

that the specific vegetation composition of the boreal forest type varies among the regions. Additionally, we recognize that boreal forest types on the periphery of the boreal forest range are found in smaller patches and are only marginally able to support adequate snowshoe hare populations. We conclude records of lynx in these marginal areas or in other areas without lynx habitat are of dispersers. Although there is no evidence that such habitats are able to sustain a resident lynx population, we include all areas with lynx occurrences and lynx habitat, however marginal, within the range of lynx.

*Issue 8:* One comment suggested lynx historically inhabited the Black Hills of South Dakota as a permanent resident. Another comment suggested northern mountain ranges in New Mexico should be included within the range of lynx.

*Response:* The scientific literature definitively demonstrates that lynx are specialist predators of snowshoe hares and do not successfully reproduce without an adequate diet of snowshoe hares (Brand and Keith 1979). Snowshoe hares are not indigenous to South Dakota (American Society of Mammalogists Web site). Therefore, we conclude South Dakota naturally could not support a lynx population. We recognize that dispersing lynx have occurred in unsuitable habitats such as in South Dakota; however, we do not include areas of unsuitable habitat within the range of lynx. We do not include New Mexico within the range of lynx because we have no reliable records of native lynx occurring in New Mexico. Lynx are not included on the list of Mammals of New Mexico (American Society of Mammalogists Web site). We do not consider lynx recently released into Colorado that strayed into New Mexico as sufficient reason to include New Mexico within the range of native lynx because there is no evidence habitat in New Mexico historically supported lynx.

*Issue 9:* A number of comments reported lynx sightings or lynx tracks in New York, New Hampshire, Washington, and Wyoming.

*Response:* Because lynx are difficult to identify and are often confused with bobcats, we must consider the majority of these reports anecdotal. Nonetheless, because of the existence of reliable lynx records from these States, in addition to the presence of lynx habitat, we include all these States within the range of lynx.

*Issue 10:* Some comments voiced concern that evidence of lynx in some areas was a result of a survey that was subsequently found to have been contaminated.

*Response:* In this reanalysis of the basis for our final rule, we did not use any information from that particular survey, the results of which have been rescinded by the author because of the contamination of samples. The majority of the evidence of lynx in the contiguous United States is from trapping records, research, and sightings or track surveys by qualified individuals. Results of positive identification of lynx by DNA acquired during the National Lynx Survey (K. McKelvey, Rocky Mountain Research Station, in litt. 2003) provide additional evidence of lynx. The integrity of the National Lynx Survey has been maintained because of the survey method, DNA analyses, and measures used to ensure quality and reliability.

*Issue 11:* We received a number of comments suggesting that certain land use activities, particularly timber management practices, adversely impact lynx habitat and are incompatible with lynx survival. Alternatively, one comment suggested that pre-commercial thinning can be compatible with objectives for high-quality lynx habitat.

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

*Issue 12:* Several comments raised concerns about the impacts of various activities on lynx habitat. Activities identified by commenters include roads and trails; agricultural and urban development; off-road-vehicle and snowmobile use; ski resort expansion; mining; fire suppression; and grazing.

*Response:* We address the potential threats to lynx under the "Summary of Factors Affecting the Species" section. As a result of our analysis, we found the threat to lynx by some of these activities, such as fire suppression, is low. We found no evidence that some activities, such as forest roads, pose a threat to lynx. Some of the activities suggested, such as mining and grazing,

were not specifically addressed because we have no information to indicate they pose threats to lynx.

In considering threats to lynx, one must consider that lynx have evolved to adapt to an ever-changing boreal forest and require a mosaic within the boreal forest of appropriate species composition, varying stand ages, and structure to support abundant snowshoe hares and lynx denning habitat. Additionally, one must consider scale. Lynx are highly mobile, moving long distances to find abundant prey, and use a large area on a landscape as demonstrated by the large size of an average lynx home range. To significantly impact a local lynx population, an activity would likely have to occur across a very large area (presumably at least the size of several home ranges), create a homogeneous forest that does not provide the various stand ages, species composition, and structure that are good snowshoe hare and lynx habitat, or result in a barrier that effectively precludes dispersal (see Summary of Factors Affecting the Species section).

*Issue 13:* One comment suggested that climate change posed a threat to southern lynx populations.

*Response:* This comment is based on a model that predicted that if average annual snow depths decrease for a long period of time in the Northeast, appropriate lynx habitat would be diminished and could be completely eliminated if appropriate climate conditions did not return, as the author theorized could happen as a result of global warming (Hoving 2001). We conclude the potential for long-term reductions in snow depth because of climate change is speculative at this time and is not a threat to lynx within the foreseeable future (see Factor E).

*Issue 14:* One comment suggested a State-sanctioned coyote snaring program threatens the lynx population in Maine.

*Response:* As addressed under Factor D, we recognize that legal trapping, snaring, and hunting for bobcat, coyote, wolverine, and other furbearers create a potential for incidental capture or shooting of lynx. We acknowledge that no reliable recordkeeping exists to determine how frequently such take occurs. Mortality of captured individuals likely has differing impacts on the ability of local populations to persist, depending on the size of the local population and when the take occurs in the population cycle. Lynx still persist throughout their range despite the fact that incidental catch occurred historically, in all likelihood at higher levels than presently occur. Although we are concerned about the