

time as the Forest Plans were amended or revised to adequately conserve lynx. Adherence to the Conservation Agreements, the biological opinion, and the LCAS in assessing the impacts of Federal actions on lynx alleviates the affects of National Forest and BLM land management plans and the activities they allow on lynx, such as timber harvest or fire management, that were identified in the final rule and the 1999 biological assessment (U.S. Forest Service and Bureau of Land Management 1999) (see Factor D).

Northern Rocky Mountains/Cascades and Southern Rocky Mountains

In the final rule, we recognized that the Northern Rocky Mountains encompass more privately-owned lynx habitat than elsewhere in the west (U.S. Forest Service and Bureau of Land Management 1999). In the final rule, we stated that almost one-third of lynx habitat is in private ownership (U.S. Forest Service and Bureau of Land Management 1999). Although we lacked specific information when we published the final rule, we recognized that large portions of this habitat likely occur on privately-owned corporate timber lands where timber harvest and thinning occurs. Data regarding private lands is generally not as available as data pertaining to Federal lands; as a result, few data are available concerning the quality of lynx and snowshoe hare habitat on private lands. However, preliminary results of research conducted on privately-owned corporate timber lands in northwestern Montana show that such lands provide varying levels of snowshoe hare densities (abundant to low), depending on the timber harvest regime (Mills and Griffin, in litt. 2003).

The final rule identified that the majority of lynx habitat in the west occurs on Federal lands. According to assessments in 1999, in the Northern Rocky Mountains, 72 percent of lynx habitat is on National Forest or BLM lands, 99 percent in the Cascades, and 82 percent in the Southern Rocky Mountains (U.S. Forest Service and Bureau of Land Management 1999). As currently mapped, in the Northern Rocky Mountains/Cascades region there are approximately 96,000 km² (37,000 mi²) of lynx habitat on National Forest Lands and approximately 1,236 km² (477 mi²) on BLM lands (see "Table 1") (E. Johnston, in litt. 2003; J. Whitney, in litt. 2003). In the Southern Rocky Mountain region there are approximately 30,000 km² (12,000 mi²) of lynx habitat on National Forest Lands and approximately 700 km² (280 mi²)

on BLM lands (see Table 1) (E. Johnston, in litt. 2003; J. Whitney, in litt. 2003).

Federal lands are managed as either "developmental" or "non-developmental" allocations. Lands in developmental allocations are managed for multiple uses, such as recreation and timber harvest, some of which may conflict with conservation of lynx. Lands within non-developmental allocations are managed for the most part to allow natural ecological processes to dominate and contain large portions of wilderness or other natural areas (U.S. Forest Service and Bureau of Land Management 1999; D. Prevedal, U.S. Forest Service, in litt. 1999). Timber harvest and construction of roads or fire suppression typically do not occur or are very limited in lands managed in non-developmental allocations. Lynx (including introduced lynx in Colorado) continue to be broadly distributed throughout lynx habitat in the Northern Rocky Mountains/Cascades and Southern Rocky Mountains (McKelvey *et al.* 2000b; T. Blickensderfer, in litt. 2003), both inside and outside of non-developmental allocation areas (U.S. Forest Service and Bureau of Land Management 1999).

Non-developmental allocations are beneficial for lynx because they are managed for the most part to allow natural ecological processes to dominate. This is significant, because in the Northern Rocky Mountains, 41 percent of lynx habitat is in non-developmental allocations; in the Cascades, 85 percent of lynx habitat is in non-developmental allocations; and in the Southern Rocky Mountains, 23 percent is in non-developmental status (U.S. Forest Service and Bureau of Land Management 1999).

The final rule described the amount of lynx habitat managed in developmental allocations for multiple uses in the Northern Rocky Mountains/Cascades, and Southern Rocky Mountains. In the Northern Rocky Mountains, 59 percent of lynx habitat is in developmental allocations, in the Cascades 15 percent, and in the Southern Rocky Mountains 77 percent (U.S. Forest Service and Bureau of Land Management 1999). Activities that may be detrimental to lynx or lynx habitat, such as some timber harvest regimes and fire suppression, can occur in developmental allocations.

Timber harvest levels on Federal land in the West have declined consistently and dramatically (approximately 80 percent) over the past decade or longer (R. Gay, U.S. Forest Service, in litt. 1999). Timber harvest in specific lynx forest types also has declined in the Northern Rocky Mountains (B.

Ballenbacher, U.S. Forest Service, in litt. 1999; B. Ferguson, U.S. Forest Service, pers. comm. 1999), Cascades (F. Zenson, U.S. Forest Service, pers. comm. 1999), and the Southern Rocky Mountains (B. Short, U.S. Forest, in litt. 1999).

On National Forest lands, with a few exceptions for projects involving third parties (applicants), activities that may affect lynx on developmental allocations are addressed by adherence to the LCAS and its conservation measures for lynx. For example, the Forest Service has curtailed its precommercial thinning on Forest Service land since the signing of its Conservation Agreement with the Service and the programmatic biological opinion on Forest and BLM land management plans, both of which abide by the LCAS (see Factor D). Risks to lynx or lynx habitat on BLM lands also are being addressed through adherence to the Conservation Agreement. Most Federal land management plans have yet to be amended to provide long-term conservation for lynx.

Timber harvest activities on non-Federal lands are guided by State or Tribal forest practice rules whose requirements vary (*e.g.*, Idaho Department of Lands 1996, Washington Administrative Code 2001, Montana State Forest Practices Rules 2003). Under Washington Forest Practices Board regulations, three major non-Federal landowners have adopted and implemented lynx habitat management plans on their lands in Washington (see Factor D).

We conclude that some timber harvest activities, such as pre-commercial thinning, may reduce the quality of snowshoe hare habitat in local areas on non-Federal lands in the Northern Rocky Mountains/Cascades and Southern Rocky Mountains, and thus may negatively affect lynx or lynx habitat at local scales. Alternatively, timber harvest regimes in lynx habitat that create a dense understory provide good snowshoe hare and lynx conditions. A significant proportion of lynx habitat is managed in non-developmental status, which is beneficial for lynx. Furthermore, lynx habitat on National Forest and BLM lands is managed to conserve lynx. As a result, we conclude the current threats from timber harvest and thinning on both non-Federal and Federal lands to lynx in the Northern Rocky Mountains/Cascades and Southern Rocky Mountains are low.

The final rule explained that natural fire plays a significant role in creating the mosaic of vegetation patterns, forest stand ages and structure that provide good lynx and snowshoe hare habitat in the western mountain ranges of the