OFFICE OF SPECIES CONSERVATION

C.L. "BUTCH" OTTER
Governor

NATHAN A. FISHER
Administrator

P.O. Box 83720
Boise, Idaho 83720-0195

300 North Sixth Street, Suite 101
Boise, Idaho 83702

May 17, 2010

Public Comments Processing
Attn: FWS-R6-ES-2008-0029
Division of Policy and Directives Management
U.S. Fish and Wildlife Service
4401 North Fairfax Drive; Suite 222
Arlington, Virginia 22203

To Whom It May Concern:

On behalf of the Idaho Governor's Office of Species Conservation and Idaho Department of Fish and Game ("IDFG"), I submit the following comments in response to the U.S. Fish and Wildlife Service's ("Service") request for information to complete the Status Review of the North American wolverine in the contiguous United States. The enclosed comments also reflect the most recent biological data compiled by IDFG related to the current status and known distribution of wolverine in Idaho.

While it is clear that these comments continue to demonstrate that little is known about the status and abundance of wolverine in Idaho, our track record shows that the State of Idaho is committed to the continued conservation and monitoring of the species to help guide appropriate management. As such, the State of Idaho does not believe the species warrants the protections afforded by the Endangered Species Act ("ESA").

The State would also like to address the Service's request for comments regarding the consideration of a potential distinct population segment ("DPS") of the North American wolverine in the contiguous United States.

On March 11, 2008 the Service indicated in its 12-month finding for the North American wolverine that the species did not constitute a DPS according to the Service's own policy. The Service found that the best available science indicated wolverine in the contiguous United States were not "markedly separated" from those populations in Canada and Alaska and therefore failed to meet the first prong of the DPS analysis—e.g. discreetness. As a result, the Service concluded that the population of North American wolverine was not a listable entity and the issue of whether the species met the second prong of the DPS analysis—significance--was deemed irrelevant.

● (208) 334-2189 ● Fax (208) 334-2172 ●

The State is acutely aware that this current 12-month status review is in direct response to and in accordance with the settlement negotiated with Defenders of Wildlife et al. stemming from their lawsuit in federal court. Notwithstanding this settlement agreement, however, the State remains convinced that without the discovery of any new significant scientific information regarding the status of the species as it relates to the creation of a separate DPS, a reversal in the Service's previous position is not warranted.

The State of Idaho believes that the Service's 2008 determination was correct. The best available science made it clear then, as it does now, that wolverine in Idaho and across their range do not warrant protection under the ESA as the species naturally occurs in low densities and are physically and genetically connected to robust wolverine populations in both Canada and Alaska.

As you will read in the following technical comments submitted by the IDFG, the State of Idaho has been a leader in wolverine research and conservation in the Northern Rocky Mountain states. The North American wolverine is classified by the State of Idaho as a protected non-game species and is recognized as a "Species of Greatest Conservation Need" as naturally low fecundity rates and remote habitat make the collection of accurate data on wolverine population trends very difficult. The ongoing wolverine conservation and research work conducted by the IDFG demonstrates that while the State of Idaho believes the species does not warrant protection under the ESA, we are committed to wolverine conservation to preclude the future need to list the species.

Please do not hesitate to contact me (208-334-218) or the Idaho Department of Fish and Game (Craig White, 208-334-3700) if you have any questions.

Sincerely,

Nathan A. Fisher
Administrator

North American Wolverine Status in Idaho

The U.S. Fish and Wildlife Service (Service) has requested information regarding the status of the North American Wolverine. Specifically, information has been requested related to:

(1) taxonomy, biology, ecology, genetics, and status of wolverines in the contiguous United States;
(2) specific information relevant to the consideration of the potential distinct population segment (DPS) of wolverines in the United States;
(3) the conservation status of wolverines in the United States including information on distribution, abundance, and population trends;
(4) specific information regarding threats to the wolverine including habitat, overutilization, disease or predation, inadequate regulatory mechanisms, and other natural or manmade factors;
(5) specific information regarding conservation actions to improve wolverine habitat or decrease threats;
(6) specific information regarding the potential effect of climate change on wolverines, their habitat, and food sources; and
(7) information on the management of wolverines on both sides of the international boundary where populations occur and how this management may differ between Canada and the United States.

The Idaho Department of Fish and Game (Department) has participated in several studies assessing wolverine biology, ecology, and distribution over the past 30 years. These studies generated the following publications:

Copeland, J., and C. Groves. 1992. Wolverine ecology and habitat use in central Idaho. Progress report. Cooperative Wildlife Research Project, Idaho Department of Fish and Game, Sawtooth National Forest, Challis National Forest, and Boise National Forest. 26pp.

Copeland, J. 1993. Assessment of snow-tracking and remote camera systems to document presence of wolverines at carrion bait stations. Idaho Department of Fish and Game, Boise, ID.

Copeland, J. P., and C. E. Harris. 1993. Progress report: Wolverine ecology and habitat use in central Idaho. Cooperative Wildlife Research Project, Idaho Department of Fish and Game, Sawtooth National Forest, Challis National Forest, and Boise National Forest. 20pp.

Copeland, J. P., and C. E. Harris. 1994. Wolverine ecology and habitat use in central Idaho. Progress report. Cooperative Wildlife Research Project, Idaho Department of Fish and Game, Sawtooth National Forest, Challis National Forest, and Boise National Forest. 20pp.

Copeland, J. P. 1996. Biology of the wolverine in central Idaho. M.S. Thesis, University of Idaho, Moscow, Idaho.

Copeland, J. P., J. M. Peek, C. G. Groves, W. E. Melquist, K. S. McKelvey, G. W. McDaniel, C. D. Long, and C. E. Harris. 2007. Seasonal habitat associations of the wolverine in central Idaho. Journal of Wildlife Management 71:2201-2212.

Edelmann, F., and J. Copeland. 1999. Wolverine survey in the Seven Devils Mountains of Idaho. Idaho Power Company and Idaho Department of Fish and Game. 40pp.

Edelmann, F., and J. Copeland. 1999. Wolverine survey in the Seven Devils Mountains of Idaho. Northwest Science 73(4):295-300.

Groves, C. 1987. Distribution of the wolverine (*Gulo gulo*) in Idaho, 1960-1987. Idaho Natural Heritage and Nongame Program Report, Idaho Department of Fish and Game, Boise, ID. 24pp.

Groves, C. R. 1988. Distribution of the wolverine in Idaho as determined by mail questionnaire. Northwest Science 62:181-185.

Groves, C. R., and G. Gadwa. 1989. Status survey for wolverines (*Gulo gulo*) on the Sawtooth National Forest and adjacent areas. Challenge Cost Share Report to Sawtooth National Forest, Idaho Department of Fish and Game, Boise. 49pp.

Groves, C. 1990. Status of the wolverine on the Sawtooth National Forest. Nongame Wildlife Surveys and Inventories report, Project W-170-R-14 final report, Idaho Department of Fish and Game, Boise, ID. 29pp.

Idaho Department of Fish and Game. 1992. Wolverine research update. Idaho Wildlife 12:26.

Magoun, A. J., and J. P. Copeland. 1998. Characteristics of wolverine reproductive den sites. Journal of Wildlife Management 62:1313-1320.

Nadeau, M. S. 1989. Wolverine survey in the North Fork Clearwater and Lochsa River drainages, Idaho. Idaho Department Fish and Game. 4pp.

Patton, G. 2004. Idaho snow-track survey, winter 2003-2004. Idaho Department of Fish and Game, Boise, ID. 18pp.

Schwartz, M. K., J. P. Copeland, N. J. Anderson, J. R. Squires, R. M. Inman, K. S. McKelvey, K. L. Pilgrim, L. P. Waits, and S. A. Cushman. 2009. Wolverine gene flow across a narrow climatic niche. Ecology 90: 3222-3232.

In recent years the Department has engaged in the following cooperative projects:

- Survey of wolverine habitat, and assessment of wolverine distribution and population status in the Idaho Panhandle National Forest; partners include Idaho Panhandle National Forest and USFS Rocky Mountain Research Station.
- Collection of genetic samples in northern Idaho for multiple forest carnivores including wolverines; partners include Idaho Panhandle National Forest, USFS Rocky Mountain Research Station, Washington Department of Fish and Wildlife, and Colville National Forest.
- Survey for wolverine presence, distribution, and population status in the Payette, Boise, and Sawtooth National Forests; partners include the Payette, Boise, and Sawtooth National Forests, and USFS Rocky Mountain Research Station.
- Evaluation of impacts to wolverines from winter recreation; partners include the Payette, Boise, and Sawtooth National Forests, USFS Rocky Mountain Research Station, Round River Conservation Studies, Idaho Department of Recreation and Tourism, Idaho State Snowmobile Association, and Central Idaho Recreation Coalition.
- Survey for wolverine presence, distribution, and population status in eastern Idaho; partners include Wildlife Conservation Society and USFS.
- Model potential impacts of climate change on habitat and distribution of a variety of species including wolverine; partners include University of Washington, U.S. Geological Survey, Washington Department of Fish and Wildlife, The Nature Conservancy, and University of Idaho.

The following evaluation is based on a range of data types of varying quality, allowing the Department to map both current and historical distribution with only moderate precision. As noted, the Department has been a significant partner in past wolverine monitoring studies that have produced some of the best literature available for evaluating wolverine status in the state. We also continue to be involved in ongoing wolverine work.

In addition to our status review, we wish to bring to Service's attention recent studies by the U.S. Forest Service Rocky Mountain Research Station. These studies have demonstrated that:

1) The global distribution of wolverine is primarily related to characteristics of winter snowpack and summer high temperature (Copeland et al. 2010. The bioclimatic envelope of the wolverine [*Gulo gulo*]: do climatic constraints limit its geographic distribution? Canadian Journal of Zoology 88:233-246);
2) The effective population size of wolverine in the Rocky Mountains of Montana and Idaho is extremely small, estimated to be just 35 individuals (Schwartz et al. 2009. Wolverine gene flow across a narrow climatic niche. Ecology 90:3222-3232); and
3) Dispersal corridors between U.S. populations in the northern Rocky Mountains and Canadian populations may be limited (Schwartz et al. 2009. Wolverine gene flow across a narrow climatic niche. Ecology 90:3222-3232).

Taxonomy, biology, ecology, genetics, and status of wolverines in the contiguous United States

The North American wolverine (*Gulo gulo luscus*) is classified by the State of Idaho as a 'protected nongame' species (IDAPA 13) and recognized as a 'species of greatest conservation need' (SGCN) in the Idaho Comprehensive Wildlife Conservation Strategy (IDFG 2005[1]). The basis for the wolverine's classification as an SGCN in Idaho is that it occurs in low densities and population trend information is lacking.

Studies conducted in Idaho with the Department as a partner have documented that annual home ranges of adult female wolverines in central Idaho averaged 384 km^2 (148 mi^2), and annual home ranges of adult males averaged 1522 km^2 (588 mi^2) (Copeland 1996). Copeland (1996) found 6 of 13 Idaho wolverines shifted their distribution to higher elevations in summer. Daily movements of male wolverines in Idaho were <35 km (21 mi), with an average of 7.6 km (4.5 mi). In contrast, daily movements of females were <20 km (12 mi), with an average of 4.3 km (2.6 mi).

The most basic habitat relationship noted in central Idaho has been the use of mid-elevation coniferous forests in winter and preference for high-elevation subalpine cirque habitat in summer (Copeland 1996, Copeland et al. 2007). Lower-elevation forests likely contain the greatest amount of ungulate carrion in winter (Copeland 1996). Northerly aspects were preferred in both winter and summer. Coniferous forests suitable for winter foraging and summer kit-rearing may only be useful if they are connected to suitable subalpine cirque habitats required for natal denning and summer foraging (Copeland 1996). Vegetative characteristics appear less important to wolverines than habitat structure. Copeland (1996) postulated high elevation habitats in summer may be related to the availability of prey, den sites, and avoidance of humans.

In central Idaho, winter diet is likely associated with non-winter mortality from hunting by humans (e.g., field processing of game or wounding mortality) and livestock losses on public grazing allotments (Copeland 1996).

Den sites are often in large boulder or talus fields in subalpine cirques. Denning habitat may be a factor limiting distribution and abundance (Copeland 1996). Wolverines may abandon dens in response to disturbance (Copeland 1996, Magoun and Copeland 1998). Copeland (1996) reported low and variable reproductive rates for wolverine in Idaho. The annual pregnancy rate was 0.46, the mean reproductive rate was 0.50 litters/female/year, and the mean reproductive output was 0.89 kits/female/year.

---

[1] Idaho Department of Fish and Game. 2005. Idaho Comprehensive Wildlife Conservation Strategy. Idaho Conservation Data Center, Idaho Department of Fish and Game, Boise, ID. http://fishandgame.idaho.gov/cms/tech/CDC/cwcs.cfm

Information relevant to the consideration of the potential distinct population segment (DPS) of wolverines in the United States.

The Department does not have any specific information to offer in consideration of the potential DPS of wolverines in the U.S.

Conservation status of wolverines in the United States including information on distribution, abundance, and population trends.

In general, wolverines occur in the more remote, mountainous regions of north-central Idaho, and along the eastern portion of the state bordering Montana and Wyoming. In Idaho, no statewide statistically-based estimate of population size or trend has been developed. However, in central Idaho, Copeland (1996) estimated density to be 1 wolverine/198 km^2 (79 mi^2).

Information regarding the distribution of wolverine in Idaho is available to the Department through a variety of sources, including reports from biologists employed by government agencies, university researchers and specialists, the general public and private companies; surveys conducted by agencies and conservations groups; and specimens collected or recovered in the field. Records currently avialable to the Department are based on identification of animals through eye-witness accounts, remote camera photographs, genetic analyses of hair, scat, and urine, and tracks. Efforts to capture, radio track, and evaluate mortalities have provided other important locations.

Some observations represent unequivocal records substantiated by strong evidence of correct identification, whereas others represent possible evidence of occupied habitat based on indirect evidence. Given the possibility that records may be based on incorrect identification, we categorized records by the observer's background (i.e., their ability to differentiate the taxon from similar taxa), followed by the type of evidence. Categories are as follows:

<u>Category 1</u>: Observations (*n* = 342 records) from the general public that were not or could not be verified by taxonomic experts, whether it be direct or indirect observations.
<u>Category 2</u>: Observations (*n* = 140 records) from biologists, researchers, or taxonomic experts based on indirect evidence (e.g., tracks, scat, unoccupied dens).
<u>Category 3</u>: Observations (*n* = 221 records) from biologists, researchers, or taxomonic experts based on captured animals, including specimens and radiotracked individuals; DNA evidence from biological samples (e.g., hair, scat, or urine); photographs that could be verified, such as those obtained at remote camera stations or from another credible source; and direct sightings.

We recognize that records assigned to Category 1 may represent valid identification of occupied wolverine habitat. However, we regard the overall reliablity of these records to be somewhat less than records contributed by researchers and agency biologists. More than 50%

of all records meet the Category 2 or 3 standard. Additionally, 32% of the Category 2 or 3 records have come in the last decade (2000-2010 inclusive).

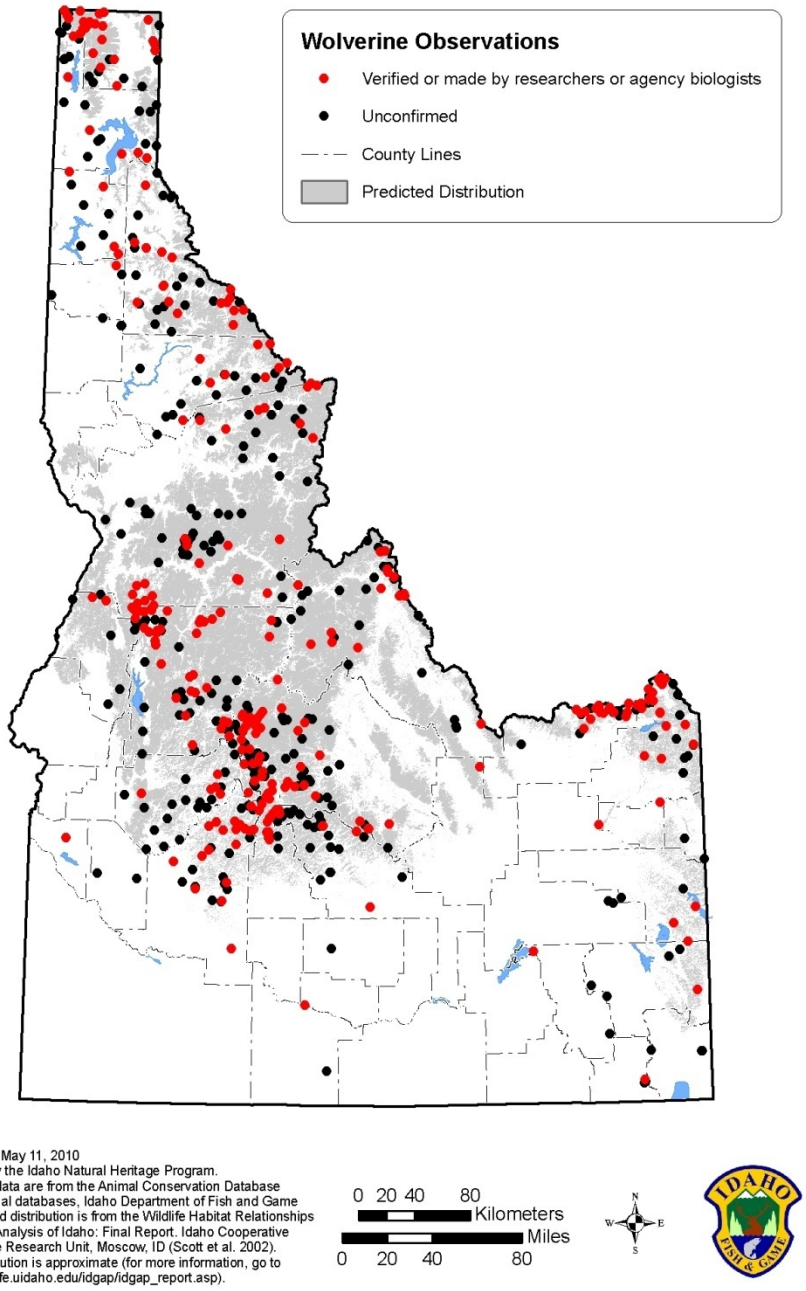
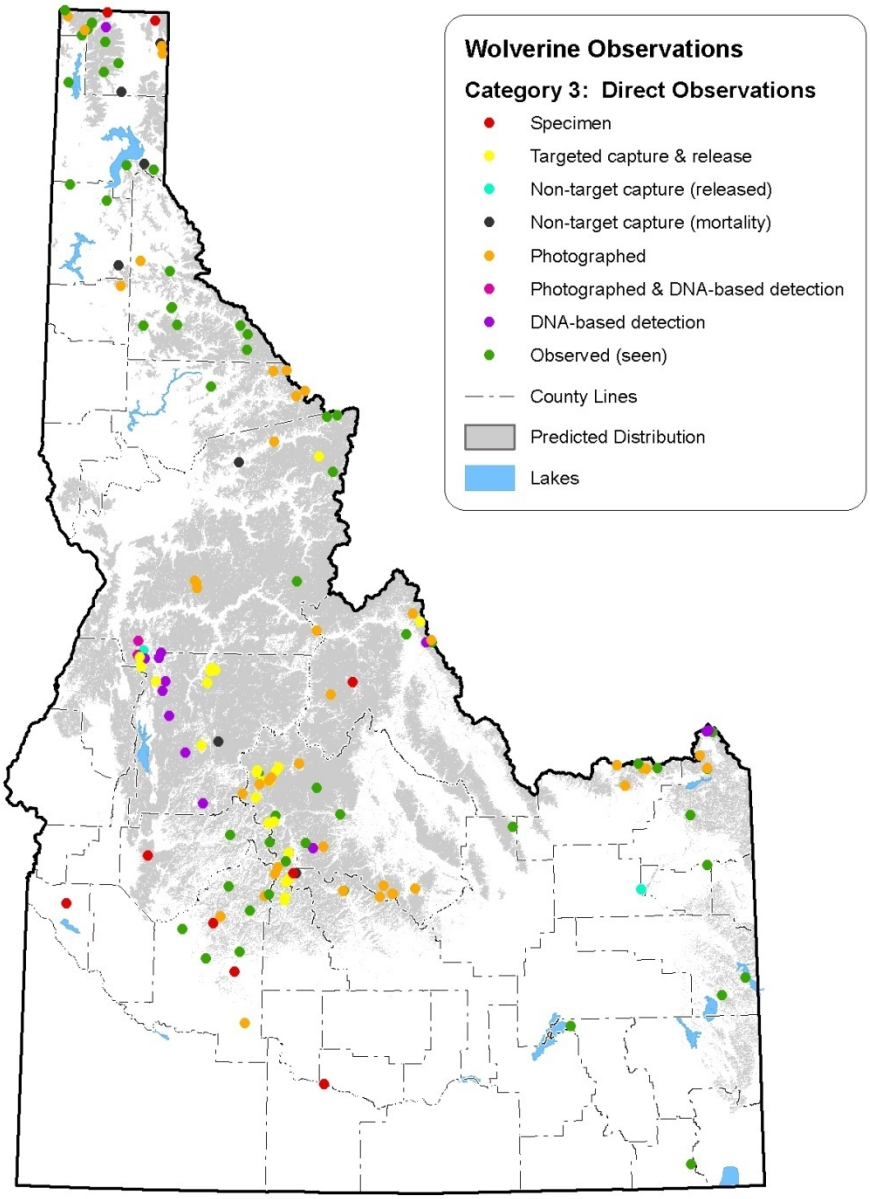


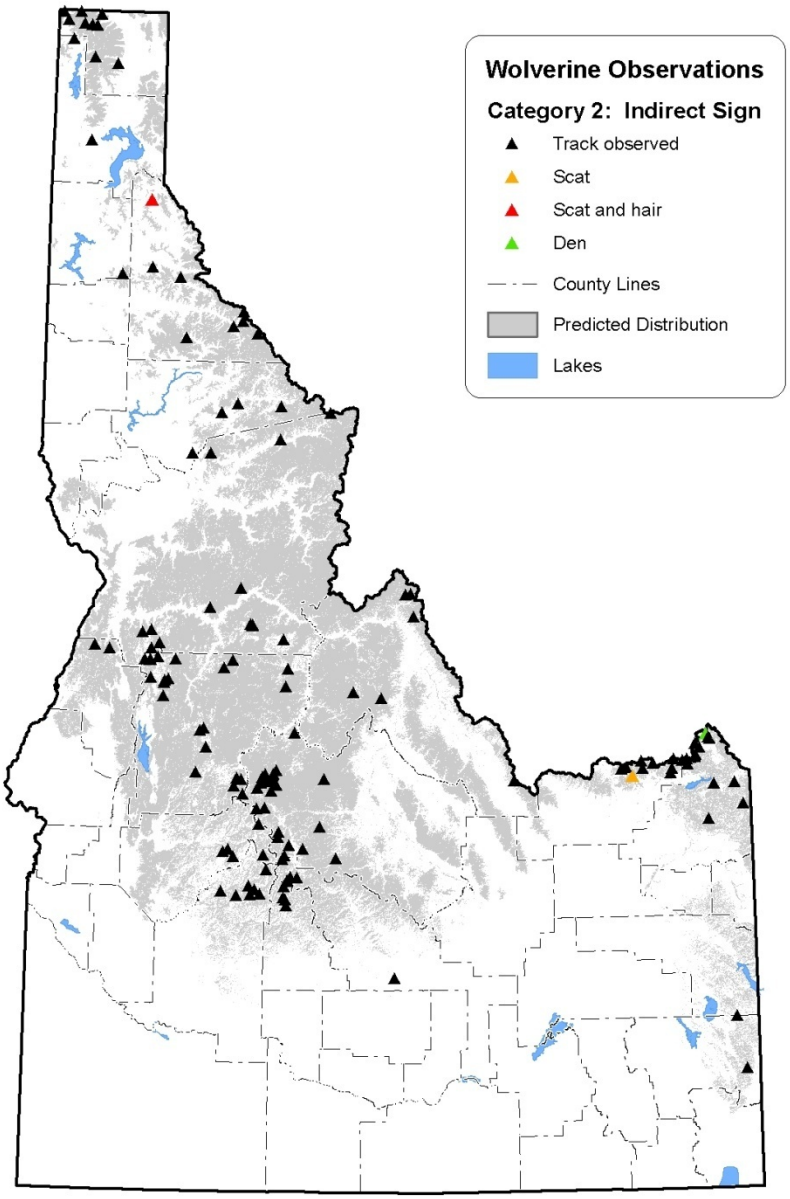
Figure 1. Range of all North American wolverine observations in Idaho and predicted distribution. Predicted distribution is from Wildlife Habitat Relationships Models (Scott, J.M., C.R. Peterson, J.W. Karl, E. Strand, L.K. Svancara, and N.M. Wright. 2002. A Gap Analysis of Idaho: Final Report. Idaho Cooperative Fish and Wildlife Research Unit. Moscow, ID.) Records displayed in red are Category 2 or 3 observations and records in black are Category 1 observations.



Map created on May 11, 2010
and prepared by the Idaho Natural Heritage Program.
Sources: Point data are from the Animal Conservation Database and other regional databases, Idaho Department of Fish and Game (2010). Predicted distribution is from the Wildlife Habitat Relationships Models, A Gap Analysis of Idaho: Final Report. Idaho Cooperative Fish and Wildlife Research Unit, Moscow, ID (Scott et al. 2002). Predicted distribution is approximate (for more information, go to http://www.wildlife.uidaho.edu/idgap/idgap_report.asp).

0 20 40 80 Kilometers
0 20 40 80 Miles

Figure 2. Category 3 records of direct observations of North American wolverine in Idaho.



Map created on May 11, 2010
and prepared by the Idaho Natural Heritage Program.
Sources: Point data are from the Animal Conservation Database and other regional databases, Idaho Department of Fish and Game (2010). Predicted distribution is from the Wildlife Habitat Relationships Models, A Gap Analysis of Idaho: Final Report. Idaho Cooperative Fish and Wildlife Research Unit, Moscow, ID (Scott et al. 2002). Predicted distribution is approximate (for more information, go to http://www.wildlife.uidaho.edu/idgap/idgap_report.asp).

0 20 40 80 Kilometers
0 20 40 80 Miles

Figure 3. Category 2 records of indirect evidence of North American wolverine in Idaho.

Information regarding threats to the wolverine including habitat, overutilization, disease or predation, inadequate regulatory mechanisms, and other natural or manmade factors.

In Idaho, the wolverine has been protected since 1965 with no open harvest season. Department records show that since 1965, 11 wolverines were incidentally trapped during the Idaho furbearer season (1 in 1965, 1976, 1979, 1993, 1997, 2007, and 2009; 4 in 2006). Seven of these incidental trapping reports were verified as wolverine catches by biologists, researchers, or taxomonic experts. One of the wolverines trapped in 2006 and 1 trapped in 2009 were later released unharmed. Five of the incidental catches resulted in mortality, and the fate of the other 4 wolverines (unverified incidental catches) is unknown at this time. In the past 10 years, the Department has issued permits allowing the capture, handling, and release of wolverine for scientific studies to the Wildlife Conservation Society and the USFS Rocky Mountain Research Station.

The Department is currently a partner with the USFS and Round River Conservation Studies, among other groups, to evaluate the effects to wolverines from winter recreation. Past studies indicate that the peak of winter recreational activities coincides with the wolverine's denning season (February–April) (Copeland 1996, Magoun and Copeland 1998). Because fecundity rates are inherently low, wolverine persistence will largely depend on protecting natal denning habitat from human disturbance (Copeland 1996). Further, subalpine forested habitat suitable for winter foraging and summer kit rearing are useable only if connected with subalpine cirque habitat available for denning, summer foraging, and security (Copeland 1996).

High road densities, timber operations, or housing developments located on the fringes of subalpine habitats may reduce available winter foraging and kit-rearing habitat, and increase the probability of human-caused mortality (Copeland 1996).

There is no information available on diseases or parasites that may have implications for wolverine populations. Aside from human-caused mortality, starvation and predation appear to be primary causes of death in weaned wolverines (Copeland 1996).

Information regarding conservation actions to improve wolverine habitat or decrease threats.

The Department is currently a partner with USFS and conservation groups to survey wolverine habitat and distribution on several National Forests in Idaho. Past work by Copeland et al. (2007) has indicated that wolverines in central Idaho prefer subalpine habitat and that wolverines may be impacted by management practices that influence subalpine habitat. Some of these studies will provide information on wolverines that will be valuable to revisions of National Forest winter travel plans.

Specific information regarding the potential effect of climate change on wolverines, their habitat, and food sources.

It has been speculated in Idaho that female wolverines have an affinity for persistent snow cover for denning (Copeland 1996, Magoun and Copeland 1998) and the need for a more comprehensive understanding of den-site characteristics is essential (Copeland et al. 2007). The Department is currently collaborating with the University of Washington, U.S. Geological Survey and others to assess the vulnerability of species and ecosystems to projected future climate change in the Pacific Northwest. At this time, it is anticipated that the wolverine will be one of a subset of species for which the impact of climate change on habitat and distribution will be modeled. In addition, researchers at the University of Idaho are in the initial stages of modeling future snow cover across the state. Once available, these data will provide a means for further evaluating the potential effect of climate change on wolverine.

Information on the management of wolverines on both sides of the international boundary where populations occur and how this management may differ between Canada and the United States

The State of Idaho has classified the wolverine as a protected nongame species since 2005, which precludes any open harvest season. The Department has a mandatory furtaker harvest report which requests that all incidental catches be reported by species. This has provided information on incidental wolverine catches in the past. Further, any wolverine catch that resulted in mortality is required to be reported. Finally, the Department does not have any specific information to offer about Canada's management of wolverine populations.