lynx habitat in LAUs subject to valid existing rights.		
HU O1. Maintain the lynx’s natural competitive advantage over other predators in deep-snow by discouraging the expansion of snow compaction activities in lynx habitat.	(Same)	(Same)
HU O2. Manage recreational activities to maintain lynx habitat and connectivity.	(Same)	(Same)
HU O3. Concentrate activities in existing developed areas, rather than developing new areas in lynx habitat.	(Same)	(Same)
HU O4. Provide for lynx habitat needs and connectivity when developing or expanding developed recreation sites or ski areas.	(Same)	(Same)
HU O5. Manage human activities, such as special uses, mineral and oil and gas exploration and development, and placement of utility transmission corridors, to reduce impacts on lynx and lynx habitat.	(Same)	(Same)
HU O6. Reduce adverse highway effects on lynx by working cooperatively with other agencies to provide for lynx movement and habitat connectivity, and to reduce the potential for lynx mortality.	(Same)	(Same)
HU S1. Allow no net increase in groomed or designated over-the-snow routes outside of baseline areas of consistent snow compaction , within the lynx habitat matrix , by LAU unless the grooming or designation serves to consolidate use and improve lynx habitat. This does not apply within permitted	HU S1. Allow no net increase in groomed or designated over-the-snow routes outside of baseline areas of consistent snow compaction , within the lynx habitat matrix , <i>by LAU or in a combination of immediately adjacent LAUs</i> unless the grooming or designation serves to consolidate use and improve lynx habitat.	See Guideline HU G10

ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
<p>ski area boundaries, to winter logging, reroutes that reduce public risks from avalanches, access to private in-holdings, roads and trails designed and managed for non-winter use, and to other access regulated by HU S3.</p> <p>Special Use Permits, authorizations, or agreements could be allowed to expand inside baseline routes and baseline areas of consistent snow compaction.</p> <p>Grooming could be allowed to expand in side baseline areas of consistent snow compaction, and on routes that have been designated but not groomed in the past.</p>	<p>This standard does not apply inside permitted ski area boundaries, to winter logging, reroutes that reduce public risks from avalanches, access to private inholdings, roads and trails designed and managed for non-winter use, and to other access regulated by HU S3.</p> <p>Special Use Permits, authorizations, or agreements could be allowed to expand inside baseline routes and baseline areas of consistent snow compaction.</p> <p>Grooming could be allowed to expand inside baseline areas of consistent snow compaction, and on routes that have been designated but not groomed in the past.</p>	
<p>HU S2. When developing or expanding ski areas, locate trails, access roads and lift termini to maintain and provide lynx diurnal security habitat if it is identified as a need.</p>	See HU G11.	See HU G11.
<p>HU S3. 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.</p>	(Same)	HU S3. Winter access for non-recreation special uses shall be limited to designated routes or designated over-the-snow routes.
<p>HU G1. When developing or expanding ski areas, provisions should be made for adequately sized inter-trail islands that include coarse woody debris to maintain lynx foraging habitat.</p>	(Same)	(Same)
<p>HU G2. When developing or expanding ski areas, nocturnal foraging opportunities should be provided consistent with the ski area's operational needs, especially where lynx habitat occurs as narrow bands of coniferous forest across mountain slopes.</p>	(Same)	(Same)
<p>HU G3. Recreational development and recreational operational uses should be planned to provide for lynx movement and to maintain effectiveness of lynx habitat.</p>	(Same)	(Same)
<p>HU G4. Remote monitoring of mineral and energy development</p>	(Same)	(Same)

ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
sites and facilities should be encouraged to reduce snow compaction.		
HU G5. A reclamation plan should be developed (e.g. road reclamation and vegetation rehabilitation) for closed mineral and energy development sites and facilities that promote the restoration of lynx habitat.	(Same)	(Same)
HU G6. Upgrading unpaved roads that would result in increased speeds and traffic volume or that would foreseeably contribute to development or increases in human activity in lynx habitat should be avoided. This applies to upgrading roads to higher maintenance levels (to maintenance levels 4 or 5) that would result in substantially increased speeds, traffic volume or potential future use.	HU G6. <i>Methods to avoid or reduce effects to lynx habitat connectivity should be used when upgrading unpaved roads to maintenance levels 4 or 5 where the result would be increased traffic speeds and volumes, or contribute to development or increases in human activity.</i>	(Same as Alternative C)
HU G7. New permanent roads should not be built on ridge tops and saddles or in areas identified as important for lynx habitat connectivity. New permanent roads and trails should be situated away from forested stringers .	(Same)	(Same)
HU G8. Cutting brush along low-speed, low-volume roads should be done to the minimum level necessary to provide for public safety.	(Same)	(Same)
HU G9. On new roads built for project-specific activities, public motorized use should be restricted. Provide for an effective closure in the initial design of the road. Upon project completion, these roads should be reclaimed or decommissioned , if not needed for other management objectives.	(Same)	(Same)
(NA)	HU G10. Where projects result in a permanent conversion of winter foraging habitat , a project component should be included to treat, through stand regeneration activities and practices, “other lynx foraging habitat” equal to or greater than the number of acres being affected, within the same or adjacent LAU. Focus of these activities should be within mature	(NA)

ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
	mesic and mid-seral lodgepole pine stands.	
(NA – See HU S1)	(NA – See HU S1)	HU G10. Designated over-the-snow reroutes or play areas should not expand outside baseline areas of consistent snow compaction by LAU or in a combination of immediately adjacent LAUs, unless designation serves to consolidate use and improve lynx habitat. This does not apply inside permitted ski area boundaries, to winter logging, or rerouting trails for public safety, to accessing private inholdings or to access regulated by HU S3.
(NA - See HU S2.)	HU G11 When developing or expanding a ski area and trails, access roads and lift termini should be located to maintain and provide lynx diurnal security habitat .	(Same as Alternative C)
LINKAGE AREAS (LINK) - Applies to linkage areas subject to valid existing rights.		
LINK O1. In areas of intermixed 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.	(Same)	(Same)
LINK S1. When highway construction or reconstruction is proposed in linkage areas , identify potential highway crossings	(Same)	(Same)
LINK S2. Manage livestock grazing in shrub steppe habitats to contribute to maintaining or achieving a preponderance of mid- or late-seral stages , similar to conditions that would have occurred under historic disturbance regimes.	(Same)	(See LINK G2)
LINK G1. National Forest System lands should be retained in public ownership.	(Same)	(Same)
NA - See LINK S2.	NA - See LINK S2.	LINK G2. Livestock grazing in shrub steppe habitats should be managed to contribute to maintaining or achieving a preponderance of mid- or late-seral stages , similar to conditions that would have occurred under historic disturbance regimes.

MONITORING		
ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
1. Map the location and intensity of snow compacting activities and designated and groomed routes that occurred inside LAUs during the period of 1998-2000 within one year and monitor every five years.	<p>1. <i>Monitor and evaluate annually under what conditions and extent fuels treatment projects occur in lynx habitat.</i></p> <p>2. Map the location and intensity of snow compacting activities and designated and groomed routes that occurred inside LAUs during the period of 1998-2000 within one year and monitor every five years.</p>	<p>1. Monitor and evaluate annually under what conditions and extent fuels treatment projects occur in lynx habitat.</p> <p>2. <i>Monitor and evaluate annually under what conditions and extent fossil fuel exploration and development practices and activities occurs in linkage areas.</i></p> <p>3. <i>Monitor and evaluate annually under what conditions and extent standard ALL S2 is applied.</i></p> <p>4. Map the location and intensity of snow compacting activities and designated and groomed routes that occurred inside LAUs during the period of 1998-2000 within one year and monitor every five years.</p>

Alternatives Eliminated from Detail Study

Public comments received in response to the proposed action provided suggestions for alternative management direction. In this particular instance, the suggested alternatives are mostly suggestions for particular standards and guidelines, rather than complete alternatives covering the full spectrum of Canada lynx conservation and recovery. Therefore, most of the alternatives considered, but not in detail are standards or guidelines for managing a particular resource. The rationale for not analyzing these alternatives (standards or guidelines) in detail is generally based on a comparison to the proposed action and other fully developed alternatives and the purpose and need for the proposed action.

1. Scoping Proposed Action

Some people were confused by parts of the proposed action described in the original scoping package. Others found it redundant and disorganized.

The scoping proposed action was eliminated from detailed study because Alternative B, the DEIS proposed action, provides clearer management direction by eliminating duplication and providing better organization, with no difference in effects. Appendix B contains a crosswalk between the scoping proposed action and Alternative B, the DEIS proposed action.

2. Prohibit grazing in lynx habitat on federal lands and/or add stronger standards to reduce impacts on hare forage and cover.

It was suggested grazing be prohibited in lynx habitat, or stronger standards for grazing in lynx habitat are needed to reduce impacts on hare forage and cover.

This was not analyzed in detail because the proposed action establishes standards that require the management of livestock grazing to (1) ensure impacts do not prevent successful regeneration of shrubs and trees; (2) ensure impacts do not prevent or inhibit sprout survival sufficient to perpetuate the long-term viability of the clones; (3) manage livestock grazing in riparian areas, and willow carrs; and (4) manage livestock grazing in shrub steppe habitats, within the elevational ranges that encompass forested lynx habitat (within LAU's). Management of livestock grazing could include using management techniques such as rest rotation, or timing of use to provide for lynx needs. Such standards already significantly reduce or eliminate grazing impacts on snowshoe hare forage and cover while still providing for livestock grazing, an existing multiple-use activity.

3. Prohibit all over-the-snow related activities or not further restrict the activities.

It was suggested that dispersed over-the-snow use off the groomed or designated trails, or designated snow play areas not be allowed, in addition to no net increase in groomed or designated routes. Others suggested that there be no increase in restrictions on winter activities.

There is incomplete information about effects of snow compaction on lynx because the topic has not been studied much. Some information indicates that snow-compacting activities can provide competitors, such as coyotes, access into lynx habitat. Whether or not the effects of coyote competition, facilitated by human-caused snow compaction, are significant, or are even an effect to be concerned about, is simply unknown.

An alternative to drop all snow-compacting standards was not developed in detail because there is evidence coyotes use packed trails. Until more information is collected, it was determined to be prudent to maintain the current levels of snow compacted areas. It is possible that unregulated expansion of compacted snow over time would impair lynx conservation efforts in the future.

An alternative to prohibit all snow-compacting activities or limit dispersed use was evaluated, but not considered in detail because there is no evidence that competition is currently negatively affecting lynx populations. It also does not meet the amendment's purpose and need to retain the multiple-use direction in existing plans. When research can provide more answers, this information can be addressed when plans are amended or revised in the future.

4. Remove ski areas or don't let ski areas expand.

It was suggested that existing ski areas should not be allowed to continue operations in order to reduce the risk to lynx viability and recovery.

This was not considered in detail because consultation with the U.S. Fish and Wildlife Service on effects to lynx has occurred, or will occur, on these developments. The alternatives include management direction for new ski areas and expansions which are designed to provide for lynx movement and habitat needs.

5. Include more road restrictions, turn the restrictions into standards, or ban all road construction.

A review of the LCAS and other literature found no information indicating road building should be banned or that further restrictions were needed.

Many internal comments expressed concern that the road management guidelines would not let managers address watershed and safety concerns. However, the team determined that guidelines were the best way to provide direction about what should be considered for lynx, while providing some flexibility to address other concerns.

The available information indicates that some management 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.

6. Prohibit harvest in old-growth or mature timber

Some people asked that an alternative be considered that prohibits harvest in old-growth and/or mature timber including spruce-fir stands to protect denning habitat and provide forage.

The proposed action includes management direction relating to forage and denning habitat. Standards and guidelines provide restrictions on what activities may take place in these stands. Alternative C, however, adds a guideline to promote managing mature and old-growth spruce-fir stands for snowshoe hare habitat.

Prohibiting harvest of all mature or old-growth timber would substantially change the overall multiple-use direction in existing plans; therefore, not meeting the purpose and need.

This was not considered in detail because it does not meet the purpose and need and is outside the scope of this amendment.

Comparison of the Alternatives

A comparison of alternatives by key issue is displayed in Table 2-2, and a comparison of alternatives by standards and guidelines is displayed in Table 2-3. These comparison tables summarize information from the environmental effects analysis and show only the effects where the standards and guidelines were different between alternatives and where there is an appreciable difference in the effects between the alternatives. A complete discussion of the affected environment and environmental consequences is found in Chapter 3.

Table 2-2. Comparison of Alternatives by Key Issue.

Key Issue	Alt A	Alt B	Alt C	Alt D
Lynx Productivity, Mortality and Movements				
a. Forest management activities such as timber harvest, precommercial thinning, grazing, fire, salvage harvest may impact lynx productivity by affecting denning and foraging habitat.	Leads to “Likely to adversely affect” determination in 1999 Biological Assessment on existing Forest Plans.	Adds regulatory direction to protect important components of lynx habitat.	Effects similar to Alternative B, but allows for combination of LAU’s to address unsuitable habitat standard.	Effects similar to Alternative B. Exceptions in standard VEG S5 and the ALL S2 standard may lead to adverse effects.
b. Activities resulting in snow compaction may affect lynx productivity by a reduction in the prey resource as a result of allowing competing predators into lynx habitat areas during the winter on the compacted routes and areas.	Contributes to “Likely to adversely affect” determination in 1999 BA on existing Forest Plans	Adds regulatory direction that limits new snow compaction areas.	Effects similar to Alternative B, but allows for combination of LAU’s to address snow compaction standard.	Effects similar to Alternative B. The exceptions to standards in VEG S5 and the ALL S2 may lead to adverse effects.
c. Landscape connectivity can be affected by Forest Service management activities, which can negatively impact lynx movements (and therefore productivity), and can increase mortality.	Important factor contributing to the “Likely to adversely affect” in the 1999 BA for existing Forest Plans.	Adds provisions for the maintenance of connectivity between patches of lynx habitat and within lynx linkage areas.	Effects similar to Alternative B.	Effects similar to Alternative B. The exceptions to standards in VEG S5 and the ALL S2 may lead to adverse effects.
Probability of Lynx Persistence	Substantial decreases in probability of lynx persistence, as compared to Alternative B.	Adds management direction that would be likely to maintain lynx productivity and movements in the SRMGA.	Slightly decreases probability of lynx persistence, as compared to Alternative B, but provides management direction that maintains sufficient habitat	Decreases probability of lynx persistence, as compared to Alternative B, but greater than Alternative A. Management direction may not ensure sufficient

Key Issue	Alt A	Alt B	Alt C	Alt D
			quality/quantity, with some gaps in habitat distributions.	habitat quantity, quality, distribution, and other conditions to provide for lynx productivity.
Public Safety				
The proposed amendment may negatively impact firefighter and public safety by limiting the construction of defensible fuel profiles around dwellings and structures, and limiting vegetation treatments to create defensible fuels profiles in support of the Fire Use Program.	Current management emphasis and direction are maintained under current Forest Plan direction.	Fire hazard thinning prohibited unless stands no longer provide snowshoe hare habitat, thereby impacting ability to create defensible space or defensible fuels profiles.	Fire hazard thinning allowed within 200 feet of dwellings or other structures and landscape settings critical for the creation of defensible fuels profiles. Allows fire use practices and activities to restore ecological processes that maintain or improve lynx habitat.	Does not limit fire hazard thinning to within 200 feet of structures, thereby allowing the creation of defensible fuels profiles.
Human Uses				
The proposed amendment may negatively impact human uses of the forest by limiting winter recreation opportunities (i.e. snowmobiling, cross country skiing, ski area expansion).	<ul style="list-style-type: none"> - Expansion of groomed and ungroomed trails would continue to grow by about 50%. - Quality winter recreation would continue to expand as increase use expands. - Winter recreation use for both motorized and non-motorized visitors would increase by an additional 4.4 million forest visits. -Growth in the number of outfitter and special uses would continue to slow as capacities are reached. -Existing and potential ski areas would continue to be managed according to the direction in existing Forest Plans. 	<ul style="list-style-type: none"> - Expansion of total groomed and ungroomed trails would be limited to existing snow compacted areas. Some existing ungroomed trails could be converted into groomed trails, allowing the groom trail system to expand by about 50%. - Winter recreation would experience additional crowding and conflict, as opportunities to expand are restricted. - Winter recreation use for both motorized 	Direction is presented as guideline HU G11, but the effects would be similar to Alternative B.	Direction is presented as guideline HU G11, but the effects would be similar to Alternative B.

Key Issue	Alt A	Alt B	Alt C	Alt D
		<p>and nonmotorized visitors would increase by an additional 4.4 million forest visits.</p> <p>-Growth in the number of outfitter and special uses would continue to slow as capacities are reached and expansions under permits or authorizations would be limited to existing groomed or designated routes but able to expand into areas of consistent snow compaction.</p> <p>-Ski area expansions would incorporate design strategies to provide diurnal lynx security habitat.</p>		
<p>The proposed amendment may negatively impact human uses of the forest by limiting timber harvest opportunities.</p>	<p>Average Annual Acres of Accomplished Precommercial Thinning Last 5 Years: 4630</p> <p>Regeneration harvest average of 4000 acres annually</p>	<p>Average Annual Acres of Precommercial Thinning: 3050</p> <p>Regeneration harvest acreage remains approximately 4000 acres annually.</p>	<p>Average Annual Acres of Precommercial Thinning: 3050</p> <p>Regeneration harvest acreage remains approximately 4000 acres annually.</p>	<p>Average Annual Acres of Precommercial Thinning: 3205</p> <p>Regeneration harvest acreage remains approximately 4000 acres annually.</p>
<p>The proposed amendment may negatively impact human uses of the forest by limiting land adjustment opportunities.</p>	<p>Possible loss of lynx habitat through conveyance, or the acquisition of lynx habitat through purchase or exchange.</p>	<p>Requirement to retain NFS lands in linkage areas could affect future exchanges or limit federal parcels available for exchange</p>	<p>Effects same as Alternative B.</p>	<p>Effects same as Alternative B.</p>

Key Issue	Alt A	Alt B	Alt C	Alt D
The proposed amendment may negatively impact human uses of the forest by limiting lands special use proposal options.	Current management emphasis and direction are maintained under current Forest Plan direction.	There may be some limitations or constraints on options for location of facilities (communication sites, etc).	Effects same as Alternative B.	Effects same as Alternative B.

Table 2-3. Comparison of Alternatives by Standards and Key Issues.

Standards	Alt A	Alt B	Alt C	Alt D
VEG S1.				
Wildlife: Foraging Habitat	Foraging habitat for lynx can be created through regeneration timber harvest; however habitat conversions are not limited by Forest Plans. Most SRLA existing Forest Plans did not have direction in plans protecting lynx foraging habitat.	Would limit potential adverse effects to lynx foraging habitat to less than 30% of lynx habitat in LAUs.	Would limit potential adverse effects to lynx foraging habitat to less than 30% unsuitable in lynx habitat in LAUs, but could be addressed at a larger scale of “combination of immediately adjacent LAU’s”. This could result in the displacement or indirect mortality (starvation) of individual lynx.	Effects would be similar to Alternative C. ALL S2 could lead to adverse effects since it allows some lynx standards to not be met.
Timber Management	The average annual harvest for the six Forests in this analysis covers 3,800 acres. Most LAU’s have 3-8% unsuitable habitat, with virtually all below 20%	This standard would not, in itself, reduce timber management activities in the Southern Rockies.	This standard would not, in itself, reduce timber management activities in the Southern Rockies.	This standard would not, in itself, reduce timber management activities in the Southern Rockies.
Fuels Management:	Current management emphasis and direction for fire use and fuels reduction activities are maintained under current Forest Plan direction	If the thresholds specified are reached, fuels reduction efforts would be curtailed regardless of the critical nature of the work or location (wildland urban interface). This can compromise firefighter and public safety. At the	Effects would be the same as Alternative B, except that prescribed fire activities are exempted also.	Effects would be the same as Alternative B, except that prescribed fire activities are exempted also.

Standards	Alt A	Alt B	Alt C	Alt D
		<p>current time no LAU's are close to exceeding the 30% threshold so the probability of this standard having a significant impact on fuels treatments is small.</p> <p>Wildland Fire Use is not limited.</p> <p>Wildfire suppression activities are not subject to this standard.</p>		
VEG S2.				
Wildlife: Foraging Habitat	Foraging habitat for lynx can be created through regeneration timber harvest. However, habitat conversions are not limited by existing Forest Plans. Most existing Forest Plans in the Southern Rockies did not have direction in plans protecting lynx foraging habitat.	Limits habitat conversions due to timber harvest to less than 15% of lynx habitat within a LAU to unsuitable condition within a 10-year period.	Effects similar to Alternative B, with the exception that it is a guideline under this alternative.	Effects similar to Alternative B, with the exception that it is a guideline under this alternative.
Timber Management	No change would occur in Forest Plan or funded timber management practices.	This standard may limit the amount of harvest activity that takes place in an individual LAU, but overall would not reduce timber management activities in the Southern Rockies over the next 10-year period.	Direction is presented as a guideline VEG G7. The effects would be similar to Alternative B.	Direction is presented as a guideline VEG G7. The effects would be similar to Alternative B.
Fuels Management	Current management emphasis and direction for fire use and fuels reduction activities are maintained under current Forest Plan direction.	This standard may limit the amount of timber harvest activity that provides secondary benefits of fuels reduction but at the current time no LAU's are close to exceeding the 15% threshold so	Direction is presented as a guideline HU G7, but the effects would be similar to Alternative B.	Same as C

Standards	Alt A	Alt B	Alt C	Alt D
		the probability of this standard having a significant impact on fuels treatments is small.		
VEG S3.				
Wildlife: Denning Habitat	Deemed adequate for overall denning habitat retention, due to old growth requirements and non-developmental land allocations. Marginal for denning structure maintenance.	Specifically maintains denning habitat across the landscape.	Effects similar to Alternative B.	Effects similar to Alternative B. However, ALL S2 could lead to adverse effects.
Timber Management	No change would occur in Forest Plan or funded timber management practices.	Implementation of this standard is similar to VEG S2 in that individual LAU's may have restrictions on the acres that could be harvested or salvaged using even-aged methods and practices that reduce coarse woody debris, but no overall reduction in timber management practices should occur.	Effects similar to Alternative B.	Effects similar to Alternative B.
Fuels Management	Current management emphasis and direction for fire use and fuels reduction activities are maintained under current Forest Plan direction.	Fuels treatments may be restricted in stands that can develop denning habitat structure if a LAU has less than 10% denning habitat. At the current time denning habitat in all LAU's within the amendment area greatly exceeds the 10% threshold and the probability of this standard limiting fuels treatment activities is low. Wildland Fire Use is not limited Wildfire suppression	Effects similar to Alternative B. Fuels treatments could occur to create defensible fuel profiles.	No restrictions for fuels treatments.

Standards	Alt A	Alt B	Alt C	Alt D
		activities are not subject to this standard.		
VEG S4.				
Lynx: Denning Habitat (Forest Floor structure)	Current plans contain some provision for both standing and dead and down coarse woody debris, but are very minimal.	Specifically maintains small disturbances that provide current or future denning structure.	Effects similar to Alternative B. Fire hazard thinning allowed within 200 feet of dwellings or other structures and landscape settings critical for the creation of defensible fuels profiles. Allows fire use practices and activities to restore ecological processes that maintain or improve lynx habitat. Effects to lynx are the same as Alternative B.	Effects similar to Alternative B, with the exception that it is a guideline under Alternative D. More potential denning structures could be removed, so this alternative may have additional impacts to denning habitat.
Timber Management	No limitations would occur in management activities aimed at controlling insect or disease infestations or in salvage of dead or dying trees.	This standard has the potential to substantially increase the size of insect infestations resulting from blowdown and small infestations, resulting in significant loss of trees.	No major difference would result in general salvage program levels in lynx habitat compared to Alternative B. Effects on forest stands would be similar to those projected for Alternative B.	Direction is presented as a guideline VEG G8, but the effects would be similar to Alternative B.
Fuels Management	Current management emphasis and direction for fire use and fuels reduction activities are maintained under current Forest Plan direction.	Limits the use of salvage harvest of areas smaller than 5 acres. Other Mechanical Fuels treatments are not restricted	Limits the use of salvage harvest of areas smaller than 5 acres. Provides for an exception allowing salvage harvest within 200 feet of a dwelling and/or associated outbuildings. This allows for the use of commercial salvage harvest within the structure ignition zone and allows landscape settings for the creation of defensible fuels profiles. Other	Direction is presented as a guideline VEG G8. No restriction on fuel treatments.

Standards	Alt A	Alt B	Alt C	Alt D
			Mechanical Fuels treatments are not restricted	
VEG S5				
Lynx: Foraging Habitat (precommercial thinning)	High quality foraging habitats not protected in existing plans. Risk of adverse effects.	Protects high quality foraging habitat.	Adds the exception, precommercial thinning associated with research and genetic tests. This exception to the restrictions on precommercial thinning would have very minor and insignificant effects on the overall foraging habitat.	The exceptions to the standard could lead to the possibility of adverse effects to snowshoe hare and lynx foraging habitat. ALL S2 could lead to adverse effects.
Timber Management	No limitations would be placed on precommercial thinning.	This standard would result in essentially no pre-commercial thinning within lynx habitat located outside urban interface zones for an indefinite period. For non-thinned lodgepole pine stands in management areas where commercial timber production is a goal, an 89% reduction of production of sawlog-sized material would be anticipated over the next 60 years.	Effects similar to Alternative B.	This alternative would reduce thinning, particularly in lodgepole pine stands, compared to present levels. However, Alternative D would allow for thinning to occur in some stands prior to a permanent loss of the physiological ability a tree to respond. Reductions in future sawlog volume production would be less than under Alternative B.
Fuels Management	Current management emphasis and direction for fire use and fuels reduction activities are maintained under current Forest Plan direction.	Fire Hazard Reduction Thinning is generally not permitted unless stands no longer provide snowshoe hare habitat. Allows fire hazard reduction thinning within the structure ignition zone only. The inability to conduct thinning can affect the units' ability to create defensible space or defensible	Permits Fire Hazard Reduction Thinning within the structure ignition zone and landscape settings critical for the creation of defensible fuels profiles to reduce the wildland fire threat to communities or facilitate fire use practices and activities that restore ecological processes that maintain or	Effects similar to Alternative C, however fuels treatments would not be restricted.

Standards	Alt A	Alt B	Alt C	Alt D
		<p>fuels profiles. This can have effects on public and fire fighter safety, private property values and the ability to conduct fire use.</p> <p>Wildfire suppression activities are not subject to this standard</p>	<p>improve lynx habitat. This alternative allows managers to conduct fire hazard reduction thinning to create defensible fuels profiles. Fire use activities should not be affected as thinning of critical landscape settings may occur.</p> <p>Firefighter and public safety should not be adversely affected in this alternative.</p>	
HU S1.				
LYNX: Snow Compaction (Competition & Predation)	Motorized and non-motorized winter recreation activities may continue to contribute to a risk of adverse effects on lynx.	Limits, to a certain extent, potential increase competition and predation risks to lynx.	Negative impacts in one LAU could be offset by protection of more pristine areas of another LAU.	Effects similar to Alternative C, however ALL S2 could lead to adverse effects.
Winter Recreation Use	<ul style="list-style-type: none"> - Expansion of groomed and ungroomed trails would continue to grow by about 50%. - Quality winter recreation would continue to expand as increase use expands. - Winter recreation use for both motorized and non-motorized visitors would increase by an additional 4.4 million forest visits. -Growth in the number of outfitter and special uses would continue to slow as capacities are reached. 	<ul style="list-style-type: none"> - Expansion of total groomed and ungroomed trails would be limited to existing areas of snow compaction. Some existing ungroomed trails would be converted into groomed trails, allowing expansion of the groomed system by about 50%. - Winter recreation would experience additional crowding and conflict, as opportunities to expand are restricted. - Winter recreation use for both motorized and un-motorized visitors would increase by an additional 4.4 	Effects similar to Alternative B.	Effects similar to Alternative B.

Standards	Alt A	Alt B	Alt C	Alt D
		<p>million forest visits.</p> <p>-Growth in the number of outfitter and special uses would continue to slow as capacities are reached and expansions under permits or authorizations would be limited to existing groomed or designated routes.</p>		
HU S2.				
Recreation: Skiing	<p>Ski based resorts would continue to be managed according to the direction in existing Forest Plans.</p>	<p>The requirements may be to reduce the potential efficiency of ski operations. The costs of constructing developments to protect potential diurnal security habitat and maintaining connectivity, as well as associated operational costs, may increase.</p>	<p>Direction is presented as guideline HU G11, but the effects would be similar to Alternative B.</p>	<p>Direction is presented as guideline HU G11, but the effects would be similar to Alternative B.</p>
LINK S2.				
Wildlife: Habitat Connectivity	<p>Most existing forest plans do not specifically address connectivity. Overall weakness of the LRMP's in the Southern Rocky Mountain Geographic Area (SRMGA) in addressing linkage or connectivity potentially contributes to a risk of adverse effects to lynx under this alternative.</p>	<p>Contains provisions for the maintenance of connectivity between patches of lynx habitat within and between LAU's. It also contains specific provisions for the protection of linkage areas. Identification and maintenance of linkage areas would facilitate movement of lynx throughout and between landscapes.</p>	<p>Effects similar to Alternative B.</p>	<p>Effects similar to Alternative B with direction as a guideline.</p> <p>ALL S2 could lead to adverse effects.</p>