

June 11, 2010

## COMMENTS: NORTHERN ROCKY MOUNTAINS FISHER STATUS REVIEW AND REQUEST FOR INFORMATION

Submitted via the Federal eRulemaking Portal

<http://www.regulations.gov>

Docket "FWS-R6-ES-2010-0017"

Also submitted via U.S. mail to:

Public Comments Processing

Attn: FWS-R6-ES-2010-0017

Division of Policy and Directives Management

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Defenders of Wildlife, Center for Biological Diversity, Friends of the Bitterroot, Friends of the Clearwater, Idaho Conservation League, The Lands Council, Save Our Cabinets, Western Watersheds Project and Wyoming Outdoor Council submit the following comments in response to the U.S. Fish and Wildlife Service's (FWS) notice announcing its petition finding and the initiation of a status review of the fisher (*Martes pennanti*) in its Northern Rocky Mountain range. 75 Fed. Reg. 19,925 (April 16, 2010). These comments are organized by the categories listed in the "Information Requested" section of this notice.

### **1. Fisher biology, range and population trends**

We call attention to the following research findings important to fisher conservation and completed since the petition to list fishers in the northern Rocky Mountains was submitted in February 2009 (Defenders of Wildlife et al. 2009).

- Weir and Corbould 2010, pp. 408-9  
Intensive forest harvesting in the future may exacerbate the already diminished ability of modified landscapes to support fishers, particularly in forests that are slated for salvage harvest of diseased or damaged trees.  
Throughout British Columbia, forests that support fishers are experiencing a widespread epidemic of mountain pine beetles (*Dendroctonus ponderosae*), which attack and kill lodgepole pine trees...  
[I]o maximize recovery of timber value in affected areas, forest harvest in beetle-affected areas has increased substantially in terms of both spatial and temporal intensity...  
[O]ur results suggest that this expedited harvest will gravely affect the ability of these landscapes to be occupied by fishers.
- 5th International *Martes* Symposium, Biology and Conservation of Martens, Sables, and Fishers: a New Synthesis, University of Washington, Seattle, USA, 8-12 September 2009

See Attachments A and B to these comments for the abstracts of oral and poster presentations at this conference. Many of these studies are now undergoing a scientific review process prior to their

publication, and the authors should be contacted for any updated information. Yet the abstracts themselves relate some important preliminary findings, and we have taken the liberty of highlighting some excerpts particularly relevant to this status review. These excerpts include updates on the conservation status of fishers in the U.S. northern Rocky Mountains (2 studies), fisher habitat needs, reproduction and survivorship, status and management in British Columbia, use and travel across the landscape at different scales, susceptibility to predation and disease, and some projected effects of climate change on fishers in North America. The abstracts and other information from this symposium are posted on this website: <http://uwacadweb.uwyo.edu/bus Kirk/martes5/> .

**a) Habitat requirements (feeding, breeding, shelter)**

See information presented in the fisher listing petition, and the subsequent research described above.

**b) Genetics and taxonomy**

See information presented in the fisher listing petition, and the subsequent research described above.

**c) Historic and current range**

See information presented in the fisher listing petition, and the subsequent research described above.

We excerpt the following map of past and present fisher range in western North America with an explanatory caption from the recent FWS Species Assessment and Listing Priority Assignment for fishers in their West Coast range (USDI 2009, p. 8).



*Contemporary range of fishers in western North America based on available information from occurrence records, surveys, research studies, and professional expertise. The contemporary range as depicted does not imply that fishers are present everywhere within the mapped area or are equally distributed throughout the mapped area.*

**d) Historic and current population levels and trends**

See information presented in the fisher listing petition, and the subsequent research described above.

e) **Conservation measures**

See Section 4(d) of our comments below.

f) **Fisher status rangewide (is the N. Rockies population either a listable DPS or a significant portion of its range)**

See Sections 2 and 3 of our comments below.

g) **U.S. versus Canada management of fishers and their habitat**

See Section 2(a)(ii) of our comments below.

**2. Fishers in the U.S. northern Rocky Mountains meet the criteria to be designated a Distinct Population Segment (DPS)**

The FWS ruled in its finding on the fisher petition that the northern Rocky Mountain fisher population “may” meet the discreteness criteria of a distinct population segment because of its physical separation and genetic distinctness from other fisher populations, and that it “may” meet the significance criteria of a distinct population because of its genetic distinctness and that its loss would result in a significant gap in the fisher’s range. 75 Fed. Reg. 19,929; 75 Fed. Reg. 19,930. Here we provide additional justification that these and other DPS criteria are met to support a final determination in favor of a DPS designation for fishers in the U.S. northern Rockies.

**A. The northern Rocky Mountain fisher population is discrete**

FWS DPS Policy (emphasis added): 61 Fed. Reg. 4,725.

A population segment of a vertebrate species may be considered discrete if it satisfies either one of the following conditions:

1. It is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors. Quantitative measures of genetic or morphological discontinuity may provide evidence of this separation.
2. It is delimited by international governmental boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist that are significant in light of section 4(a)(1)(D) of the Act.

Both conditions apply to the northern Rocky Mountain fisher population, for reasons that we describe in detail as follows.

**i. The northern Rocky Mountain fisher population is “markedly separated” from other populations**

We concur with the FWS finding on the fisher petition that natural physical barriers currently preclude connectivity between the northern Rocky Mountain fisher population, and other U.S. fisher populations along the West Coast and the Midwest. 75 Fed. Reg. 19,928. We also concur with the FWS finding that there is no evidence to indicate connectivity between the U.S. northern Rocky Mountain fisher population and fisher populations in Canada. 75 Fed. Reg. 19,929.

Even if there was some level of connectivity between fisher populations in the U.S. northern Rocky Mountains and in southern Canada, the northern Rocky Mountain fisher population would still meet the “discrete” criteria of a DPS due to its relative isolation from fisher populations in Canada. A review of the FWS DPS policy indicates that complete isolation is not necessary for a population to be considered discrete. 61 Fed. Reg. 4,724.

The Services do not consider it appropriate to require absolute reproductive isolation as a prerequisite to recognizing a distinct population segment...

[T]he standard adopted does not require absolute separation of a DPS from other members of its species, because this can rarely be demonstrated in nature for any population of organisms.

The FWS finding on the fisher petition also concluded that the northern Rocky Mountain fisher population contains unique genetic material that is not evident in outside fisher populations, including the closest neighboring fisher populations in Canada and the West Coast of the U.S.

For both reasons of its geographic separation, and its genetic distinctiveness, the northern Rocky Mountain fisher population meets the discrete criteria to be designated a DPS.

- ii. **The northern Rocky Mountain fisher population is delimited by an international boundary, and there are significant differences on either side of this boundary regarding control of exploitation, habitat management, conservation status and regulatory mechanisms affecting fishers.**

It is clear that the international boundary between the United States and Canada results in differences in the control of exploitation, habitat management, and conservation status of fishers, as well as the regulatory mechanisms that are in place to protect the species. These differences are significant enough to indicate that current regulatory mechanisms are not adequate to ensure the survival of fishers in the U.S. northern Rocky Mountains.

We are disappointed with the FWS’s conclusion in its finding on the fisher petition that it lacks “any information” indicating significant differences in the management of fishers and their habitat in the U.S. versus Canada. 75 Fed. Reg. 19,929. FWS also asserted that fishers in the U.S. Rockies are subject to more protective regulations than fishers in Canada, implying that this would make the “international boundary” criteria for designating a DPS less significant (*Ibid*). First, one does not need to look too far to find many significant differences in the management of fishers and their habitat on either side of the international border: basic comparisons of the national, state/provincial and private land regulations governing the human uses and activities in areas used by fishers in either country quickly expose great differences. Second, significant differences in management that may threaten the U.S. population is all that must be shown to fulfill the “discrete” criteria, no matter which side of the border has the most prevalent threats. As an extreme hypothetical example, a policy by British Columbia to clearcut all of its forests affected by the mountain pine beetle would represent a significant threat to the U.S. northern Rocky Mountain fisher population by exacerbating its isolation from the nearest Canadian population.

The intent of the “international boundary” criterion for a DPS designation is simply to provide the grounds for using a political boundary for a DPS when it is justified for reasons not grounded in biology. 61 Fed. Reg. 4723.

... it appears to be reasonable for national legislation, which has its principal effects on a national scale, to recognize units delimited by international boundaries when these coincide with differences in the management, status, or exploitation of a species.

Put another way, when considering the question of whether adequate regulations are in place to effectively address the various threats facing fishers in the U.S. northern Rockies (section 4(a)(1)(D) of the ESA), FWS should consider if there are any significant differences in control of exploitation, habitat management, conservation status, or regulatory mechanisms for fishers in the northern Rockies versus in Canada. If so, FWS can designate a DPS for the U.S. population of that species and consider listing it under the ESA. If not, the U.S. population is not sufficiently discrete to be considered for DPS designation.

#### **a) International differences in fisher conservation status**

Fishers are clearly less imperiled in western Canada than in the western U.S. The more liberal trapping regulations for British Columbia and Alberta provide just one indicator of the fisher’s far more robust status in western Canada, as well as a good example of significant differences in the management of fishers in Canada versus the U.S. (BC Ministry of Environment 2009, Alberta 2009). By comparison, fisher trapping is prohibited in all of the western U.S. except Montana, which allows a maximum of seven fishers total to be legally trapped each year, and a maximum female subquota of just two animals (MDFWP 2009, p.7).

In a previous status review on the wolverine, FWS claimed that similar differences in the conservation status of wolverines on either side of the U.S./Canada border were not sufficient to consider the U.S. population discrete, with the unclear justification that they are “not significant in light of section 4(a)(1)(D) [of the ESA].” 73 Fed. Reg. 12,937. Section 4(a)(1)(D) of the ESA simply asks if regulatory mechanisms are in place to effectively address the threats to a species or population under consideration for listing. Both the wolverine’s and the fisher’s conservation status are significantly different in the lower 48 states compared to Canada, and current regulations on either side of the international border have failed to prevent this difference. Nor is there any evidence that current regulations affecting either species and its habitat in the U.S. and Canada are sufficient to restore the lower-48 population such that the differences in these species’ conservation status on each side of the international border will become less significant at any time in the foreseeable future. Thus, the northern Rocky Mountain fisher population meets the “discrete” criterion of the FWS DPS policy.

#### **b) International differences in the management of fisher habitat**

The regulations that govern fisher habitat in the U.S. and Canada change abruptly at the international border. On the U.S. side, much of the habitat is managed by the U.S. Forest Service, which is obliged to manage habitat for native species under the National Forest Management Act (though how this responsibility is implemented varies considerably across national forests—see Section 4(D) of these comments below). In Canada, there is no such legal mandate to maintain native species not listed under the federal Species At Risk Act. Furthermore, the status of fishers is

much more secure in Canada, so they receive much less attention when managers face decisions affecting their habitat. Canada is under no obligation to help maintain fishers in the U.S. northern Rockies by providing source populations or maintaining connectivity to the U.S. populations, thus the United States has sole responsibility to maintain fishers in the U.S. Rocky Mountains. Such is the purpose and intent of the federal Endangered Species Act, as well as the “international boundary” criterion of the FWS DPS policy.

**c) International differences in how the exploitation of fishers is controlled.**

As stated in our introduction to the “international differences” section of these comments, above, to meet the condition for a discrete population, FWS should determine whether there are significant differences in the control of exploitation on either side of the international border, and whether these differences are significant in light of the regulatory mechanisms that are in place to address the threats to the population. The trapping regulations attached to these comments show many differences between British Columbia, Alberta, and the U.S., in terms of who is allowed to trap, how long they are able to trap, how many fishers they can trap, etc. Furthermore, there is no evidence that the more liberal trapping regulations in Canada are designed to maintain fishers in the U.S. northern Rockies, and they clearly have not prevented the decline of this population in the past. Thus, the differences in trapping regulations between the two countries provide further justification for designating the northern Rocky Mountain fisher population a distinct population segment.

**d) International differences in regulatory mechanisms affecting fishers overall.**

If there were no international boundary at the 49<sup>th</sup> Parallel, and Canada was the 51<sup>st</sup> United State, then the only reason to create a DPS for the northern Rocky Mountain fisher population would be its “marked separation” from fishers in Canada described above. In that hypothetical scenario, consistent regulations might occur across the fisher’s range to maintain and restore fishers and their habitat, now at risk in the U.S. northern Rockies. Yet given that the international boundary is indeed in place, American wildlife laws, policies and officials have no control over what happens in Canada and vice versa. The best American managers can do, and what the ESA requires, is for FWS to maintain species, populations, and ecosystems in the U.S. where they are threatened or endangered, and work collaboratively with our neighbors to provide for these species range-wide. Where differences occur in regulations affecting these species and their habitat at an international border, which is almost always the case, the U.S. is obliged to consider its portion of that species as discrete, designate it as a distinct population segment, and do whatever it can to protect and restore that DPS.

When examining the management of fisher habitat, the control of its exploitation, and other regulations affecting the species, it is clear that each State, Province, national forest, provincial forest, or other land or wildlife management entity regulates these issues separately, without regard for persistence of the species across its current range. The current lack of federal protections either under the Species At Risk Act in Canada or the Endangered Species Act in the U.S. results in piecemeal management of the species and its habitat by States and Provinces, with little regard for regional management directed at the continued existence of the species. This fact, coupled with the clearly more imperiled conservation status of fishers in the western U.S. is ample justification for the

delineation of a DPS to address these conservation concerns and ensure the persistence of the northern Rocky Mountain fisher population.

### **B. The northern Rocky Mountain fisher population is significant**

Besides being discrete, the northern Rocky Mountain fisher population must also be “significant” to be designated a DPS according to FWS policy (61 Fed. Reg. 4,725, emphasis added):

*Significance:* If a population segment is considered discrete under one or more of the above conditions, its biological and ecological significance will then be considered in light of Congressional guidance (see Senate Report 151, 96th Congress, 1st Session) that the authority to list DPS’s be used “\* \* \* sparingly” while encouraging the conservation of genetic diversity. In carrying out this examination, the Services will consider available scientific evidence of the discrete population segment’s importance to the taxon to which it belongs. This consideration may include, but is not limited to, the following:

1. Persistence of the discrete population segment in an ecological setting unusual or unique for the taxon,
2. Evidence that loss of the discrete population segment would result in a significant gap in the range of a taxon,
3. Evidence that the discrete population segment represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside its historic range, or
4. Evidence that the discrete population segment differs markedly from other populations of the species in its genetic characteristics.

As stated above, the FWS finding on the fisher petition concluded that the northern Rocky Mountain fisher population “may” meet the significance criteria of a distinct population because of its genetic distinctness and that its loss would result in a significant gap in the fisher’s range. Here we provide additional justification that these and one other DPS “significance” criterion are met to support a final determination in favor of a DPS designation.

#### **i. The northern Rocky Mountain fisher population is ecologically unusual and unique.**

We are disappointed with the FWS’s conclusion in its finding on the fisher petition that the petition contains no evidence that the U.S. northern Rocky Mountains fisher population is significantly different from other regions where fishers still survive. 75 Fed. Reg. 19,930. Our primary, “common sense” rebuttal to this conclusion is that differences in seasons, latitude, elevation, temperature, precipitation, vegetation, predators, prey, disease, and anthropogenic impacts abound among fisher habitat in the U.S. northern Rockies, central British Columbia, the West Coast of the U.S., and eastern North America. Many of these differences directly impact fishers and how they make their living in those places. We encourage FWS to consult its own field offices and those staff with expertise in these regions, and their counterparts in Canada, to evaluate these differences. We are confident that these differences are sufficient to satisfy the “significant” criterion of the FWS DPS policy.

#### **ii. Loss of the northern Rocky Mountain fisher population would result in a significant gap in the fisher’s range.**

We concur with FWS's conclusion in its finding on the fisher petition that the loss of the northern Rocky Mountain fisher population—which it aptly described as “one of the four existing southern-most extensions of the taxon's range”—would result in a significant gap in the species' range. 75 Fed. Reg. 19,930. Fishers have already been extirpated from reported areas of their former range in Utah, and perhaps Wyoming (see fisher petition). There is no question that the loss of this range, plus any additional extirpations of fishers from their current range in the U.S. northern Rocky Mountains would fit the definition of a “significant gap” in their range. Given its low density wherever the species occurs, it is difficult to calculate the exact area of past and presently “occupied” fisher habitat in the U.S. northern Rockies, but if they were extirpated from the region, their range would shift approximately 750 miles northward from their historic range, and 400 miles northward from their current range in the Rocky Mountains. A range reduction of this magnitude is more than sufficient to satisfy the “significant” criterion of the FWS DPS policy.

**iii. The genetic characteristics of the northern Rocky Mountain fisher population are markedly different than other fisher populations**

Besides the “significant gap in range” just discussed, the unique genetic characteristics recently discovered in the northern Rocky Mountain fisher population is the second reason FWS found in its finding on the petition that the significance criteria may be met by this population. We simply add here that indeed this evidence is sufficient and indisputable, constituting the third out of four possible criteria, any one of which is sufficient to meet the “significant” component of the FWS DPS policy.

**3. The U.S. northern Rocky Mountains represent a significant portion of the fisher's overall range.**

In addition to soliciting information relevant to the DPS criteria above, the FWS notice announcing its fisher status review also specifically requests information indicating that the range of fishers in the U.S. northern Rockies constitutes a significant portion of the species' range overall, which is an alternate justification for its listing under the ESA in cases where the criteria for a distinct population segment are not met. While we believe that the DPS criteria are clearly met, we also address the “significant portion of range” question to provide further justification for the listing.

Perhaps the clearest justification that the range of the northern Rocky Mountain fisher population is significant is evident in the “significant gap” component of the DPS criteria discussed above. How could the elimination of one of the four southern-most fisher populations in North America, whose disappearance would represent a 400 mile range contraction of currently occupied habitat, and perhaps 750 miles of contraction from historically occupied habitat in the Rocky Mountains, not be considered to be the loss of “a significant portion” of their overall range?

We also take the opportunity with these comments to explain how the northern Rocky Mountain fisher population clearly contributes to the resilience, redundancy and representation of the species overall, and thus is indeed significant.

**A. The northern Rocky Mountain fisher population is important to the species' resilience**

In its previous status review on the wolverine, FWS defines “resilience” as the ability of the species to recover from disturbance. It stated that a population is more inclined to contribute to the species’ resilience when it occupies a large area, and/or areas of high quality habitat. 73 Fed. Reg. 12,940. Human-induced climate change is one foreseeable disturbance with the potential to affect fishers range-wide in North America (e.g., Weir and Corbould 2010, Carroll 2007, plus see abstracts by Krohn and Lawler et al. in Attachment A). Weir and Corbould (2010) warn that the current beetle outbreak in British Columbia, followed by extensive logging to salvage the affected trees have the potential to significantly reduce fisher habitat in that portion of its range. Fisher habitat in the U.S. northern Rockies has thus far escaped the brunt of insect and wildfire outbreaks (J. Sauder, Idaho Department of Fish and Game, personal communication, March 2010). Should the U.S. habitat remain suitable and Weir and Corbould’s fears for the fisher’s Canadian habitat be realized, the U.S. northern Rockies has the potential to serve as an important refuge from these sudden and widespread impacts on fishers.

In another example, in its finding on the fisher petition FWS describes an unsuccessful effort by British Columbia in the late 1990’s to restore fishers to the East Kootenai region of southeastern B.C. 75 Fed. Reg. 19,928-9. This area is not far from the U.S. border and is a likely destination for fishers dispersing northward from Idaho and Montana. A secure fisher population in the U.S. northern Rockies would make a valuable contribution to the resiliency of fishers by serving as the southern “anchor” for fisher populations across the Rocky Mountains.

If we refer to grizzly bears as an example, the lower-48 population may be as much of a source population for grizzly bear populations in southern Alberta and British Columbia as the other way around. This is a good example of how the lower-48 grizzly bear population contributes to the resilience of grizzly bears in North America, and the same may be true for fishers.

#### **B. The northern Rocky Mountain fisher population provides redundancy important to the species**

Just as it contributes to the resiliency of the species, the northern Rocky Mountain fisher population also provides important redundancy for the species. Given its small size, it could be argued that this population may not significantly contribute to the redundancy of the species overall. We disagree with this conclusion. Population size is just one criterion to consider. Of equal or greater importance when considering redundancy is the location and connectivity of the population. In this case, even though it is a small portion of the overall population, the U.S. northern Rockies fisher population represents one of just four southern peninsulas of range across the continent. Furthermore, its isolation from fisher populations in Canada and elsewhere in the U.S. can be an asset to redundancy, since it can provide isolation from disease or invasive species that may threaten contiguous populations. Again the grizzly bear serves a similar example of how the lower-48 population might significantly contribute to redundancy in a species overall.

#### **C. The northern Rocky Mountain fisher population provides representation important to the species**

There is no doubt that the entire southern portion of the fisher’s Rocky Mountain range—perhaps 10 degrees of latitude historically, and 5 degrees today—contributes to representation within the species overall. In a previous status review on the wolverine, FWS defines genetic uniqueness as an indicator of representation (73 Fed. Reg. 12,941). As discussed above, FWS has already

acknowledged the ample evidence of genetic differentiation in the northern Rocky Mountain fisher population. A broader interpretation of representation includes unique behavioral traits, which are also evident in this population by its adaptations to the ecological characteristics unique to the U.S. northern Rockies region (see Section 2(B)(i) of these comments above).

If FWS were to dismiss the contribution of the northern Rocky Mountains fisher population's unique genetic characteristics and ecological adaptations to the species overall and label its range "not significant," the agency would be violating its duty under the ESA to maintain the viability of the species. As a final point on this subject, comparing the case of the fisher with the grizzly bear or the gray wolf further illustrates Congress's intended interpretation of "significant portion of range." The distribution of grizzly bears and the gray wolf in the U.S. Rocky Mountains is similar to the distribution of fishers, as is each of these species' distribution in western Canada. Few people would argue that the area occupied by grizzly bears and wolves in the western U.S. is not a "significant portion of their range" and that the federal protection of these species and ongoing recovery programs represent an overreaching of the ESA. The same rationale should be accorded to the fisher.

#### **4. The five listing factors that apply to fishers in the U.S. northern Rockies**

##### **a) Habitat loss**

We appreciate that the FWS's finding on the fisher petition agreed that the petition presented substantial information that listing the fisher may be warranted due to the past and ongoing threat to its habitat from commercial logging and developments. 75 Fed. Reg. 19,932. Yet the FWS's finding concluded there was insufficient evidence of the threat posed to fisher habitat by human-induced climate change, so we take this opportunity to provide additional evidence here.

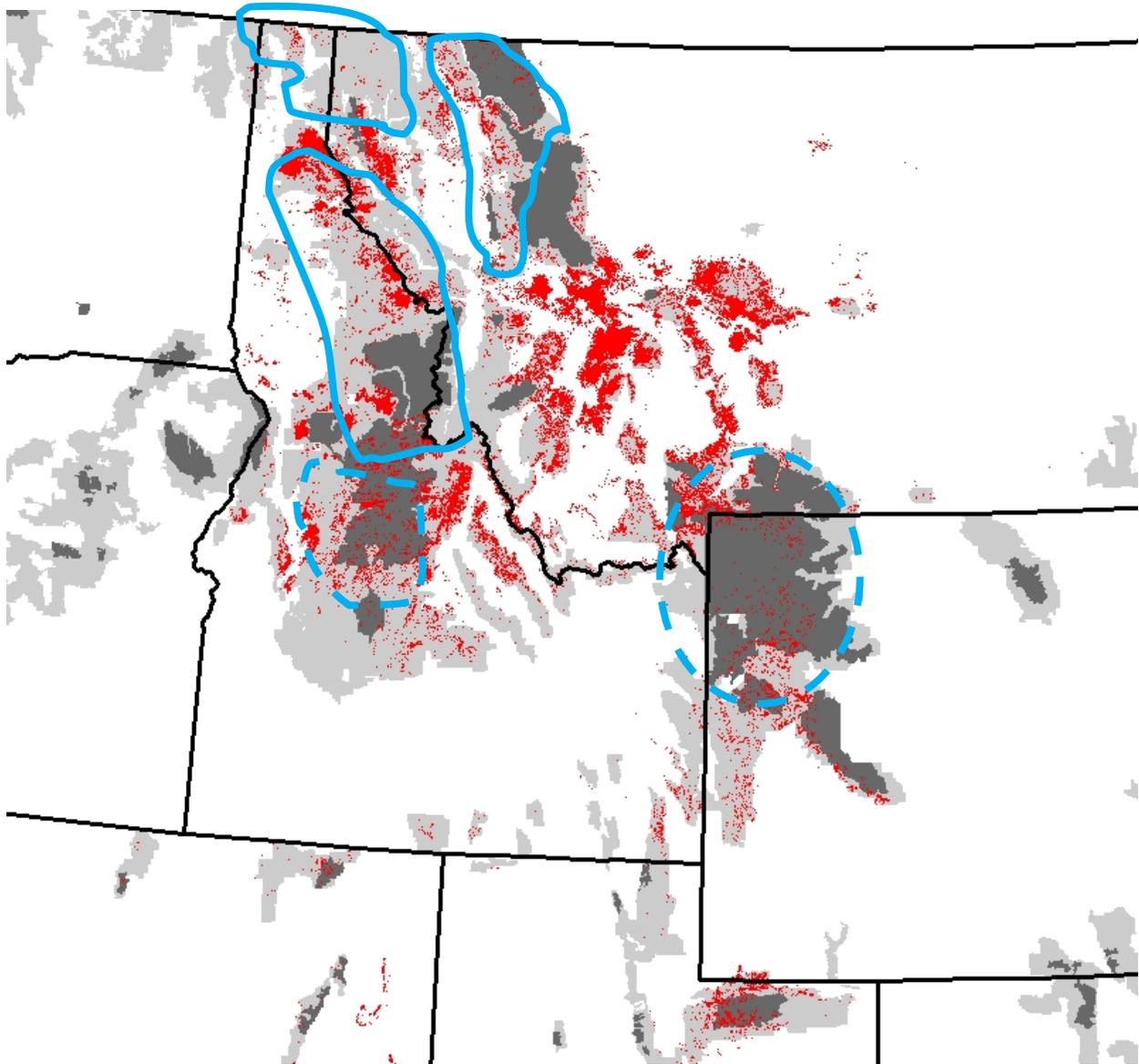
The specific threats posed by climate change to many wildlife species is still largely unknown, especially for a rare, wide-ranging species like the fisher, yet initial research indicates this threat may indeed be significant. Carroll (2007) modeled the effects of climate change on martens in eastern North America, and projected a reduced and fragmented range in the northeastern U.S. Two of the abstracts found in the proceedings from the recent Martes Symposium address the effects of climate change on fishers, one within their East Coast range and one in their West Coast range. The latter abstract by Lawler et al. does not include any specific predictions, but the former by Krohn relates the following conclusion (Attachment A, p. 17):

At a minimum, past climate warming should be considered as a factor contributing to the historical range contractions of both fishers and martens. These results further suggest that continued climate warming will result in an expansion of fishers northward, and a retreat in American marten populations along the southern edge of their current geographical range.

A "retreat northward" for the population of a species on the southern periphery of its range is clearly a cause for concern. And while specific impacts of climate change on fishers have not been studied in the U.S. northern Rocky Mountains, their projected impacts on the region overall include various threats to fisher habitat: higher temperatures and more extreme weather events including drought that are likely to result in higher frequency and intensity of fire, insects and disease outbreaks in the Rocky Mountain forests. Here we excerpt one relevant section from the recent report by the U.S Global Change Research Program (Karl et al. 2009).

Higher summer temperatures and earlier spring snowmelt are expected to increase the risk of forest fires in the Northwest [U.S.] by increasing summer moisture deficits; this pattern has already been observed in recent decades. Drought stress and higher temperatures will decrease tree growth in most low- and mid-elevation forests. They will also increase the frequency and intensity of mountain pine beetle and other insect attacks, further increasing fire risk and reducing timber production, an important part of the regional economy. The mountain pine beetle outbreak in British Columbia has destroyed 33 million acres of trees so far, about 40 percent of the marketable pine trees in the province. By 2018, it is projected that the infestation will have run its course and over 78 percent of the mature pines will have been killed; this will affect more than one-third of the total area of British Columbia's forests... Forest and fire management practices are also factors in these insect outbreaks. Idaho's Sawtooth Mountains are also now threatened by pine beetle infestation.

As mentioned above, Weir and Corbould (2010) describe this massive tree mortality in Canada and warn of the harm to fishers as these forests are intensively "salvage" logged. The U.S. Forest Service has documented huge tree die-offs in the western U.S. as well. A map of beetle-killed trees surveyed in Forest Service Regions 1 and 4 overlaid with fisher habitat in the northern Rockies (see below) underscores the potential threat of climate-induced threats (beetle-killed trees) to the species in the western U.S.



**Figure 1. Areas of beetle-killed trees overlaid onto fisher habitat in the northern Rockies**

**Source: USDA 2010c**

*Red = Beetle-killed trees*

*Blue = Fisher habitat (approximate, from Defenders et al. 2009, and dotted line means unconfirmed)*

*Dark gray = National parks and Wilderness areas*

*Light gray = Unprotected Forest Service lands*

*Black = State boundaries*

### **b) Overexploitation**

We appreciate that the FWS finding on the fisher petition agreed that the petition presented substantial information that listing the fisher may be warranted due to “legal furbearer trapping and the loss of fishers in traps set for other species.” 75 Fed. Reg. 19,933. We take this opportunity to comment on the development of Montana’s trapping regulations, since FWS indicated that it lacks information on this process (*Ibid*). Data on the numbers of fishers trapped in Montana in recent

years are provided in the fisher listing petition, along with a description how the season re-opened in the early 1980s with an annual quota of 20 animals that was never met, and which was eventually reduced to the current quota of seven fishers total. Montana added a female subquota of two this past year (MDFWP 2009, p. 7).

Defenders of Wildlife and other groups have consistently testified before the Montana Department of Fish, Wildlife and Parks Commission in favor of closing the fisher trapping season because of concerns that it is not sustainable. While these efforts have been unsuccessful thus far, the former FWP Commission Chair Steve Doherty agreed with these concerns, as evidenced by his comments preceding a vote on the fisher trapping quota in August 2008 (MDFWP 2008).

**15. 2008 Furbearer Seasons and Quotas – Final.** Quentin Kujala, FWP Wildlife Division Management Bureau Chief, presented the furbearer proposals. He stated that FWP received many public comments, particularly in opposition to wolverine trapping for a variety of reasons. Additional comments centered around setbacks, mandatory trap checks, and 48-hour reporting of dogs caught in traps... [p. 11]

Doherty asked how many fishers are in Montana. Kujala replied that it is unknown... [p. 13]

Doherty stated that he is concerned about fishers, and not knowing how many are out there. The notion of science that “we’ve done it for years so it must be ok because they are not extinct yet” is not acceptable. He said if we don’t know how many there are and still say we can kill 5, and it is unknown how many are killed from other sources, it is troublesome. It is especially disconcerting when the possibility exists that we can be looking at listing them under the Endangered Species Act.

*Action on Motion: Motion carried. Four in favor – one opposed. (Doherty opposed).* [p. 14]

### **c) Disease or Predation**

Substantial new information has come to light indicating disease may indeed be a significant threat to fishers in their West Coast range, which means it should not be dismissed as a potential threat to fishers in the northern Rockies, given similarities in the ecology and status of fishers in the two regions.

A talk entitled, “Pathogens and Parasites of the genus *Martes*” was presented at the *Martes* Symposium in Seattle last September to provide an overview on these issues for those involved in fisher conservation and management (see Gabriel et al.’s abstract in Attachment A to these comments, and contact the authors for more information about their review).

Another current study by California fisher researchers Sweitzer and Barrett (2010, Attachment C), presented at the Western Section of The Wildlife Society’s conference in January 2010, found that disease was responsible for 16.7 – 20.8 percent (4-5 of 24) of fisher fatalities, making it second only to predation as a cause of fatalities. The diseases included canine distemper (3-4) and toxoplasmosis (1). See pages 7-10 of Attachment C of these comments for several slides that describe these findings.

A third recent study (Brown et al. 2007) is referenced in the recent FWS Species Assessment and Listing Priority Assignment for fishers in their West Coast range. We reproduce the relevant excerpt here (USDI 2009, p. 21).

Specific information on disease in fishers is limited. Fishers are susceptible to viral-borne diseases, including rabies (Family *Rhabdoviridae*), canine and feline distemper (*Mobilivirus sp.*), and plague (*Yersinia pestis*). Contact between fishers and domestic dogs and cats, as well as other wild animals susceptible to such diseases (raccoons, coyotes, martens, bobcats, chipmunks, squirrels, etc.) may lead to infection in fishers. A report on pathogens associated with fishers in northwestern California, (Brown et al. 2007), is the first study of disease in fishers within the range of the west coast DPS. Brown et al. (2007) reported that viruses associated with fishers in their study area included: rabies virus; canine distemper virus; parvoviruses; corona viruses; and canine adenovirus (the cause of canine infectious hepatitis); and West Nile virus. Brown et al. (2007) also documented following bacteria: *Anaplasma phagocytophilum*; *Borrelia burgdorferi sensu lato*; and *Toxoplasma gondii*. Although little is known about canine distemper and feline parvovirus in fishers, both viruses cause mortality of susceptible mustelids. In addition, *anaplasmosis* causes debilitating immuno-suppression in susceptible species; the seroprevalence of fishers for exposure to *A. phagocytophilum* is unprecedented for areas other than the study area in northwestern California.

Although similar data have not been collected for fishers in the northern Rockies, this potential threat cannot be dismissed without additional research, especially considering that the canine distemper virus is known to be present and has affected other wildlife in the northern Rockies region (e.g., wolves).

Predation was responsible for double the number of fisher mortalities as disease in the Sweitzer and Barrett study (2010, Attachment C, p. 7), so it should be considered a threat to fishers in the northern Rocky Mountains as well. In this study the predation was due to bobcats primarily, but also by mountain lions (*Ibid*, p. 9), both of which occur throughout the fisher's range in the northern Rockies. The bobcats exclusively targeted female fishers (*Ibid*, p. 9), which may further threaten these small western fisher populations disproportionate to the number of mortalities alone.

#### **d) Inadequate regulations**

The regulations currently in place that directly affect fishers and their habitat in the U.S. northern Rocky Mountains are essentially limited to state regulations that affect the trapping of fishers (intentionally or incidentally), and state, federal, private and tribal regulations that affect the management of fisher habitat by those entities. The petition to list the fisher describes how these regulations have not prevented the decline of fishers in the northern Rockies to their currently imperiled status, and thus clearly constitute one significant factor that continue to threaten fishers in this region today. Here we present some supplemental information to further illustrate this problem.

##### **i. Forest Service regulations are inadequate to maintain fisher habitat**

As described in the fisher listing petition, the bulk of fisher habitat in the northern Rockies occurs on national forest lands. These lands are managed under a "multiple use" mandate, meaning to provide a variety of goods and services to the American public, including monitoring wildlife and providing wildlife habitat. Specific regulations to protect fishers and their habitat on national forest lands are found in the "sensitive species" and in the "biodiversity" implementing regulations of the National Forest Management Act, which are then reflected in various forest-specific regulations to protect old growth and other attributes of the national forests important to fishers.

## A. Sensitive species regulations are inadequate

Fishers are listed as a Sensitive Species in Regions 1 and 4 of the U.S. Forest Service within each national forest where they occur, which curiously includes the Uinta National Forest in Utah (USDA 2010a, USDA 2010b). The Forest Service defines Sensitive Species as follows (Bosch and Pivorunas 2005):

Those plant and animal species identified by a Regional Forester for which population viability is a concern, as evidenced by:

- a. Significant current or predicted downward trends in population numbers or density.
- b. Significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution.” (FSM 2670.5)

The Forest Service sets forth the following objectives for its management of Sensitive Species (*Ibid*):

Forest Service objectives for designated sensitive species:

2670.22 Sensitive Species

1. Develop and implement management practices to ensure that species do not become threatened or endangered because of Forest Service actions.
2. Maintain viable populations of all native and desired nonnative wildlife, fish, and plant species in habitats distributed throughout their geographic range on National Forest System lands.
3. Develop and implement management objectives for populations and/or habitat of sensitive species.

Bosch and Pivorunas (2005) describe the following Forest Service policies, responsibilities, and Forest Plan Objectives for Sensitive Species:

Forest Service **policies** for designated sensitive species:

2670.32 - Sensitive Species

1. Assist States in achieving their goals for conservation of endemic species.
2. As part of the National Environmental Policy Act process, review programs and activities, through a biological evaluation, to determine their potential effect on sensitive species.
3. Avoid or minimize impacts to species whose viability has been identified as a concern.
4. If impacts cannot be avoided, analyze the significance of potential adverse effects on the population or its habitat within the area of concern and on the species as a whole. (The line officer, with project approval authority, makes the decision to allow or disallow impact, but the decision must not result in loss of species viability or create significant trends toward Federal listing.)
5. Establish management objectives in cooperation with the States when projects on National Forest System lands may have a significant effect on sensitive species population numbers or distributions. Establish objectives for Federal candidate species, in cooperation with the FWS or NMFS and the States.

Forest Service **responsibilities** for designated sensitive species:

2670.4 - Responsibility

2670.44 - Regional Foresters. The Regional Foresters:

5. Ensure that specific management objectives and legal and biological requirements for the conservation of endangered, threatened, proposed, and sensitive plants and animals are included in Regional and Forest planning, and ensure that planning for those species common to two or more Forests is coordinated among concerned units.

2670.45 - Forest Supervisors. The Forest Supervisors:

2. Develop quantifiable recovery objectives and develop strategies to effect recovery of threatened and endangered species. Develop quantifiable objectives for managing populations and/or habitat for sensitive species.

Forest Service **Forest Plan Objectives** for designated sensitive species:

2672.32 - Forest Plan Objectives for Sensitive Species. For sensitive species, include objectives in Forest plans to ensure viable populations throughout their geographic ranges. Once the objectives are accomplished and viability is no longer a concern, species shall not have “sensitive” status.

Unfortunately, these Forest Service regulations and their implementation fall short of achieving the desired outcomes. Yes, the effects from various projects and plans that affect fishers and their habitats are typically reviewed in biological evaluations that are included in the analysis of the project conducted under the National Environmental Policy Act. Yet without clear, comprehensive standards for how to protect and restore fisher habitat, or information about the current status and trends of fishers in their area, let alone the effects of past and ongoing Forest Service management decisions on their status, Forest Service managers lack the necessary information and direction to ensure fishers are not harmed in their decisions. More specifically, the stated responsibilities of Forest Service Regional Foresters and Forest Supervisors are not being fulfilled when it comes to fishers. Regional Foresters in Forest Service Regions 1 and 4 have yet to develop a regional conservation strategy for fishers to be implemented on the various national forests where they occur. Forest Supervisors lack the necessary tools and resources to “[d]evelop quantifiable objectives for managing populations and/or habitat” of fishers (FSM 2670.45, above). Similarly, Forest Service plans cannot and do not “include objectives... to ensure viable populations” of fishers so long as a viable fisher population for the region has not yet been defined (FSM 2672.32, above). More generally, these and related Forest Service regulations under the National Forest Management Act fail to adequately maintain fishers and their habitat because there is a lack of oversight of these decisions by an outside agency that has expertise in wildlife conservation, such as the U.S. Fish and Wildlife Service. Citizens can and do appeal Forest Service decisions because of the harms they pose to fishers and other sensitive species, but this is no substitute for the consultation requirements provided by the Endangered Species Act to ensure against harm to a listed species. Unfortunately, fishers in the northern Rocky Mountains have declined to a level that now necessitates a more rigorous review of Forest Service decisions than is provided by the Forest Service regulations governing the species it lists as Sensitive.

## **B. Forest Service regulations to protect old growth are inadequate**

Regulations to protect old growth and other components of the national forests important to fishers are found in individual forest plans. They tier to the Forest Service’s obligations under the National Forest Management Act to maintain habitat sufficient to support viable populations of native species. Since fishers and many other native species need old growth, the Forest Service is required to maintain it. Each national forest has its own standards to maintain old growth, some of which are more rigorous than others, but all of them suffer from similar deficiencies: (1) inventories of old growth are incomplete and/or inaccurate, so compliance with the forest plan standards is unknown,

and (2) even if the standards were met, their effectiveness in maintaining old growth dependent species is unknown, because monitoring has not been adequate to determine this. When challenged in court, these deficiencies in the Forest Service regulations have been exposed, such as in this statement in a ruling against the Kootenai National Forest by the U.S. District Court dated June 27, 2003 (Juel 2003, Attachment D, p. 21):

the Forest Service is out of compliance with ...monitoring requirements... It is not clear ... that the Forest Service knows enough about native wildlife species to assure viability of old-growth dependent species.

In another example from a national forest critical to fishers in the northern Rockies, the Clearwater National Forest recently conceded that it has failed to meet its forest plan standard to maintain at least 10% of the forest as old growth. In a December 7, 2006 guidance document it noted the following (USDA 2006, Attachment E, p. 1):

[T]he Clearwater National Forest has received updated information using Forest Inventory and Analysis (FIA) data that has estimated the amount of old growth forest-wide on the Clearwater National Forest to be 9.4 percent (mean) with a 90 percent confidence interval of old growth between 7.3 percent (lower bound) to 11.8 percent (upper bound)... The mean of this estimate is below the Clearwater Forest Plan standard of maintaining 10 percent old growth forest-wide.

Thus, current Forest Service regulations to maintain fisher habitat have not been effective in meeting their own goals, and while the same document suggests the 10% standard may be met in just two more years, it is important to realize these are projections only, not actual data, and it will take a reading of updated FIA data in 2012 to determine whether the Clearwater National Forest actually achieves its 10% old growth standard. Furthermore, it is important to note that it is an untested hypothesis if retaining 10% of this and other forests important to fishers in old growth conditions is sufficient to maintain fishers. Recent estimates for the amount of old growth that existed in forests in the northern Rockies region pre-European settlement are much higher than 10%, in fact 20 to 50% (e.g., Lesica 1996).

For a thorough review of the Forest Service's old growth regulations, please see the report, "Old Growth at a Crossroads" attached to these comments. An excerpt from the conclusion of this report further illustrates the inadequacy of the Forest Service's regulations to protect old growth habitat (Juel 2003, Attachment D, p. 23).

Another striking finding is that the accuracy of national forest old-growth inventories is highly questionable. Four of the national forests have forest plans that require a certain amount of old growth be maintained forest-wide. Three of those forests (Clearwater, Idaho Panhandle, and Kootenai) have been involved in litigation that challenged the accuracy of their forest-wide old-growth inventories. In each case, a federal court ruled the inventory was not accurate enough to insure that the total amount of old-growth habitat required by the forest plans was actually being maintained. The fourth, the Nez Perce National Forest, does not currently have a comprehensive forest-wide old-growth inventory... The amount of old growth that currently exists on these forests is apparently unknown. As the Forest Service enters the revision phase for new forest plans, none of the national forests has collected the data that would allow them to understand how their management under the

original forest plans has affected population trends of these wildlife species. This is not what Congress envisioned when NFMA was passed into law.

Furthermore, the Clearwater National Forest supervisor admitted that the agency is not currently meeting its own old growth standard on the Clearwater National Forest which is only 10%. Thus, even minimal standards are not being met.

### **C. The Forest Service and other agencies lack a regional conservation strategy for fishers in the U.S. northern Rocky Mountains**

An important first step in analyzing and prescribing adequate regulations to maintain and restore a wide-ranging species and its habitat can be a regional conservation assessment and strategy, like the one developed for the Canada lynx a decade ago (Ruediger et al. 2000). A similar strategy for fishers in their West Coast range has been developed and is still undergoing internal review (see Finley and Naney's abstract in Attachment A to these comments). Conservation strategies have been developed for fishers in the northern Rockies (see IDFG 1995, described in detail in the fisher listing petition) and in other regions (see Marcot and Raphael's abstract, in Attachment A to these comments). Yet the lack of any region-wide strategy for fishers currently under implementation in the U.S. northern Rocky Mountains is one more important threat facing fishers in this region: a lack of adequate regulatory mechanisms to maintain and restore them and their habitat. The disconnect between what we know fishers need and how fisher habitat is managed received significant attention at the recent Martes Symposium. Even in areas lacking extensive field research on fishers such as the northern Rocky Mountains, much is known that can be applied across geographic regions (see the abstracts just mentioned plus additional abstracts by Proulx, Raley et al., and Zielinski et al. in Attachment A to these comments).

#### **ii. State regulations in Montana, Idaho and Wyoming are inadequate to maintain and restore fishers and their habitat**

Neither its current conservation and management state designations, nor the regulations affecting the management of its habitat on state lands in Idaho in Montana are adequate to maintain fishers in the northern Rocky Mountains.

#### **A. State designations of fishers in Idaho, Montana and Wyoming are insufficient to maintain and restore fishers**

The fisher listing petition describes the fisher's status in Idaho, Montana and Wyoming. It is currently listed as a Species of Greatest Conservation Need in Idaho and Wyoming, and a Species of Concern in Montana (Defenders of Wildlife et al, 2009, pp. 13-16). FWS indicated in its fisher petition finding that it lacks information on the effects of these designations (75 Fed. Reg. 19,934), so we provide some relevant information here.

In Idaho, the explanation of the fisher's status and what it means are described in the following excerpts from Appendix F of the Idaho Comprehensive Wildlife Conservation Strategy (IDFG 2005, emphases added).

#### **BASIS FOR INCLUSION [on the list of Species of Greatest Conservation Need]**

Low populations and lack of population trend data in Idaho...

## **DISTRIBUTION AND ABUNDANCE**

The fisher is endemic to North America and occurs throughout much of Canada and in the northern U. S. Within Idaho the species occurs in the northern and central parts of the state. During the early 1960s the fisher was thought to be extirpated from the state (Williams 1962b) and individuals were translocated to 3 north-central Idaho sites during the early 1960s (Williams 1963).

## **POPULATION TREND**

There is no estimate of population trend for Idaho.

## **HABITAT AND ECOLOGY**

The fisher occurs in conifer and mixed conifer-hardwood forests in North America. In Idaho, the species occurs in a mosaic of mesic conifer, dry conifer, and subalpine forests. Mature and old-growth forests are used during summer, and young and old-growth forests are used during winter (Jones 1991). Forested riparian habitat is also important, and stream courses may be used as travel corridors (Jones 1991). Occupied habitat often has a high percentage of canopy coverage, although tree cover may be quite low in some areas (Lugue 1983). The fisher is an opportunistic predator; prey includes rabbits, squirrels, and porcupines.

## **ISSUES**

Over-harvesting by trappers and loss of habitat to massive forest fires in northern Idaho contributed to the historical decline of this species (Jones 1991). Habitat loss and degradation continue to threaten populations. Loss of forested habitat, particularly old-growth forests, to fire and timber harvest results in the reduction and fragmentation of suitable habitat. Incidental trapping of fishers with marten traps may also be an important source of mortality, particularly where populations are small and fragmented. Small, isolated populations may lose genetic diversity and have a higher probability of extinction.

## **RECOMMENDED ACTIONS**

Information is needed to determine the current status of populations in some areas. Research is needed to evaluate landscape- and regional-scale responses to disturbance and forest management practices. Protection and restoration of important habitat may be necessary. Forest management that maintains a balance of old growth and early seral-stage forests and protects riparian habitat may be required to sustain viable populations. Information is also needed with regard to inter-relationships between habitat fragmentation, movement patterns, and the genetic composition of populations.

We commend Idaho for prioritizing the conservation of fishers in its Comprehensive Wildlife Conservation Strategy (“CWCS”), yet this information makes it clear that critical information, resources and leverage is lacking under its current state designation to significantly affect and effectively remedy the fisher’s imperiled status.

In Wyoming, fishers have a similar status as in Idaho under the Wyoming CWCS. Thus, while we commend Wyoming for recognizing the imperiled status of fishers in that state and prioritizing its conservation, it is also clear that similar to Idaho, Wyoming lacks the information, resources and leverage to maintain and restore fishers under its current state regulations alone. We excerpt the following “Problems” and “Conservation Actions” from the Wyoming CWCS to illustrate this point: the “Problems” identify clear and immediate threats to fishers in Wyoming, which could be

addressed by the proposed “Conservation Actions,” yet no resources or regulations are available or in place to accomplish them (WGFD 2005, p. 153).

**Problems:**

- Population, status, trends, and distribution of the fisher are unknown, precluding effective management;
- There are no efforts to identify key habitats in Wyoming; and
- Populations may be limited in some areas by timber harvesting (including firewood cutting) and high-intensity fires in spruce-fir forests.

**Conservation Actions:**

- Conduct inventories for fishers in all potential habitat in the state;
- Delineate crucial range and work cooperatively with land management agencies to maintain habitat within the designated area;
- Maintain structurally-diverse forests with abundant snags, downed timber, and herbaceous vegetation in areas where fishers occur; and
- Manage fisher habitat to reduce conflicts with timber harvesting.

In Montana, the fisher is listed as a “Tier II” species in need, and the state’s obligation to conserve them and other Tier II species are described as follows (MNHP and MDFWP 2006, p. 4, emphasis added):

Moderate conservation need. Montana Fish, Wildlife & Parks could use its resources to implement conservation actions that provide direct benefit to these species, communities, and focus areas.

Defenders of Wildlife has submitted written comments to Montana requesting that fishers be upgraded to “Tier I” status, but to no avail thus far. Montana has responded instead that fishers currently receive adequate management attention as a “furbearer” species. We respectfully disagree, and believe the trapping of fishers in Montana poses unnecessary risks to the population that outweighs any conservation benefits.

**B. Regulations governing the management of state lands in Idaho and Montana are insufficient to maintain fisher habitat on those lands.**

As described in the fisher listing petition and recounted in the FWS finding on that petition, state forests in Idaho are likely to see increased timber cutting in the coming years, which will adversely affect those portions of fisher habitat on state trust lands in Idaho 75 Fed. Reg. 19,931.

In Montana, the Department of Natural Resources and Conservation (DNRC) has regulations to maintain fisher habitat as it does for other sensitive species, but these protections are discretionary, subservient to the agency’s mission to generate revenues for the schools and other beneficiaries of the state trust lands, and thus are insufficient to prevent the past and ongoing loss of fisher habitat on these lands. We reproduce the DNRC standards here (Montana DNRC 2007, emphases added).

**36.11.440 SENSITIVE SPECIES - FISHER**

- (1) The department shall assess fisher habitat on projects that contain preferred fisher cover types for lands administered by the department's northwest land office

and southwest land office. When conducting forest management activities, the department shall consider the following as consistent with 77-5-301 and 77-5-302, MCA:

- (a) In blocked areas within the Stillwater , Swan River , and Coal Creek state forests, the department shall use the grizzly bear BMU sub-unit as the unit of analysis. In all other areas, the department shall determine the unit of analysis at the project level.
  - (b) When managing within preferred fisher cover types that are within 100 feet of class 1 streams or within 50 feet of class 2 streams:
    - (i) The department shall manage 75% of the acreage (trust lands only) to be in the sawtimber size class in moderate to well-stocked density. The department shall postpone treatments where this cannot be accomplished.
    - (A) Where treatments reduce stand density below moderately stocked levels, the department shall make efforts to provide forest connectivity along the opposite stream bank.
    - (ii) The department shall define a minimum of one buffered management zone connecting to other fisher habitat through sites where individual perennial and intermittent stream courses are difficult to define (e.g., braided with many channels) .
    - (iii) The department shall retain large snags, snag recruits and CWD pursuant to ARM 36.11.409 through 36.11.414. The department shall promote recruitment if existing abundances are below expected levels. Following large-scale stand replacement disturbance events in preferred fisher cover types, the department shall give consideration to maintaining an abundance of large snags and CWD within 100 feet of class 1 streams and 50 feet of class 2 streams.
    - (iv) When practicable, the department shall avoid constructing new roads in preferred fisher cover types within 100 feet of class 1 streams or 50 feet of class 2 streams. Where feasible, the department shall incorporate use of temporary roads, and obstruct or obliterate unnecessary existing roads.
  - (c) The department shall manage for at least one forested patch providing connectivity between adjacent third order drainages, preferably in saddles, where landscape conditions allow.
  - (d) The department shall consider importance of late-successional riparian and upland forest in meeting the life requisites of fishers.
- History: 77-1-202, 77-1-209, 77-5-201, 77-5-204, MCA; IMP , 77-5-116, 77-5-204, 77-5-206, 77-5-207, MCA; NEW , 2003 MAR p. 397, Eff. 3/14/03.

We also note that fishers are not included in a habitat conservation plan currently in preparation for the state forests in western Montana. Information on this process can be found online at the address: <http://dnrc.mt.gov/HCP/species.asp> .

#### **e) Other factors**

In its finding on the fisher listing petition, FWS acknowledged the small size of the northern Rocky Mountain fisher population fragmented across a large area may threaten its survival, yet dismissed this factor as a reason to list the population, citing the lack of precise information on fisher numbers or trends in those numbers over time. 75 Fed. Reg. 19,934. We acknowledge this is an area that needs more research, yet we believe a lack of information does not justify dismissing this as a threat, especially for a species considered to be the rarest of its kind in the region (Vinkey 2003).

Recent research into another rare, wide-ranging species of weasel in the northern Rockies, the wolverine, may inform our understanding of the fisher population's rarity and fragmented nature, and support a justification for listing the species under the ESA. Extensive field work, interagency cooperation, and powerful new genetics techniques have been applied to better understand the conservation status of wolverines in the U.S. Rocky Mountains (Schwartz et al. 2009) and the conclusion is cause for both alarm and conservation action. The term "effective population size" refers to that portion of the total population that effectively contributes to the gene pool (Schwartz et al. 1998). Effective population sizes of wolverines or any other species below 50 individuals are at significant risk from demographic stochasticity in the short term (i.e., inability to find a suitable mate) and/or genetic and environmental stochasticity in the longer term (i.e., inbreeding and genetic drift, or reduction of habitat due to global warming). Schwartz et al. (2009) estimated the wolverine's effective population size at just 35 individuals ("credible limits, 28-52") in the U.S. Rocky Mountains. The genetic differentiation already apparent between both wolverines and fisher populations in the western U.S. and their respective counterparts in Canada indicate these risks are already manifest in these populations; hence the need to act immediately to prevent any additional reduction or isolation of wolverine and fisher populations in the western U.S. In sum, the wolverine's estimated low effective population size, and the fisher's inferred low effective population size, provide the urgency to list and set conservation actions in motion as soon as possible for both species, even as uncertainties persist concerning the exact status and trends of their populations.

A good description of the threat posed to fishers in their West Coast range by virtue of their small, fragmented populations is found in the recent FWS Species Assessment and Listing Priority Assignment for that distinct population segment (USDI 2009, pp. 34-38), which we believe is directly relevant to fishers in the U.S. northern Rocky Mountains as well.

#### **5. Data and information relevant to the designation of critical habitat, and the delineation of a northern Rocky Mountains distinct population segment boundary.**

The FWS notice announcing this status review notes that if the listing is found to be warranted, critical habitat will be designated as required by the Endangered Species Act. Thus, we also provide comments on the designation of critical habitat for the northern Rocky Mountain fisher population.

Overall, FWS should start by designating all areas of currently occupied fisher habitat (see Section 5(b) below). Then, FWS should designate additional areas of habitat necessary to support a recovered fisher population. This should include "core" areas that can support resident, breeding animals, plus "connecting" areas of habitat where fisher can safely travel between these core areas.

##### **a) Physical, biological features essential to fishers in the N. Rockies**

The physical and biological features essential to fishers have been amply documented in the scientific literature (see fisher listing petition and the FWS finding on that petition). New scientific research subsequent to the petition should be considered as well, such as the research presented at the September 2009 Martes Symposium attached to these comments. One study from that symposium should prove especially helpful to the designation of critical habitat for fishers throughout the western U.S., so we call attention to it here.

Fisher researchers Steve Buskirk and others (2010) conducted a meta-analysis of fisher resting sites across their West Coast range in the U.S. and British Columbia and found a number of key

components that applied across this vast region. The analysis does not incorporate data from the U.S. northern Rockies, but could still provide a valuable starting point for determining this component of fisher habitat there as well. The authors caution that other components of fisher habitat are also important to consider, but again this provides a useful starting point for designating key areas important to fishers across the western U.S. We reproduce some excerpts from the meta-analysis here (Buskirk et al. 2010, appended to these comments as Attachment F).

Here, we report on a meta-analysis of data on habitat selection at resting sites by the fisher in the Pacific coastal states and provinces. We chose to analyze selection of resting sites because they are believed to represent key components of fisher habitat... [p. 2]

A meta-analysis is a statistical approach for combining and estimating the strength of results obtained from multiple studies that ask similar questions... [p. 3]

Among the eight studies included in the meta-analysis, fishers exhibited remarkably consistent selection for each of the nine variables considered... [p. 8]

[O]ur results indicate that the nine variables we considered represent important components of fisher resting habitat throughout its Pacific coastal range... [pp. 8-9]

All of the habitat attributes we analyzed either have been included in published models for selection of resting sites by fishers (e.g., Zielinski et al. 2004, Purcell et al. 2009), or have been postulated to represent important habitat components for fishers throughout their range (e.g., Powell 1993, Powell and Zielinski 1994, Buskirk and Powell 1994). However, ours is the first study to investigate the generality of fisher habitat associations derived from multiple independent radio-telemetry studies conducted over a broad geographic area. We demonstrated that all nine of the attributes we analyzed provide habitat value to fishers at resting sites across their Pacific coastal range, in the face of substantial variation in environmental conditions at these sites. Thus, even among study areas where forest conditions varied substantially (e.g., tree sizes, species composition, conifer/hardwood ratios, etc.), fishers selected sites for resting that, compared to random sites, were more mesic in temperature and moisture regimes (i.e., aspects oriented further from southwest), higher in vegetation cover, steeper in slope, and that contained a relatively greater volume of logs and a higher prevalence of large trees (i.e., relatively high basal area of conifers, hardwoods, and snags 51-100 cm dbh, and relatively large-diameter conifers and hardwoods)... [pp. 9-10]

It is important to understand, however, that resting site habitat suitability is only one of many potentially important components of overall fisher habitat quality. Denning habitat, as well as foraging habitat, escape cover, and other habitat attributes that are measured at much larger spatial scales, may be equally or more important than resting site habitat quality. Thus, managing only for one or more components of resting site habitat suitability may not result in benefits to fisher populations if other important components of fisher habitat quality are limited or unavailable. [pp. 10-11]

## **b) Where are fishers found?**

We direct FWS to the recent fisher survey work described by Albrecht et al., Vinkey et al., and others presented at the 2009 Martes Symposium and now in preparation for publication (see their abstracts in Attachment A). We also encourage FWS to take advantage of empirically-based modeling of fisher connectivity described in the abstracts also in Attachment A by Schwartz et al.

and related work by Wasserman and Cushman to ensure the critical habitat designation provides for functional connectivity between fisher subpopulations across the U.S. northern Rockies region.

Last, we take this opportunity to urge FWS to include the Greater Yellowstone Ecosystem (GYE) in its northern Rocky Mountain DPS and to consider including portions of the southern Rocky Mountains in Utah and Colorado within the DPS as well. Fisher observations in the GYE are presented in the fisher listing petition, and we note here that the Forest Service lists them as a Sensitive Species in those portions of the Bridger-Teton and Caribou National Forests that lie within Region 4 of the Forest Service, along the western edge of the GYE (USDA 2010b). The fisher listing petition includes maps that depict historic occupancy of northern Utah by fishers, and as mentioned above, the Forest Service lists them as a Sensitive Species on the Uinta National Forest in Utah (*Ibid*). Finally, appended to these comments are some observation reports of fishers in Wyoming and Utah, with the observers' contact information (Attachment G).

**c) Evidence that special management is required to maintain essential features (including managing for climate change)**

Existing plans and policies affecting fishers and their habitat are no substitute for the critical habitat regulation, for reasons that we described in this excerpt from a letter submitted by Defenders of Wildlife and other conservation groups in response to the proposed revised rule to designate critical habitat for the Canada lynx. 73 Fed. Reg. 62,450 (October 21, 2008).

The ESA dictates that critical habitat include the species' occupied habitat which contains the physical or biological features essential to the conservation of the species and "which may require special management considerations or protection." 16 U.S.C. § 1532(5)(A)(i). FWS's implementing regulations define "special management considerations or protection" as "any methods or procedures useful in protecting physical and biological features of the environment for the conservation of listed species." 50 C.F.R § 424.02(j).

While the definition of critical habitat requires FWS to determine what occupied areas may "require special management," the provision does not allow the exclusion of areas simply because some alternative management prescriptions are already in place. *See Center for Biological Diversity v. Norton*, 240 F. Supp. 2d 1090, 1098 (D. Ariz. 2003) ("CBD") ("FWS [has] been repeatedly told by federal courts that the existence of other habitat protections does not relieve [it] from designating critical habitat.")<sup>1</sup> As the court in *CBD* explained, the position embraced in the original lynx critical habitat designation by FWS that critical habitat does not need to be designated on areas that it has determined "did not require *additional* special management according for [sic] the definition of critical habitat," 71 Fed. Reg. 66,028 (emphasis added), is "knowingly unlawful" as it violates the plain meaning of the Act, "eliminate[s] a crucial part of the consultation requirements of the ESA, namely the 'adverse

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<sup>1</sup> *See Natural Resources Defense Council v. United States Department of the Interior*, 113 F. 3d 1121, 1126 (9th Cir. 1997) ("Neither the [ESA] nor the implementing regulations sanctions nondesignation of habitat when designation would be merely *less* beneficial to the species than another type of protection.") (emphasis in original); *Middle Rio Grande Conservancy District v. Babbitt*, 206 F. Supp. 2d 1156, 1169 (D.N.M. 2000) (stating that the ESA "compels the designation despite other methods of protecting the species the Secretary [through FWS] might consider more beneficial."); *Conservation Council for Hawaii v. Babbitt*, 2 F. Supp. 2d 1280, 1286 (D. Haw. 1998) (stating that FWS decision not to designate critical habitat because it would offer little additional benefit is not rational).

modification' prong [and is] in direct contravention of the express purpose of the ESA: to conserve 'the ecosystems upon which endangered species and threatened species depend.'" *CBD*, 240 F. Supp. 2d. at 1100-1102 (citation omitted).

In the case of the northern Rocky Mountain fisher population, even if the ESA allowed for the existence of an alternative management mechanism to supplant the required critical habitat designation, which it does not, the NFMA regulations to maintain viable populations of native wildlife, "sensitive species," etc. are neither the functional equivalent of critical habitat, nor do they provide anywhere close to the same level of protections, and therefore could not stand in the place of a critical habitat designation. The NFMA regulations are used by the U.S. Forest Service to both inform decisions on specific actions and to guide the revision of land management plans, but fail to provide meaningful protections for fishers in either role. First, when used outside of the resource management plans, the NFMA regulations do not specifically prohibit any particular actions which may result in the destruction of fisher habitat. Second, even when the measures are incorporated into management plans, the measures adopted do not carry sufficient weight to prohibit harmful or adverse activities that have led to the fisher's current imperiled status (see Section 4(d) of these comments above). In contrast, the ESA is designed to provide significant, concrete protections for the areas upon which listed species depend by prohibiting federal agencies from taking or permitting an action that will destroy or adversely modify designated critical habitat.

We close this section of our comments with one more relevant excerpt from the comments by Defenders and others on the lynx critical habitat rule (emphasis added).

Moreover, the advantages to the species of a critical habitat designation over alternative management practices are even more pronounced after *Gifford Pinchot*. Simply put, critical habitat has a mandatory recovery component not found in other management regimes, such as the LCAS. In fact, in this situation the LCAS [or NFMA regulations, in the case of the fisher] and the federal land management plans that incorporate the standards, should complement – but not provide an excuse to avoid – the critical habitat designation. *CBD*, 240 F. Supp. 2d at 1100 ("So long as they are useful, the more protections the better . . . The stated purpose [of the ESA] is not for some agencies and departments to conserve endangered species; all must do so. Thus, any and every protective method or procedure should be employed to further that purpose."). Indeed, the "Conservation Agreements," which commit the Forest Service and the BLM to abiding by the LCAS prior to the incorporation of the measures into resource management plans, discuss at length that notwithstanding compliance with the LCAS the federal land management agencies must comply with the requirements of the ESA. *See, e.g.*, Canada Lynx Conservation Agreement, U.S. Forest Service and U.S. Fish and Wildlife Service (2005) (attached). Therefore, at best, the LCAS is a useful tool which may "guide" federal land managers when making effects determinations pursuant to section 7 of the ESA, 71 Fed. Reg. at 66034, but even in this role, unless an area is designated as critical habitat, potentially harmful projects may be allowed to go forward because the only check that will be in place is the duty of the agency to avoid jeopardizing the species, the more lenient of the section 7 standards. *See* 16 U.S.C. § 1536(a)(2).

### **Additional comment regarding the priority of listing the northern Rocky Mountain fisher population**

The northern Rocky Mountain fisher population faces threats that are both high magnitude and imminent, and merits immediate protection under the Endangered Species Act so that conservation actions to ensure its survival and recovery have the highest probability of success. We urge FWS to

move as expeditiously as possible to list this population and we stand by to assist the Service in this effort however we can.

**Conclusion**

Thank you for your consideration of these comments in the preparation of your status review of the northern Rocky Mountain fisher population. Please contact us for any additional information pertaining to our comments.

Sincerely,



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### **Attachments**

- A. Abstracts for Oral Presentations, Martes Symposium, Seattle, WA, September 2009
- B. Abstracts for Poster Presentations, Martes Symposium, Seattle, WA, September 2009
- C. Sweitzer and Barrett 2010. Update/Status Report on the SNAMP Fisher Study
- D. Juel 2003. Old Growth At A Crossroads, The Ecology Center, Missoula, MT
- E. USDA 2006. Old Growth Direction memo, Clearwater National Forest, ID
- F. Buskirk et al. 2010. Meta-analysis of resting site selection by the fisher in the Pacific coastal states and provinces, Portland, OR
- G. Ratner and Carter 2010. Fisher observations in Wyoming and Idaho.

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