Commonly Asked Questions About The Canada Lynx

General

What is a Canada lynx?
The Canada lynx (Lynx canadensis), the only lynx in North America, is a rare forest-dwelling cat of northern latitudes. Lynx feed primarily on snowshoe hares but also will eat small mammals and birds. Its range extends from Alaska, throughout much of Canada, to the boreal forests in the northeastern United States, the Great Lakes, the Rocky Mountains, and the Cascade Mountains. The Lynx is a medium-sized cat, similar to the bobcat, but appears somewhat larger. It has longer hind legs and very large well-furred paws, which make it highly adapted to hunting snowshoe hares in the deep snow typical throughout its range. It also has long tufts on the ears and a short, black-tipped tail. Adult males average 22 pounds in weight and 33.5 inches in length with an average weight for females at 19 pounds and 32 inches in length.

What kind of habitats do lynx require?
In the eastern and Great Lakes States, lynx live in southern boreal forests that are considered mixed deciduous-coniferous forests. In the western States they live in spruce/fir forests at higher elevations. Downed logs and windfalls provide cover for denning sites, escape, and protection from severe weather. Earlier successional forest stages provide habitat for the lynx's primary prey, the snowshoe hare. The size of lynx home ranges vary and have been documented between 3 to 300 square miles. Lynx are capable of moving extremely long distances in search of food or to establish new home ranges. Lynx populations rise and fall following the cyclic highs and lows of snowshoe hare populations. When hare populations are low, the change in the lynx's diet causes the productivity of adult female lynx and survival of young to nearly cease.

Why are lynx so rare in the contiguous United States?
In the contiguous United States, lynx populations occur at naturally low densities; the rarity of lynx at the southern portion of the range compared to more northern populations in Canada is normal. The rarity of lynx is based largely on limited availability of its primary prey, snowshoe hare. At southern latitudes, low snowshoe hare densities are likely a result of the naturally patchy, transitional boreal habitat. Such habitat prevents hare populations from achieving high densities similar to those in the extensive northern boreal forest. Lynx in the contiguous United States are part of a larger metapopulation whose core is located in central Canada.

Range And Status

What is the size of the lynx population?
Because the lynx is such a rare animal and there are no reliable population estimates for any region, the size of the total population in the contiguous United States is unknown.

What is the range of the lynx in the contiguous United States?
The range of the lynx in the contiguous United States includes 14 States—Maine, New Hampshire, Vermont, New York, Michigan, Wisconsin, Minnesota, Washington, Oregon, Idaho, Montana, Wyoming, Utah, and Colorado. Lynx infrequently dispersed into Nevada, North Dakota, South Dakota, Iowa, Indiana, Ohio, and Virginia.

With available information, it is difficult for us to determine whether

resident lynx populations existed historically or currently in many States within the contiguous United States. We have conclusive evidence that resident populations of lynx currently exist in Montana, Washington, and likely Maine. We suspect resident populations occurred historically in Minnesota, Wyoming, and New Hampshire, but current information is inadequate to determine whether these States currently support resident populations of lynx. It is likely the native resident lynx population in Colorado has been extirpated. We have inadequate information to determine whether resident lynx populations occurred historically or currently within New York, Vermont, Michigan, Wisconsin, Idaho, Utah, and Oregon.

What is the status of lynx in individual States? (What is the official State status of the lynx?)

Maine—(Lynx are listed as a species of special concern.) In 1999, nine lynx were radio-collared and kittens found. We conclude a resident lynx population likely exists in Maine.

New Hampshire—(Listed as Endangered in 1980.) Numerous historic records but information is inadequate to determine whether a resident population currently exists.

Vermont—(Listed as Endangered in 1972.) Information is inadequate to determine whether a resident population existed historically, now believed to be extirpated.

New York—(Protected small game with no open season.) Information is inadequate to determine whether a resident population existed historically, now believed to be extirpated. A reintroduction effort during 1987-1989 apparently failed to establish a breeding population.

Minnesota—(Protected game animal with no open season since 1984.) We suspect a resident population existed historically but information is inadequate to determine whether a resident population currently exists.

Wisconsin—(Species of concern, taking prohibited.) Information is inadequate to determine whether a resident population existed historically or currently.

Michigan—(Listed as Endangered in 1974, again in 1987.) Information is inadequate to determine whether a resident population existed historically or currently.

Washington—(Listed as Threatened in 1993.) Lynx occupy five of the six areas considered to be lynx management zones by the State of Washington. We conclude a resident lynx population exists in Washington.

Oregon—(Unregulated.) Information is inadequate to determine whether a resident population existed historically or currently.

Idaho—(Furbearer with no open season.) Although numerous historic reports, information is inadequate to determine whether a resident population existed historically or currently.

Montana—(Classified as a Furbearer with closed season.) We conclude a resident lynx population exists in Montana.

Utah—(Sensitive.) Information is inadequate to determine whether a resident population existed historically or currently.

Wyoming—(Protected as nongame with no open season since 1973.) We suspect a resident population existed historically in northwestern Wyoming; however, although two lynx have been recently collared in Wyoming, available evidence is inadequate for us to clearly determine whether a resident population currently exists.

Colorado—(Listed as Endangered in 1975.) Historically a resident population existed, likely now extirpated. Reintroduction effort initiated in 1999.

Management Considerations

What is the ownership or management of lynx habitat in the contiguous United States?

A substantial amount of lynx habitat is on U.S. Forest Service and Bureau of Land Management lands—(Cascades [99 percent], Northern Rockies [72 percent], Southern Rockies [82 percent], Great Lakes [19 percent], and Northeast [7 percent]). The majority of lynx habitat in the Great Lakes and Northeast is under private, State, or county management.

In the west, lynx habitat on large proportions of these Federal lands is managed in "nondevelopmental" status. Lands within nondevelopmental allocations are managed to allow natural ecological processes to dominate. Nondevelopmental lands contain large portions of wilderness or

other natural areas. Timber harvest and road building typically do not occur or are very limited in lands managed in nondevelopmental allocations. The percent of western lynx habitat in nondevelopmental allocations is—Cascades, 85 percent; Northern Rockies, 41 percent; and Southern Rockies, 23 percent.

Has a change in fire management affected the lynx?
Based on available information on fire suppression and upon available habitat assessments, we conclude that at the present time, fire suppression effects are less significant in lynx habitats than in many other forest types in the west and, therefore, the effects of fire suppression are not threatening western lynx populations at this time. Fire did not play a historically significant role in the Northeast; therefore, we conclude that fire suppression does not threaten lynx in the Northeast. In the Great Lakes, fire suppression may have regional or local impacts but does not currently threaten the contiguous United States lynx population.

What effect has the increased human access into lynx habitat had on lynx?
Human activities, such as winter maintenance of roads and trails, snowmobiling and skiing create packed snow trails that allow coyotes to access traditional lynx winter habitat. However, we have no evidence that competition with coyotes, or other potential competitors such as bobcats or mountain lions, is negatively affecting lynx populations.

How has trapping affected the lynx population?
One of the primary reasons we proposed to list lynx, based on available information at the time, was our conclusion that the low numbers of lynx in the contiguous United States were the residual effects of overtrapping that was believed to have occurred in the 1970s and 1980s, in response to unprecedented high pelt prices. However, we now understand that low numbers of lynx in the contiguous United States occur not as a result of overtrapping, but because lynx and their prey are naturally limited by fragmented habitat, topography, and climate compared to that in the core of the lynx range in central Canada.

Does competition with other species negatively affect lynx in the contiguous United States?
We know that coyotes have greatly expanded their range and that packed snow trails facilitate the movement of coyotes into formerly inaccessible deep snow habitats occupied by lynx. Additionally, mountain lion numbers appear to have increased. Lynx co-evolved with mountain lions and bobcats and, in most areas, have coexisted with coyotes for many decades. We found no evidence that competition with species such as coyotes, mountain lions, or bobcats is negatively affecting lynx at a population-level scale.

Are lynx affected by roads?
Lynx movements may be negatively influenced by high traffic volumes on roads that bisect suitable lynx habitat. We suspect that highways with high traffic volumes and associated suburban developments inhibit movements within home ranges and dispersal and may contribute to loss of habitat connectivity. Otherwise, however, roads do not appear to be a significant direct cause of lynx mortality. We found no information demonstrating that forest roads negatively impact resident lynx populations.

Final Listing

The U.S. Fish and Wildlife Service has determined that the Canada lynx will be listed as threatened under the Endangered Species Act.

What factors does the U.S. Fish and Wildlife Service consider as significant threats to the continued existence of the lynx in the lower 48 States?
We conclude the single factor threatening the contiguous United States distinct population segment of the lynx is the inadequacy of existing regulatory mechanisms, specifically the lack of guidance to conserve lynx in National Forest Land and Resource Management Plans and Bureau of Land Management Land Use Plans and the potential for these plans to allow or direct actions that adversely affect lynx. New information available since publication of the proposed rule found that the majority of lynx habitat, particularly in the Northern Rocky Mountains/Cascades and Southern Rocky Mountain regions, is located on Federal lands. Federal land management assumes the largest role in the conservation of lynx in the contiguous United States because of the preponderance of lynx habitat available on U.S. Forest Service and Bureau of Land Management lands.

When does the listing go into effect?
The listing goes into effect 30 days after publication of the final rule in the Federal Register.

What determines if a species meets the definition of endangered or threatened?
The U.S. Fish and Wildlife Service must determine if the presence of one or more of the five factors listed below have caused a species' status to decline to where it meets the definition of endangered or threatened:

- The present or threatened destruction, modification, or curtailment of its habitat or range.
- Overutilization for commercial, recreational, scientific, or educational purposes.
- Disease or predation.
- Inadequacy of existing regulatory mechanisms.
- Other natural or manmade factors affecting its continued existence.

Endangered is defined as any species which is in danger of extinction throughout all or a significant portion of its range.

Threatened refers to any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

What protection does the lynx receive from listing as threatened under the Endangered Species Act?
The Endangered Species Act requires Federal Agencies to conserve endangered and threatened species and to consult with the U.S. Fish and Wildlife Service on any actions that might affect the lynx.

Upon listing, lynx in the contiguous United States are protected from "take." "Take" is defined as: to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect. Harm may include significant habitat modification where it actually kills or injures a listed species through impairment of essential behavior (e.g., feeding, breeding or sheltering). Taking is prohibited unless authorized by a special 4(d) rule that would provide for the conservation of lynx.

Final Listing—Distinct Population Segments (DPS)

What is a distinct vertebrate population as defined by the Endangered Species Act?
Under the Endangered Species Act, populations of species can be listed individually as threatened or endangered if they are separated or discrete from other populations and they represent populations with significant biological or ecological value. Once it has been determined that a population has these two elements and therefore meets the definition of a distinct population, the specific population is then evaluated using the five listing factors used to determine if it meets the definition of either threatened or endangered (described above). This policy applies to vertebrate animals that may be endangered or threatened in part of their range but are more numerous elsewhere. The Endangered Species Act protects species, subspecies, and "any distinct population segment of any species of vertebrate fish or wildlife" which are endangered or threatened.

In the case of the lynx, a distinct population segment means that lynx in the lower 48 United States are considered discreet in that this population is delineated by an international political boundary that coincides with differences in status and management. In addition, the population of lynx in the lower 48 States are considered significant because loss of this population would significantly reduce the range of the species.

Why does the distinct population segment delineation stop at the Canadian border?
The U.S. Fish and Wildlife Service's policy on vertebrate population segments allows for the identification of distinct population segments following international boundaries under certain circumstances. With the lynx, there appears to be a difference in the population status and management practices of lynx north of the United States border.

How important are the different regions to the persistence of the contiguous United States distinct population segment?
Within the contiguous United States, the relative importance of each region to the persistence of the Distinct Population Segment (DPS) varies. The Northern Rockies/Cascades Region supports the largest amount of lynx habitat and has the strongest evidence of persistent occurrence of resident lynx populations, both historically and currently. In the Northeast (where

resident lynx populations continue to persist) and Southern Rockies regions, the amount of lynx habitat is naturally limited and does not contribute substantially to the persistence of the contiguous United States DPS. Much of the habitat in the Great Lakes Region is naturally marginal and may not support prey densities sufficient to sustain lynx populations. As such, the Great Lakes Region does not currently contribute substantially to the persistence of the contiguous United States DPS. Collectively, the Northeast, Great Lakes, and Southern Rockies do not constitute a significant portion of the range of the DPS. We conclude the Northern Rockies/ Cascades Region is the primary region necessary to support the continued long-term existence of the contiguous United States DPS. However, the role that each region plays in the long-term conservation of the species will be explored further in recovery planning for the species

Listing Impacts

Will listing the lynx shut down logging, recreational development, and other activities on Federal lands?
No. In the vast majority of cases, modifications to reviewed projects are possible that reduce or eliminate impacts to listed species, allowing projects to continue. The Lynx Conservation Assessment and Strategy, developed by the U.S. Forest Service, Bureau of Land Management, and U.S. Fish and Wildlife Service, provides guidelines for Federal Agencies to analyze and minimize effects of planned and ongoing projects on lynx and lynx habitat and recommends lynx conservation measures. Compliance with the National Forest Management Act and Federal Land Policy and Management Act will reduce any restrictions necessary under the Endangered Species Act.

What effect does timber harvest have on the lynx?
Timber harvest activities and precommercial thinning may reduce the quality of snowshoe hare habitat in local areas of the Northern Rockies/ Cascades and Southern Rockies and thus may negatively affect lynx at local scales. However, based on the large proportion of lynx habitat managed in nondevelopmental status (such as designated Wilderness) compared to the proportion of managed lynx forest types affected, current regional effects of timber harvest and thinning appear to occur at levels that are not likely threatening western lynx populations.

What impacts will the listing have on private, State, or County timber harvest?
In the Northeast and Great Lakes, most lynx habitat is in private, State, or County ownership and timber harvest and associated activities may be detrimental to lynx on these lands. Modifications to private timber management may be necessary in areas where lynx denning is known to occur.

Non-federal landowners also have the option of entering into a Habitat Conservation Agreement which will provide for the conservation of the lynx while allowing timber harvest and protection against incidental take.

How will the listing affect trapping in the contiguous United States?
Trapping of lynx will be illegal upon the date the listing goes into effect. All States (with the exception of Oregon) and many Tribes within the contiguous United States had already closed their lynx trapping and hunting seasons prior to the lynx being listed under the Endangered Species Act.

We have been working with States and Tribes to ensure that their trapping and hunting programs for species other than lynx do not result in the take of lynx. One option we are planning is the issuance of a special 4(d) rule to address conservation of the species by States and Tribes in order to minimize the potential for lynx to be incidentally taken while ensuring that the legal hunting and trapping programs can continue.

Conservation Agreement

The Forest Service has signed a Conservation Agreement with the Fish and Wildlife Service which will promote the conservation of lynx and its habitat on federal lands. It identifies actions the Forest Service will take to reduce or eliminate adverse effects or risk to the lynx and its habitat. These actions are a result of considering the new information about the Canada lynx contained in the Lynx Science Report and the Lynx Conservation Assessment Strategy.

What has been accomplished to address lynx conservation on Federally managed lands?
The Forest Service, the Bureau of Land Management (BLM), National Park Service (NPS), and the Service recognized that Federal agencies have a significant role in the conservation of lynx. They established a Lynx Steering Committee in 1998 consisting of representatives from each agency. The Steering Committee provides oversight and guidance to teams established to address various lynx conservation issues on Federal lands. One team developed the Lynx Conservation Assessment and Strategy; another team developed the Science Report; a third team prepared a biological assessment to evaluate the effects of Forest Service and BLM Land Management Plans on lynx. All of these efforts are intended to plan and implement sound conservation actions and management decisions for lynx on Federal lands.

Why was the Lynx Conservation Assessment and Strategy developed? How will it be used in Section 7 consultations?
The Lynx Conservation Assessment and Strategy (LCAS) was developed to provide a consistent and effective approach to conserving lynx on Federal lands in the contiguous United States. It was developed by the Forest Service,

Bureau of Land Management (BLM), National Park Service, and the Service. The overall goals of the LCAS were to recommend lynx conservation measures, provide a basis for reviewing the adequacy with regard to lynx conservation of Forest Service and BLM land and resource management plans, and facilitate conferencing and consultation under section 7 of the Act, should the lynx be listed. It will also provide a blueprint to guide recovery efforts.

What was the determination of the draft biological assessment (DBA) of the effects of National Forest Service and BLM Land Management Plans on lynx?

The DBA determined that Federal land management plans are likely to adversely affect the lynx. The DBA identified potential effects resulting from 57 Forest Service Land and Resource Management Plans (Plans) and 56 BLM Land Use Plans (Plans) within the 16-State area where lynx were proposed for listing. The direction found in the Plans was compared to direction proposed in the LCAS. If it was determined that a Plan may adversely affect either an individual lynx or a population segment through failure to meet any one of the programmatic conservation measures in the LCAS, then the Plan was deemed overall as likely to adversely affect lynx. In other words, a risk was deemed harmful to lynx if the possibility of any adverse effect existed due to Plan direction or if the Plans did not address lynx conservation issues.

The Federal agencies chose a conservative approach in determining whether Plans might result in adverse effects to lynx. The determination was based only on what the Plans directed or allowed, not on a quantitative assessment of the effects to lynx from actual actions as a result of past or current implementation of the Plans. We acknowledge that many activities allowed by Plans, such as timber harvest and road construction, are never carried out for a variety of reasons, such as funding limitations and environmental, wildlife or policy considerations.

The DBA evaluated 15 criteria that may contribute to some level of adverse effects to either an individual lynx or a population segment through failure to meet any one of the programmatic conservation measures in the LCAS. These criteria were denning habitat, foraging habitat, habitat conversion, precommercial thinning, fire management, landscape patterns, forest roads, developed recreation, non-winter dispersed recreation, winter dispersed recreation, minerals and energy, habitat connectivity, land tenure adjustments, management coordination, and monitoring. Individually, these criteria may not impart substantial impacts on the DPS, however, current Plans do allow actions that cumulatively could result in significant detrimental effects to the DPS. We cannot predict the future levels of impacts to lynx that would result from continued implementation of current Plans. However, the DBA concludes that there is reasonable potential for adverse effects to lynx as a result of actions directed or allowed by existing Plans.

Special 4(d) Rule

The U.S. Fish and Wildlife Service included in the final listing a special 4(d) rule that will allow for the take and export of lawfully obtained captive-bred lynx.

What are the requirements for captive-bred lynx?

The special rule provides for the take of lawfully obtained captive-bred lynx without permit. It allows us to issue CITES export permits for captive-bred lynx and captive-bred lynx skins, properly tagged with valid CITES export tag.

What about State and Tribal hunting and trapping programs?

The Service has also developed an addition to the special 4(d) rule that will address the take of lynx that may result incidentally from State and Tribal regulated hunting and trapping programs. This addition to the special rule is in the review process and is expected to be published soon followed by a public comment period.