

## **Questions and Answers Regarding the Status Review Finding For the Northern Rocky Mountains Fisher**

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### **What is the status review finding regarding a Distinct Population Segment of the Fisher in the Northern Rocky Mountains?**

The U.S. Fish and Wildlife Service has completed a status review of the fisher population in the northern Rocky Mountains of the United States, which includes Idaho, Montana and Wyoming, and has determined it does not warrant protection as a threatened or endangered Distinct Population Segment (DPS) under the Endangered Species Act (ESA). The Service bases its conclusion for this finding on a thorough review of all the available scientific and commercial information regarding the status of the fisher and the potential threats to the species.

### **What is a status review?**

A status review, also known as a 12-month finding, makes public the Service's decision on a petition to list a species as threatened or endangered under the ESA. The finding is based on a thorough assessment of the available information on the species, as detailed in the species' status review. One of three possible conclusions can be reached as part of the finding: that listing is warranted, not warranted, or warranted but presently precluded by other higher-priority listing activities involving other species. In the case of the fisher, the Service found that the species is not likely to become threatened or endangered within the foreseeable future in all or a significant portion of its U.S. Northern Rocky Mountains range. Therefore, listing of the U.S. Northern Rocky Mountains fisher as a threatened or endangered Distinct Population Segment under the ESA is not warranted at this time.

### **What is a Distinct Population Segment (DPS) and why did we analyze the Fisher as a DPS?**

Under the Service's DPS policy, the following three elements are considered concerning the classification of a possible DPS as a listable entity under the ESA: (1) the discreteness of a population in relation to the remainder of the species to which it belongs; (2) the significance of the population segment to the taxon to which it belongs; and (3) the population segment's conservation status.

Based on the best scientific and commercial information available, the Service determined that the fisher in the U.S. Northern Rocky Mountains is both discrete and significant to the rest of the taxon based on physical separation, and the fact that its loss would result in a significant gap in the range and the loss of markedly different genetic characteristics relative to the rest of the taxon. Physical separation is evident because there is no historical connection between population centers in the United States, and we have no direct confirmation that fishers are moving between the U.S. Northern Rockies and larger population centers in Canada. The loss of the Northern Rockies fisher population would result in a significant gap in the range of the taxon by shifting the

southern boundary of the western range over 965 km (600 mi) to the north, leaving only three individually isolated Pacific Coast populations in the entire southwestern range of the taxon. Fishers in the Northern Rocky Mountains of the United States have a genetic legacy from population augmentations conducted in the 1960s and 1990s with individuals from Canada and the Midwest United States and a unique native genetic type found nowhere else in the range of the species. The loss of the native fisher lineage in the Northern Rockies would result in the loss of a unique and irreplaceable genetic identity and the local adaptation and evolutionary potential that goes with it.

The petitioners requested that the fisher in Idaho, Montana, and Wyoming be evaluated as a DPS for listing consideration. We determined that the Northern Rocky Mountains DPS consists of the existing range in Idaho and Montana. There is no evidence that fishers occupy Wyoming today or that there was ever a breeding population in the State. However, while we found that the Northern Rocky Mountains population of fisher does meet the criteria for discreteness and significance under the DPS policy, the conservation status of the population, discussed below, did not show it to be warranted for listing under the ESA.

### **What specifically does the Service look at to determine if a species or DPS needs to be listed as threatened or endangered?**

We considered the DPS's conservation status using the five factors specified in the ESA to determine whether a species, subspecies or DPS meets the definition of "threatened" or "endangered" according to the criteria stated in the Act. A species may be warranted for listing based on the present or threatened destruction, modification or curtailment of a species habitat or range; overutilization for commercial, recreational, scientific or educational purposes; disease or predation; inadequacy of existing regulatory mechanisms; or other natural or manmade factors affecting a species' continued existence. We did not find that the U.S. Northern Rocky Mountains fisher to be threatened by these factors, either individually or cumulatively.

### **What is the Fisher and where is it found?**

The fisher is a medium-sized forest-dwelling mammal. Across their range fishers are most commonly associated with low- to mid-elevation environments of mesic (moderately moist), coniferous and mixed conifer and hardwood forests. Moderate to high levels of contiguous canopy cover are more important as components of fisher habitat rather than any particular forest plant community. Fishers avoid areas with little or no overhead cover, but an abundance of coarse woody debris, boulders or shrub cover sometimes provide suitable overhead cover in non-forested or otherwise open areas. In the understory, the physical complexity of coarse woody debris such as downed trees and branches are important for providing a diversity of foraging and resting locations.

The presumed historical range of the fisher was throughout the montane and boreal forests across North America in Canada extending south into the U.S. to New England,

the Great Lakes area as far south as Tennessee, and along the Appalachian, Rocky, and Pacific Coast Mountains. The contemporary U.S. distribution has contracted compared to the presumed historical range, with most of the geographic area south of the Great Lakes no longer occupied and less extensive population areas in the Pacific Northwest. Smaller range reductions have occurred in Canada. The current distribution of fishers in the U.S. Northern Rocky Mountains is similar to the presumed historical range.

Fishers have been trapped for their fur throughout their historical range, and unregulated overtrapping and indiscriminate predator control have been implicated in past range reductions and local extirpations. Fishers were so rare in the U.S. Northern Rockies by the 1920s that they were considered extirpated from the region. Beginning in 1959, a series of translocations of fishers from British Columbia, Minnesota and Wisconsin were thought to have reestablished a fisher presence in the region. It is now understood that a small remnant population of native fishers survived extirpation and that the current population is an admix of introduced and native fishers. There is no information on the historical numbers or density of fisher populations in the region and little is known of regional population numbers today.

### **What factors that could potentially affect the U.S. Northern Rocky Mountains Fisher populations did the Service examine?**

The Service analyzed potential factors that may affect the habitat or range of the U.S. Northern Rocky Mountains fisher including forest management, development, climate change, wildfire and forest disease, furbearer trapping, disease and predation, effects of small, isolated populations, and the adequacy of regulatory mechanisms.

#### **Forest Management:**

Because of the fisher's dependence on forest cover, their habitat could potentially face risks from timber harvest, forest management, loss of habitat from roads or other human development. Fisher populations were greatly reduced to the point they were believed extirpated by the early 20th century. Human occupation and commercial timber harvest occurred at low levels early in the 20th century in this region, and anthropogenic alteration of fisher habitat is an unlikely cause of the species' population collapse. Over decades, fisher populations resurged, with the help of augmentations, concurrently with natural climate events such as drought and fire, and also the permanent or long-lasting effects of development and timber harvest that potentially alter the important mature forest structure.

Based on the limited available survey information, the contemporary distribution of fishers is similar to the historically depicted distribution in Idaho and Montana, despite alterations that have occurred within its range. The existing state of the regional landscape is conducive to supporting fisher, but it is not clear what the capacity of the system is to support, in the long-term, a self-sustaining population or a number of interacting subpopulations. Interpreting the impact of past and present forest

management, resource extraction, or development is complicated by an incomplete picture of how the animals are using a landscape impacted by human actions. Given the available information, however, it does not appear that forest management and timber harvest are threats to the species currently or in the foreseeable future.

### **Development:**

Dwellings, roads, and other infrastructure have been on the landscape for decades, and currently developed areas likely will see an increase in the density of development over the next 20 years. It is unknown if fisher habitats that are currently or potentially suitable will be affected directly by future development. The proximity and availability of large areas of forested public lands may moderate a loss of habitat, if it occurs, but more needs to be understood regarding how fishers are using the lands at the interface of public and private ownership. An increase in traffic on roads, and increased human presence and demands for recreation on public lands may also increase the risk of vehicle collision and displacement from suitable habitats in proximity to areas receiving high levels of human use. Reports of fishers' responses to human activity and the presence of roads are mixed and, therefore, difficult to interpret with certainty. Habitat loss and increased direct mortality resulting from increasing human development are a concern, but, based on the available information, do not rise to a level of threat to the population.

### **Climate Change:**

Projected changes in climate such as increasing temperatures, earlier spring run-off, and more precipitation falling as rain than snow, could result in a wide range of potential outcomes for the forested environments on which fishers depend. Warming temperatures could benefit fishers by facilitating forest expansions to the north and up slopes, or riparian habitats used extensively by fishers in the region could deteriorate due to alterations in moisture availability. The effects to fishers in either the short or long term in a focused geographic area cannot be reasonably discerned because there is no specific aspect of the species' ecology or physiology that is linked to a climate change variable that can be confidently projected. We have no knowledge of a limiting ecological or physiological factor for fishers in the U.S. Northern Rockies other than the presence of forested landscapes, which are not predicted to be reduced under climate change projections. Increasing temperatures and drought could affect fire frequency and intensity and the susceptibility of forest vegetation to disease, but climate change itself does not represent a threat to fishers now or in the foreseeable future.

### **Wildfire and Disease:**

The Northern Rocky Mountain region has a history of local and periodic regional fire and tree disease events. Fire and disease will continue to shape forest landscapes. Disturbances promote important habitat features such as tree snags and woody debris in the understory, conditions that foster larger trees, and open heavily stocked stands to provide foraging habitat for prey such as the snowshoe hare. Conversely, extensive and intense regional fires or defoliating events could reduce the amount of forest cover

available to fishers. While most climate predictions through the 21st century include increased temperature and earlier spring snowmelt conducive to longer fire seasons, the uncertainty of moisture patterns makes regional fire patterns difficult to predict with confidence. An increase in incidence of forest diseases or novel diseases also could accompany a changing climate, but as with fire, the threat to fisher habitats is difficult to predict.

### **Furbearer trapping:**

Trapping is considered one of the most important factors influencing fisher populations because fishers are easily trapped and unregulated overharvest in the past contributed to severe population reductions. Low levels of harvest have the potential to negatively impact small, local populations if not adequately regulated. Today, most populations in the species' range experience regulated harvest, and trapping is the primary known source of fisher mortality.

Regulated harvest has occurred in Montana since 1983. The harvested population in west-central Montana is considered stable with the existing trapping pressure based on a consistent yearly harvest over time and the continual presence of a high proportion of younger animals in the harvest. Because subadult individuals are more susceptible to all causes of mortality than adults, the presence of a high percentage of younger animals in seasonal furbearer harvests may indicate that harvest is compensating for natural mortality.

Fishers are classified as furbearers under State law in Idaho but there is no harvest season. Over the past 40 years in Idaho a low level of fisher mortality has occurred incidental to trapping for other species – primarily the American marten. Incidental capture and mortality increased between 2006 and 2010 for unknown reasons; possible explanations include an increasing and expanding fisher population or greater exposure to trapping or both. These recent incidental captures could become a concern if the trend continues and there is no evaluation and consideration of the potential impacts; however, efforts are ongoing to study the fisher's ecology in Idaho and devise beneficial management strategies that could be applied to limit unintended fisher capture.

### **Disease and Predation:**

We found no evidence that disease or predation are threats to the U.S. Northern Rocky Mountains fisher.

### **Small Population:**

Solitary, territorial, requiring large home ranges, and reluctant to move through areas with no cover, fishers may be aggregated into smaller interrelated groups on the landscape making them vulnerable to random demographic, environmental, and genetic changes or impacts of a changing landscape from human activities. However, we currently do not have information to show whether small population size allows for other

environmental or anthropogenic factors to create a threat to the fisher in the U.S. Northern Rockies.

**Regulatory Mechanisms:**

We found no single factor or accumulated effects of factors, that when considered within a foreseeable future, rose to a level significant enough for fishers in U.S. Northern Rockies to warrant the protections of the ESA, and therefore, the existing regulatory mechanisms were not considered ineffective. Measures are in place that could benefit fishers. Seventy-two percent of the forested habitats in the region are managed by the U.S. Forest Service in part or all of 14 national forests. The fisher is a species given consideration in management direction primarily by maintaining canopy cover and mature forest components such as snags and coarse woody debris on the ground. Riparian areas are important to fishers, and State laws provide riparian area protections in forest management and timber operations.

**The Fish and Wildlife Service has publicly described the fisher as a species sensitive to the loss of “old-growth” forests that have been greatly reduced to timber management and logging. Why are you now stating that it is not?**

At the time we started this status review, the information available to us indicated that fishers across their range were associated with forests with a high percentage of canopy cover and large trees. Forests in an older or mature stage (often called “old growth”) are most likely to supply these features. The habitat ecology of fishers in the U.S. Northern Rockies is not well studied. However, the apparent expansion of native fishers and the establishment of translocated individuals to occupy the described historical range indicate that the regional landscape and features at smaller scales, including younger or less mature forests, are providing for fisher habitat needs. More information is needed on the fisher’s habitat ecology in the region to assess the landscape’s capacity to support a healthy and viable population over time.