

Chapter 1- Purpose and Need

Background

Canada lynx (*Lynx canadensis*) inhabit moist coniferous forests that are subject to cold, snowy winters and provide a prey base of snowshoe hare. In the United States, Canada lynx or lynx occur mostly on federal lands, especially in the west. The lynx occupies habitat on National Forest System lands in Regions 1, 2, 4, 6 and 9.

On July 8, 1998, the U.S. Fish and Wildlife Service (FWS) proposed to list the lynx as a threatened species. The Forest Service and Bureau of Land Management (BLM) responded to the declining status of lynx in 1998 by establishing a science team of international experts in lynx ecology to collect and summarize scientific data. This effort resulted in the publication of *Ecology and Conservation of Lynx in the United States* (USDA FS 1999).

A team of agency biologists developed the *Canada Lynx Conservation Assessment and Strategy* (LCAS) (Ruediger et al. 2000) based on information compiled by the science team. The LCAS recommended conservation measures to be applied to lynx habitat on all federal lands in the contiguous United States. These conservation measures focus on managing vegetation consistent with succession and disturbance patterns, maintaining dense understory conditions for prey, reducing snow compaction, and identifying and maintaining connectivity within and between habitat areas.

In December 1999, the Forest Service and BLM prepared a *Biological Assessment* of 57 Forest Service and 56 BLM land management plans. The assessment found the land management plans were likely to adversely affect lynx because they allowed activities that may not conserve lynx.

In February 2000, five Regional Foresters and four FWS Regional Directors signed a *Lynx Conservation Agreement*, to promote the conservation of lynx and its habitat. The agreement provides that the agency review and consider recommendations in the LCAS before making any new decision to undertake actions in lynx habitat, and changes in Forest Service management direction will be made through amendment or revision of Land and Resource Management Plans (Forest Plans).

The FWS listed the lynx as threatened, effective April 24, 2000. The FWS concluded the chief threat to the lynx in the contiguous United States was the lack of guidance to conserve the species in federal land management plans.

Formal consultation, as required by the Endangered Species Act (ESA), was completed on October 25, 2000, when the FWS issued its *Biological Opinion* on the plans. In the opinion, the FWS concluded that the plans as implemented in conjunction with the conservation agreement are not likely to jeopardize the continued existence of the lynx. The FWS no jeopardy conclusion for National Forest System lands is based upon continued consideration of the LCAS and science report until such time that Forest Plans are amended or revised to consider the needs of lynx.

In July 2003, the FWS issued a Notice of Remanded Determination of Status for the contiguous United States population of lynx (USDI FWS 2003). In it, the FWS reaffirmed its decision to list the lynx as threatened, rather than endangered.

The desired condition for the analysis area is to provide for the conservation and promotes the recovery of lynx by maintaining or creating additional lynx foraging, denning, and linkage habitat while preserving the overall multiple-use direction in existing plans.

The State of Colorado, Department of Natural Resources, is a Cooperating Agency as defined in the Code of Federal Regulations (CFR) 40 part 1508.5 in the development of this Environmental Impact Statement (EIS) due to their special expertise in respect to lynx in Colorado.

Administrative Units included in the Amendment

The LCAS identifies five geographic areas that provide habitat for lynx in the United States. According to the schedule agreed upon in the conservation agreement signed with the FWS in 1998, the Forest Service initiated planning for seven national forests in the Southern Rockies Geographic Area in the Rocky Mountain Region in the states of Colorado and Wyoming. *The number of Forest Plans affected by this amendment differs from the number of units involved because of unit consolidation.* National Forest units and Forest Plans affected by this amendment are listed in Table 1-1, below.

Table 1-1 National Forest Units and Forest Plans Affected by This Amendment

National Forest	Affected Forest Plan	State
Arapaho-Roosevelt	Arapaho-Roosevelt Forest Plan	Colorado
Pike-San Isabel	Pike-San Isabel Forest Plan	Colorado
Grand Mesa-Uncompahgre-Gunnison	Grand Mesa-Uncompahgre-Gunnison Forest Plan	Colorado
San Juan	San Juan Forest Plan	Colorado
Rio Grande	Rio Grande Forest Plan	Colorado
Medicine Bow-Routt	Medicine Bow Forest Plan and Routt Forest Plan	Wyoming Colorado

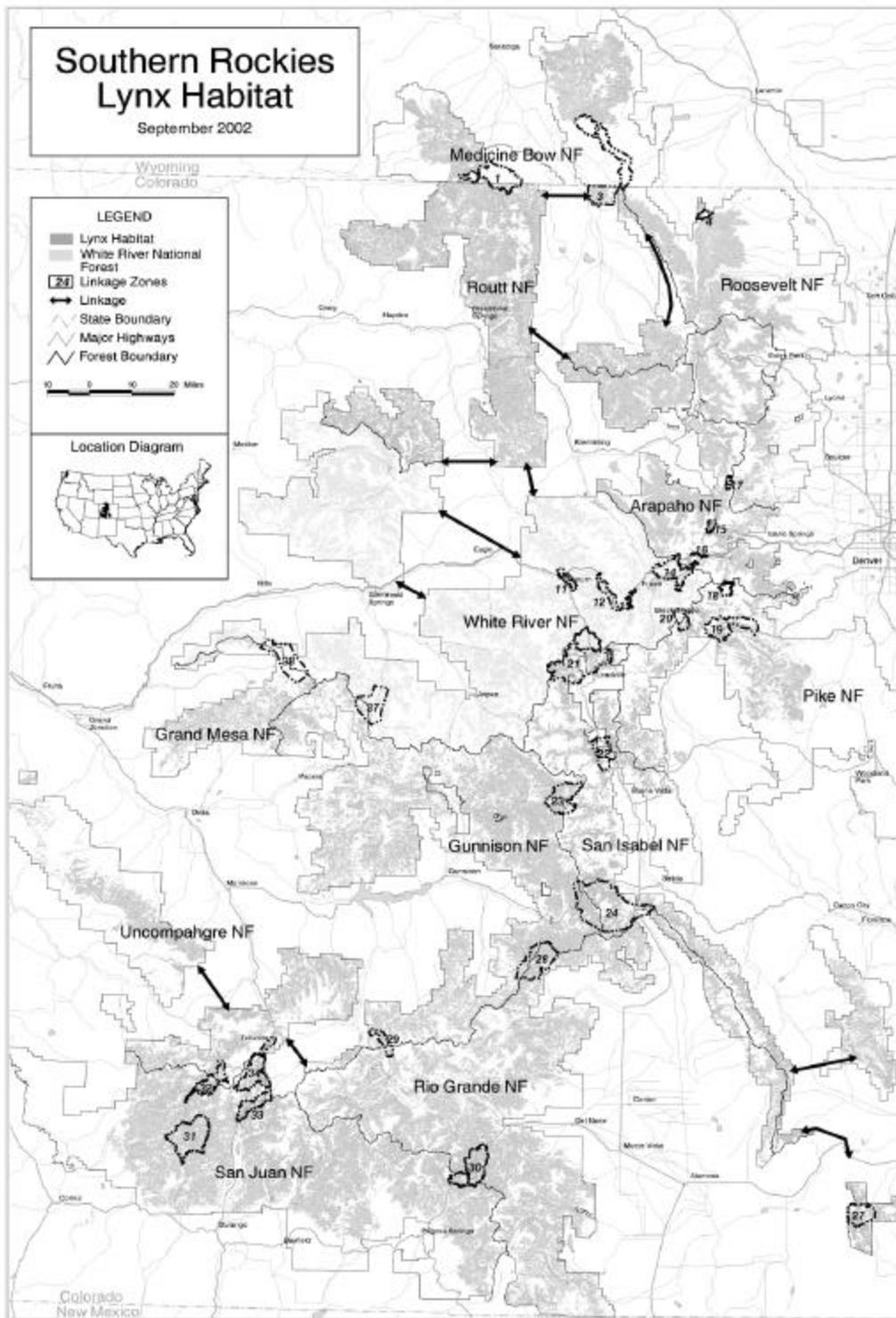
The Arapaho-Roosevelt, Rio Grande and Routt National Forests completed revisions to their forest plans in 1997, 1996 and 1998, respectively. The 1985 Medicine Bow Forest Plan was undergoing revision at the time of the Southern Rockies Canada Lynx Amendment analysis. Revision of the Medicine Bow Forest Plan is anticipated to be completed at the time of the release of this Draft EIS. The decision to be issued for the Southern Rockies Canada Lynx Amendment will amend the revised management direction for these national forests. The forest plans for the Pike-San Isabel, Grand Mesa-Uncompahgre-Gunnison and San Juan National Forests are currently being revised. The decision to be issued for the Southern Rockies Canada Lynx Amendment will amend the direction provided in the existing forest plans.

The Forest Plans of five National Forests in the Rocky Mountain Region are not included in this proposed amendment, as noted below.

- ~~✍~~ The White River National Forest Land and Resource Management Plan Revision was completed in summer 2002 and incorporated lynx conservation measures.
- ~~✍~~ The Nebraska and Black Hills National Forests do not support lynx or lynx habitat.
- ~~✍~~ The Bighorn and Shoshone National Forests are being addressed as part of the Northern Rockies Geographic Area proposed amendment.

Figure 1 shows a map of the analysis area for the proposed amendment. Note that although management direction for the White River Forest Plan is not being amended, the area is shown on the map to give a total picture of the lynx habitat area in the Southern Rockies Geographic Area. Linkage zone descriptions are found in Appendix D.

Figure 1 Map of Analysis Area



Lynx Conservation and Assessment Strategy - Risk Factors

The LCAS and the *Biological Assessment* identified management activities and practices that may degrade lynx habitat and described these as “risk factors.” The analysis of the risk factors provided the framework for conservation recommendations in the LCAS, which in turn provides the substance of the proposed action. Reducing or eliminating these risk factors is part of the purpose and need. Chapter 2, Comparison of Alternatives discusses how the alternatives address them. The following is a summary of the risk factors identified in the LCAS. See the LCAS Chapter 2 for a detailed discussion of each factor.

Risk factors affecting lynx productivity

- ~~///~~ Timber management
- ~~///~~ Wildland fire management
- ~~///~~ Livestock grazing
- ~~///~~ Recreational uses
- ~~///~~ Forest backcountry roads and trails
- ~~///~~ Other human developments

Lynx require certain habitat elements in order to exist. Generally, these elements include denning and foraging habitat. Denning habitat is found in areas that provide large woody debris, either down logs or root wads. Foraging habitat is found on sites that contain a high number of young trees or shrubs that are tall enough to protrude above the snow. These conditions may occur in early successional stands following some type of disturbance, or in older forests with a substantial understory of shrubs and young conifer trees. Activities, such as timber management, fire suppression and livestock grazing, can affect the amount, distribution and condition of lynx denning and foraging habitat.

Predators may also affect lynx productivity. Lynx have developed a competitive advantage in places where the deep, soft snow tends to exclude other predators in mid-winter, a time when prey is most limiting. Activities that result in providing access to predators are a potential risk factor. These activities include winter recreation, winter use of forest roads and trails and other human developments.

Risk factors affecting mortality

- ~~///~~ Trapping
- ~~///~~ Predator control
- ~~///~~ Shooting
- ~~///~~ Highways
- ~~///~~ Predation by other species

Several factors can directly affect lynx mortality. Trapping is no longer allowed; shooting can occur but is regulated by State agencies; and predator control activities are conducted by USDA Wildlife Services; therefore these risk factors are not addressed in this DEIS.

Highways are a known source of direct mortality. Activities that increase the presence of predators also can be a factor in lynx mortality by reducing the amount of prey available, resulting in starvation of the lynx.

Risk factors affecting movement

- ~~☒~~ Highways and associated developments
- ~~☒~~ Private land development

Lynx are known to disperse over wide areas. Activities, such as highways and associated developments may impede lynx movements.

The FWS decision to list lynx as threatened was based on a subset of these risks, which threaten the lynx population as a whole. Threats to lynx populations influenced by national forests and BLM land management include timber harvest regimes and fire suppression, as well as the lack of guidance to address these threats in existing plans. Lynx conservation and recovery requires that the plans address these threats.

Purpose and Need

The purpose and need for the proposed amendment is: To establish management direction that conserves and promotes the recovery of lynx, and reduces or eliminates potential adverse effects from land management activities and practices on the Southern Rockies national forests, while preserving the overall multiple-use direction in existing Forest Plans.

Adoption of this management direction is needed to comply with the National Forest Management Act (NFMA) regulations to provide for adequate fish and wildlife habitat to maintain viable populations of existing native vertebrate species. This action is also needed to assure that Forest Plans provide adequate management direction to conserve the lynx and its habitat, as required by ESA.

To respond more quickly and consistently, management direction is considered for the identified forests, rather than addressing each plan individually. The new management direction seeks to preserve the overall multiple-use direction in existing plans by avoiding making significant changes. Adjustments to individual plans may be considered as they are revised during the next several years.

Proposed Action

The Forest Service proposes to amend seven Forest Plans in Colorado and Wyoming to provide conservation and recovery of the lynx, a threatened species.

The proposed amendment would add or modify management direction consisting of one or more of the following components:

- ~~☒~~ Goals, general descriptions of desired end results;
- ~~☒~~ Objectives, descriptions of desired resource conditions;

- ✎ Standards, management requirements designed to achieve objectives;
- ✎ Guidelines, management actions that would normally be used to achieve objectives; and
- ✎ Monitoring requirements.

The proposed action, Alternative B, is described in detail in Table 1-2. The initial proposed action was modified from that presented in the initial scoping document to improve clarity and remove redundancy. See Appendix E for a crosswalk between the initial proposed action and the proposed action clarified. The proposed action, as referenced throughout this document, refers to the proposed action clarified, which is Alternative B.

The proposed action is based on conservation measures in the LCAS. The measures from the LCAS were reorganized and described in forest planning language to facilitate incorporation into the Forest Plans. During the transformation, the original intent of the measures in the LCAS was preserved.

The amendment applies only to National Forest System (NFS) lands identified as lynx habitat or linkage areas. See Appendix F for a description of lynx habitat mapping procedures. This amendment would not include a site-specific decision that determines lynx habitat and linkage-area boundaries.

Table 1-2. The Proposed Action.

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GOAL: Conserve the Canada lynx.
ALL MANAGEMENT ACTIVITIES AND PRACTICES (ALL) - Applies to lynx habitat in Lynx Analysis Units (LAUs), and in linkage areas subject to valid existing rights.
ALL O1. Maintain or restore lynx habitat connectivity.
ALL S1. New or expanded permanent developments and vegetation management practices and activities must maintain habitat connectivity. This standard does not apply to: 1. Wildland Fire Use practices and activities that restore ecological processes. 2. Wildfire suppression.
ALL G1. Techniques to avoid or reduce effects on lynx should be used when constructing or reconstructing highways. Techniques could include underpasses or overpasses.
LAU S1. LAU boundaries would not be adjusted except through agreement with the US Fish and Wildlife Service, based on new lynx habitat information.
VEGETATION MANAGEMENT ACTIVITIES AND PRACTICES (VEG) - Applies to lynx habitat in LAUs subject to valid existing rights.
VEG O1. Manage vegetation to be consistent with historical succession and disturbance processes while maintaining habitat components necessary for the conservation of lynx.
VEG O2. Maintain or improve lynx habitat, with an emphasis on continued availability of high-quality foraging habitat in juxtaposition to denning habitat.
VEG O3. Conduct fire use activities to restore ecological processes and maintain or improve lynx habitat.
VEG O4. Design regeneration harvest, reforestation, and thinning to develop characteristics suitable for lynx and snowshoe hare habitat.
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

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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.

This standard does not apply to:

1. Wildland Fire Use practices and activities that restore ecological processes, or maintain or improve lynx habitat.
2. Wildfire suppression.

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.

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 vegetation management practices and activities in stands that have the highest potential to develop denning-habitat.

This standard does not apply to:

1. Wildland Fire Use practices and activities that restore ecological processes.
2. Wildfire suppression.

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:

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. Within the structure ignition zone (200 feet of administrative sites, dwellings and/or associated outbuildings).
5. Wildfire suppression.
6. Removal of dead or down trees for personal use (i.e., firewood collection).

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).

The following precommercial thinning activities may occur prior to the stands no longer providing snowshoe hare habitat:

1. Conducted within the structure ignition zone (200 feet of administrative sites, dwellings and/or associated outbuildings).

This standard does not apply to:

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

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.

This standard does not apply to:

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,

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<p>dwellings and/or associated outbuildings).</p> <p>3. Wildfire suppression.</p> <p>4. Wildland Fire Use.</p> <p>5. Developed recreation sites, administrative sites, or authorized special use improvements including within permitted ski area boundaries.</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 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.
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.
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.
VEG G5. Habitat for alternate prey species (primarily red squirrel) should be provided in each LAU.
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.
GRAZ S1. In fire- and harvest-created openings, manage livestock grazing to ensure impacts do not prevent successful regeneration of shrubs and trees.
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.
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.
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.
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.
HU O2. Manage recreational activities to maintain lynx habitat and connectivity.
HU O3. Concentrate activities in existing developed areas, rather than developing new areas in lynx habitat.
HU O4. Provide for lynx habitat needs and connectivity when developing or expanding developed recreation sites or ski areas.
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.
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.
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

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<p>designation serves to consolidate use and improve lynx habitat.</p> <ul style="list-style-type: none"> ○ This does not apply within permitted 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. ○ Special Use Permits, authorizations, or agreements could be allowed to expand inside baseline routes and baseline areas of consistent snow compaction. ○ 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.
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.
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.
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.
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.
HU G3. Recreational development and recreational operational uses should be planned to provide for lynx movement and to maintain effectiveness of lynx habitat.
HU G4. Remote monitoring of mineral and energy development 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.
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 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.
HU G8. Cutting brush along low-speed, low-volume roads should be done to the minimum level necessary to provide for public safety.
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.
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.
LINK S1. When highway construction or reconstruction is proposed in linkage areas, identify potential highway crossings
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.
LINK G1. National Forest System lands should be retained in public ownership.

Decision Framework

Planning for units of the National Forest System involves making two levels of decisions. The first stage is the development of a Forest Plan and any subsequent amendments that provide programmatic direction. The second level of planning involves the analysis and implementation of management practices designed to achieve the goals and objectives of the Forest Plan. This second stage involves a site-specific analysis to meet the National Environmental Policy Act (NEPA) requirements of project decision-making.

This is a programmatic EIS and is being prepared to evaluate the effects of the proposed action, and to look at alternate ways of achieving the purpose and need and respond to the key issues as described in Chapter 2.

The responsible official will decide whether or not to amend Southern Rockies Forest Service Land and Resource Management Plans to incorporate direction on lynx conservation and recovery.

Responsible Official

Rick D. Cables, Regional Forester, USDA-Forest Service, Rocky Mountain Region, Region 2, P.O. Box 25127, 740 Simms Street, Lakewood CO, 80225.

Scope

“Scope” is defined in 40 CFR 1508.25 as the range of actions, alternatives and impacts to be considered in an environmental analysis. The proposed action and alternatives consists of the goals, objectives, standards, and guidelines. The DEIS addresses their reasonably foreseeable effects.

To determine the scope of an EIS, the agency shall consider three types of actions, three types of alternatives, and three types of impacts.

Connected actions - Connected actions are closely related actions that:

- Automatically trigger other actions;
- Cannot or will not proceed unless other actions are taken previously or simultaneously; or
- Are interdependent parts of a larger action and depend on that larger action for their justification.

The proposed action and alternatives include management direction needed to fulfill the identified purpose and need.

There are other planning efforts underway to address lynx management, such as a proposed amendment for forests in the Northern Rockies geographic area. These actions are not considered connected because:

- Each plan can stand on its own;
- The areas have different ecological conditions and management histories; and
- The decisions can be made independently under NFMA.

Cumulative actions - Cumulative actions are those which, when viewed with past, other present and reasonably foreseeable actions, may have cumulatively significant impacts and therefore should be discussed in the same environmental analysis.

Other programmatic actions on Forest Service, other federal, tribal, state and private lands have been evaluated where information is available to determine the programmatic cumulative effects on various resources. This analysis is described in Chapter 3.

Similar actions - Similar actions are those with enough similarity in timing or geographic proximity as the proposed action. These actions may be considered in the same environmental analysis as the proposed action and its alternatives.

Alternatives analyzed - The analysis evaluates three types of alternatives including No Action alternative (Alternative A), the Proposed Action (Alternative B) and other courses of action (Alternatives C and D). Alternatives C and D include mitigating measures that address key issues.

Impacts Considered - The analysis evaluates direct, indirect and cumulative effects of the proposed action, and alternatives, including the No Action alternative.