

areas naturally act as “sinks,” where lynx mortality is greater than recruitment and lynx are lost from the overall population (McKelvey *et al.* 2000a). Sink habitats are most likely those places on the periphery of the southern boreal forest where habitat naturally becomes more patchy and more distant from larger lynx populations. We consider lynx found in these sink habitats to be dispersers but we include these areas within the range of the lynx. Changes in the habitat conditions or cyclic fluctuations in the prey populations may cause some habitat patches to change from being sinks to sources and vice versa. Through this natural process, local lynx populations in the contiguous United States may “blink” in and out as the metapopulation goes through the 10-year cycle. We conclude that where habitat is of high enough quality and quantity, resident lynx populations are able to become established or existing populations are augmented, aiding in their long-term persistence.

We include areas that contain boreal forest but that support only dispersers within the range of the lynx because of the possibility lynx could establish a small, local population and contribute to the persistence of the metapopulation. However, evidence of this is minimal.

An example of the cyclic population “wave” occurred in the 1960s and 1970s, when numerous lynx were reported in the contiguous United States far from source lynx populations. These records of dispersing lynx correlate to unprecedented cyclic lynx highs in Canada (Adams 1963; Harger 1965; Mech 1973; Gunderson 1978; Thiel 1987; McKelvey *et al.* 2000b; Mowat *et al.* 2000). These dispersers frequently were documented in areas such as Wisconsin, that are close to source populations of lynx in Canada or possibly northeastern Minnesota and that contain some boreal forest. But there also have been a number of occurrences of dispersers in unsuitable habitats far from source populations, such as North Dakota prairie (Adams 1963; Gunderson 1978; Thiel 1987; McKelvey *et al.* 2000b; Verts and Carraway 2001).

Rather than recognizing that the cyclic peaks of the early 1960s and 1970s were anomalous highs for the 20th century, as explained in the final rule, some wildlife managers expected subsequent cycles to be equally high. Managers became concerned when harvest returns in the 1980s and 1990s indicated comparatively low cycles. However, as thoroughly described in the final rule, lynx harvest returns in the

1980s and early 1990s were not unusual nor appreciably lower than those recorded prior to the 1960s.

Some maps (e.g., Hall and Kelson 1959, Tanimoto and Garton 1993) incorrectly portray the range of the lynx by encompassing peripheral records from areas that are not within boreal forest or do not have cold winters with deep snow, such as prairie or deciduous forest. Such maps have led to a misperception that the historic range of the lynx in the contiguous United States was once much more extensive than ecologically possible. Records of lynx outside of southern boreal forest in peripheral habitats that are unable to support lynx represent long-distance dispersers that are lost from the metapopulation unless they return to boreal forest and contribute to the persistence of a population. These unpredictable and temporary occurrences are not included within either the historic or current range of lynx because they are well outside of lynx habitat. This includes records from Connecticut, Indiana, Iowa, Massachusetts, Nebraska, Nevada, North Dakota, Ohio, Pennsylvania, South Dakota, and Virginia (Hall and Kelson 1959; Burt 1954 in Brocke 1982; Gunderson 1978; McKelvey *et al.* 2000b; J. Belfonti, The Nature Conservancy, in litt. 1994; S. Johnson, Indiana Department of Natural Resources, in litt. 1994; P. Jones, Ohio Department of Natural Resources, in litt. 1994; South Dakota Natural Heritage Program, in litt. 1994; W. Jobman, U.S. Fish and Wildlife Service, in litt. 1997; Smithsonian Institute, in litt. 1998). In the proposed rule to list the lynx, we included Massachusetts and Pennsylvania in the historic range of the lynx but removed those areas from the range in the final rule because of better information that historically habitat in these States was not capable of supporting lynx. We consider both the historic and current range to consist of Colorado, Idaho, Maine, Michigan, Minnesota, Montana, New Hampshire, New York, Oregon, Utah, Vermont, Washington, Wisconsin, and Wyoming because these States support some boreal forest and have more frequent records of lynx.

Previous Federal Action

The final rule that listed lynx as threatened in the contiguous United States described the history of the Service's actions concerning the listing of the lynx. That discussion is incorporated herein by reference. Since publication of the final rule and as a result of the litigation that requires us to reconsider our determination about the significant portion of the range of lynx,

we reopened the comment period for 30 days to acquire information to assist us during our reconsideration (March 17, 2003, 68 FR 12611). This comment period closed on April 16, 2003.

Summary of Comments and Recommendations

As a result of the reopened comment period in March and April 2003, the Service received 118 comments and recommendations. Of these comments, 2 were from Congressional or Legislative officials, 6 were from Federal agencies; 6 from States; 2 from County Commissioners, 17 from environmental organizations, 3 from businesses, 9 from Industry Trade Associations, 1 from a University, and 70 from individuals. Some commenters provided information relevant to our determination regarding the significant portion of the range of lynx. Comments of a similar nature are grouped into general issues. These issues and our responses are discussed below.

We received numerous comments covering a broad spectrum of lynx-related issues that are not the subject of this notice or are beyond the scope of the court's remand. We are not addressing these comments in this document. These comments covered such subjects as: designation of critical habitat for lynx; the existence of various DPSs of lynx; general support for or opposition to protection of lynx under the Act; support for or opposition to lynx re-introduction efforts; classifying the lynx re-introduction in the Southern Rocky Mountains as an experimental, non-essential population; concern that the Service was prioritizing the listing and protection of charismatic megafauna ahead of other flora and fauna; the competency and intent of the Service; an internet retail vendor of lynx pelts; recovery planning; and streamlining section 7 consultations. In particular, we received a number of comments as to the status of the lynx throughout the U.S. DPS (*i.e.*, endangered, threatened, or neither). However, the only portion of our March 24, 2000 final listing determination that the court remanded for further consideration was our determination that “[c]ollectively, the Northeast, Great Lakes and Southern Rockies do not constitute a significant portion of the range of the DPS.” Our finding on this limited remand is discussed below. To the extent that the information we received since the final listing determination, or that we receive in the future, causes us to reevaluate the listing of the lynx, we will issue an appropriate proposed rule when resources allow.