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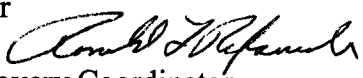
IN REPLY REFER TO:

ES/TE

April 14, 2005

Memorandum

To: TJ Miller, Region 3 Endangered Species Program Manager

From: Ron Refsnider, Region 3 Listing Coordinator & Wolf Recovery Coordinator 

Subject: Endangered Species Permit Request from Michigan Department of Natural Resources

In a February 22, 2005, letter to Regional Director Robyn Thorson and an attached permit application, Mindy Koch, Michigan DNR Resource Management Deputy, requested a permit under ESA section 10(a)(1)(A) "to use harassment and lethal control to respond to wolf-related threats to human safety and domestic animals... to maintain public support and thereby ensure the long-term recovery of the species." While not specifically discussed in the letter or permit application, this request clearly resulted from the January 31, 2005, ruling by the U.S. District Court for the District of Oregon that vacated the Service's April 1, 2003, reclassification of Michigan wolves from endangered to threatened status. This vacature also ended our ability to implement the section 4(d) special regulations that allowed various forms of take of threatened gray wolves by state and tribal authorities.

The following take authorities were requested by Michigan DNR in the Feb. 22, 2005, application:

1. Lethal control of wolves – up to 10 percent of the late-winter population – involved in confirmed depredations (injuring or killing) on lawfully present livestock (including livestock guard dogs) or other domestic animals, under the following conditions:

- a) Wolf depredation must be verified following the procedure described in *Michigan Department of Natural Resources Wildlife Division Procedure: Guidelines for Management and Lethal Control of Wolves Following Confirmed Depredation Events* (version 1.03, 9/03/03).
- b) Depredation is likely to be repeated at the site.
- c) Trapping for the depredating wolf or wolves must occur within 1 mile of the depredation site.
- d) The trapping, handling, and euthanizing must be done in a humane manner.
- e) Traps must be checked at least every 24 hours.
- f) Young of the year trapped before August 1 must be released.

- g) Lactating females trapped before July 1 must be released near the point of capture unless they have been involved in 3 or more depredations; if so involved, they may be euthanized.
- h) Livestock operations must implement technical assistance guidelines in a timely manner in order to qualify for lethal control efforts.
- i) May not be used to take wolves that kill dogs “that are free-roaming, hunting, or training on public lands.”

Note: Conditions 1(a) through 1(d) are nearly identical to those found in our 2003 section 4(d) special regulations for wolves in portions of the Eastern Distinct Population Segment. Conditions 1(e) through 1(i) place additional restrictions on the take actions.

2. Harass wolves “that pose a threat to humans, livestock and other domestic animals,” under the following conditions:

a) Injurious harassment (“cannot be reasonably expected to cause permanent physical damage or death to a wolf”) when a wolf (i) attacks or closely approaches livestock or other domestic animals, (ii) has lost its fear of humans, (iii) closely approaches humans, or (iv) closely approaches a human residence three or more times.

b) Noninjurious harassment (“cannot be reasonably expected to cause temporary or permanent physical damage or death to a wolf”) in the above situations and when a wolf (i) approaches a human residence or (ii) nears/enters an area occupied by livestock or other domestic animals.

(Note: Much of this would be covered under the “human safety” take regulation that applies with the development sec. 6 cooperative agreements; see below.)

3. Designate other agencies, tribal governments, organizations, and private individuals as State agents who are authorized to conduct the take activities under 1 and 2 above, adhering to the conditions outlined for those forms of take. Permittee (Michigan DNR) must inform FWS of any take by designated agents by Jan. 31 of each year.

Correction to Number 3: On March 23, 2005, Todd Hogrefe, Michigan DNR Endangered Species Coordinator, informed us that the permit application previously submitted was in error. He immediately e-mailed the correct version to us. The correct version does not contain the request, under #3, to designated organizations and private individuals to conduct the lethal take activities under #1, but only requests authority to designate organizations and private individuals to conduct the harassment activities described under #2. The corrected #3 contains a request for authorization to designate other agencies and tribal governments to conduct lethal take (#1) and harassment (#2).

FWS Actions to Date

On March 10, 2005, we renewed the subpermit to USDA-Wildlife Services in Minnesota to continue their similar program of removing verified depredating wolves in Minnesota Wolf Management Zones 2-5.

On February 28, 2005, we issued a new subpermit 05-03 to Wisconsin DNR that authorized nonlethal control (trapping and translocation) of depredating wolves, plus lethal control of up to 8 wolves that are repeat depredators. This subpermit authorized Wisconsin DNR and USDA-Wildlife Services personnel to resume most of the wolf research and depredation control activities as they had been conducted prior to the April 1, 2003, reclassification and 4(d) regulations.

We recently completed a review of other forms of take that were requested by Wisconsin DNR, including take authorities that closely resemble the lethal take authorities of the 2003 section 4(d) special regulation. A new Biological Opinion under section 7 of the ESA was developed by our Green Bay Field Office to evaluate (1) euthanizing severely injured wolves, (2) euthanizing diseased wolves, and (3) taking depredating wolves under the conditions specified in the 2003 4(d) rule. On April 1, 2005, we issued an amended subpermit 05-03A1 for the remainder of 2005 that authorizes the Wisconsin DNR to lethally take 10, 3, and 34 wolves, respectively, as well as the incidental mortality of 4 wolves.

Evaluation

The requested lethal control of depredating wolves will be limited by several conditions that were contained in the 2003 section 4(d) special rules (USFWS 2003):

- The evidence at the scene is examined and agency officials have determined that the depredation was likely to have been caused by a gray wolf.
- Depredation is likely to be repeated at the site.
- The taking must be performed in a humane manner.
- Young of the year captured before August 1 must be released rather than killed.

In addition, Michigan DNR's Depredation Management and Control Guidelines (Michigan DNR 2003), which will also constrain lethal control of depredating wolves, are more restrictive than our previous 4(d) regulations in several ways. These additional restrictions will result in less impact on Michigan wolves than could have occurred if the 4(d) rules were implemented as finalized in 2003:

- Lactating female wolves trapped before July 1 must be released near the point of capture unless they are trapped at a farm with three or more depredation events over two years.
- Lethal control will not be carried out for wolves who have attacked and/or killed free-roaming dogs on public land; the 4(d) rule allowed lethal control of wolves attacking/killing any "lawfully present livestock or domestic animals."
- Lethal control will not be used on private lands where the owner fails to follow, in a timely manner, technical assistance guidelines to reduce depredation likelihood.

As a result of the 22-month period between the finalization of the 2003 4(d) rules and the January 31, 2005, ruling by the Oregon District Court, we have two years of empirical data on the impacts of the lethal depredation control that has been requested by Michigan DNR.

Summary of Lethal Depredation Control under the 4(d) Rule:

All were depredations involving livestock, unless otherwise noted (data from Todd Hogrefe, MI DNR, in litt. Feb. 11, 2005).

2003 – Four adult wolves killed at 2 Mackinac County farms: 1 in August, 3 in September.
 2004 – Six wolves killed (3 adults, 3 pups): 3 at 3 farms in Delta, Ontonagon, and Baraga Counties; 1 at a residence (attack on dog); 2 in a Baraga County elk farm. 1 in June, 1 in July, 1 (dog incident) in August, 3 in September (incl. both elk farm wolves)
 2005 - None euthanized during January, the only period in 2005 when lethal control was authorized by the 4(d) rule.

The 2003 adult lethal control represented **1.2%** of the 2003 late-winter population, and the 2004 adult lethal control removed **0.8%** of the 2004 late-winter population. These percentages are lower than the 2 to 3 percent that we predicted in our 2003 Final Reclassification Rule (USFWS 2003); those predictions were based on Minnesota depredation control data from the early 1980s when the winter wolf population in Minnesota ranged between 1100 and 1500 animals.

From Michigan DNR wolf population data it is clear that this level of lethal depredation control has not prevented continued growth of the Michigan wolf population. The final population estimate for 2005 will not be available until late April or May 2005, but the population is expected to show a gain since the winter of 2003-2004 and the preliminary estimate is slightly over 400 (Hogrefe, pers. comm. 2005; Lederle, pers. comm. 2005).

Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
pop.	30	57	80	116	112	140	174	216	249	278	321	360	400*
% incr.	---	90.0	40.4	45.0	-3.4	25.0	24.3	24.1	15.3	11.6	15.5	12.1	11.1*

* 2005 estimate is preliminary (Lederle pers. comm., 4/13/05)

Similar lethal depredation control programs have been operating in Minnesota (since 1979) and in Wisconsin (from April 2003 through January 2005). Removal of depredating wolves in Minnesota ranged from less than 2 percent in the early 1980s when the program was in its early years to a maximum of about 9 percent in 1997. Removal rates of Wisconsin depredating wolves in 2003 and 2004 were 2.7 percent and 5.4 percent, respectively, of the late winter population. Both of these programs removed a higher percentage of wolves from the wild population than were removed in Michigan, and the wolf populations continued to increase in number in both states (Erb and Benson 2004, Wydeven et al. 2005, Wydeven pers. comm. 2005).

Combined Michigan and Wisconsin wolf population estimates since 1980 are shown on the attached graph, including winter 2004-2005 estimates from Wydeven (pers. comm. 4/13/05) and Lederle (pers. comm. 4/13/05). The steep population increase seen in both states since 1993 appears to be continuing, including the last 2 years during the two lethal depredation control programs. These wolf populations continue to show the rapid growth rate that is the typical of the middle phase of the “sigmoid growth curve” displayed by species exploiting new habitat where conditions are not limiting their growth. During this phase of rapid growth a species generally is resistant to minor adverse impacts.

Injurious and Noninjurious Harassment

These forms of requested take are limited to actions that are not expected to cause permanent physical damage or death, or actions not expected to cause any physical damage, respectively.

Therefore, these forms of take of endangered wildlife are available to the State “conservation agency” under 50 CFR 17.21(c)(5) without requiring a permit from the Service.

Furthermore, 50 CFR 17.21(c)(5) indicates that the State may delegate these take authorities to their “agent,” again without a Federal permit. Thus, the State could conduct these take activities, and delegate agents to conduct such activities, without any direct FWS regulation or oversight. Under the provisions of the Section 6 Cooperative Agreement between Michigan DNR and the Service, the annual reporting of such take activities is required.

An advantage of covering these harassment activities under a FWS subpermit is that it allows us to impose additional reporting requirements. Prompt reporting of incidents of injurious harassment, or of incidents of intended noninjurious harassment which result in injuries, would allow us to continually reevaluate the impacts of such actions, and to modify permit conditions if such impacts are greater than previously envisioned or if they no longer promote the conservation of the gray wolf in Michigan. Because MI DNR intends to delegate authority for such harassment actions to other agencies, tribal governments, organizations, and private individuals, tighter reporting requirements should be specified so we can ensure that these activities are not producing undesirable and/or unexpected impacts to the Michigan wolf population.

The injurious and noninjurious harassment activities that Michigan DNR proposes should have no detrimental impact on the State’s wolf population. Under the conditions specified by Michigan DNR, such actions “cannot be reasonably expected to cause permanent physical damage or death to a wolf.” Harassment actions that go beyond this limitation and can be expected to result in permanent physical damage or death will be viewed as illegal takings under the ESA and thus are subject to prosecution. Harassment actions that are properly carried out under the specified conditions should result in fewer wolf-human interactions, and decreased exposure of wolves to livestock and other domestic animals. This could lead to a decreased need for lethal depredation control at sites where harassment is carried out, and therefore may result in a greater density of wolves in certain areas.

At some point wolves will reoccupy all suitable habitat areas in the Upper Peninsula; as that occurs the population growth is expected to slow and eventually cease, and the wolf population will plateau at some unknown level. Due to the variability in a number of demographic and environmental factors, the wolf population will likely bounce above and below that level from year to year once the plateau is reached. The Upper Peninsula is estimated to have a biological carrying capacity of over 800 wolves (Mladenoff et al. 1995). However, the Michigan Wolf Management Plan (Michigan DNR 1997) states that a lower “social carrying capacity” is likely to exist at some unknown level. The Michigan wolf management Plan establishes a minimum population goal of 200 wolves for the Upper Peninsula. Therefore, the Upper Peninsula wolf population is likely to be between 200 and 800 animals (late winter count) for the foreseeable future. The Plan does not address the potential for wolves to move to the Lower Peninsula and establish a population there. A small pack of wolves was first documented in the northern portion of the Lower Peninsula in 2004, but winter surveys failed to find sign of additional wolves or evidence that the first pack still exists there.

Michigan DNR's wolf management plan calls for an Upper Peninsula wolf population of at least 200 wolves (Michigan DNR 1997). The Service's Recovery Plan for the Eastern Timber Wolf has a recovery goal of a minimum of 100 wolves in Wisconsin and the Upper Peninsula of Michigan combined for at least five years (USFWS 1992). The Michigan wolf population, even with the impacts of two successive years of lethal depredation control, continues to greatly exceed both goals.

The impact of injurious and noninjurious harassment is difficult to assess because incidental take in the form of permanent injury or death is a possibility. In order to estimate the extent and nature of the incidental take, the Service must be knowledgeable of the forms of harassment to be used, and must review the training and oversight to be provided to the harassing individuals. Because Michigan DNR has not provided such information at this time, the impacts of such incidental take will not be evaluated here.

Human Safety Concerns

Ms. Koch's letter explains that the request for these take authorities partially comes from a need "to respond to wolf-related threats to human safety...." However, the Code of Federal Regulations at 50 CFR 17.21(c)(2) provides "any person" with the authority to "take endangered wildlife in defense of his own life or the lives of others. Additionally, 50 CFR(c)(3)(iv) provides the Service, Federal land management agencies, and state conservation agencies the authority to take endangered wildlife to "remove specimens which constitute a demonstrable but nonimmediate threat to human safety...." With these human safety-related forms of take already codified for endangered wolves, I don't find that Michigan DNR's permit application has provided sufficient documentation of human safety concerns to justify injurious and noninjurious harassment, in light of the lack of information on which to assess the incidental impacts of such harassment.

Conclusion

After reviewing the available data on Michigan wolves, I conclude that euthanizing depredating wolves under the conditions specified above will promote the conservation of the species in Michigan. It will do so by removing depredating individuals and packs, and greatly reducing the incentive for private individuals to resort to illegal killings to remove perceived problem wolves. Private killing of problem wolves is likely to result in the wrong wolves, and too many wolves, being killed, and may well interfere with wolf recovery. In contrast, a coordinated and limited depredation control program, as described in the Michigan DNR permit application and the Michigan lethal control guidelines (Michigan DNR 2003) will efficiently and precisely remove the problem wolves or packs, while minimizing the impacts to the wolf population in the State. As this program is a continuation of the depredation control program carried out for the last two years under the 2003 section 4(d) special regulations for the Eastern Gray Wolf Distinct Population Segment, I conclude that the Upper Peninsula wolf population's continued growth will not be significantly impacted, and is likely to be enhanced by the removal of up to 5-7 percent of the late winter population. The removal of a higher percentage – ten percent as requested by Michigan – also is not likely to stall population growth, but at this time it's not clear that there is a need to authorize that magnitude of lethal control; I recommend issuing a

subpermit that authorizes only 5 to 7 percent of the late winter population, with the understanding that we will reevaluate a higher level of take if depredation rates prove to be higher than those experienced over the last 2 years.

The extent of incidental impacts resulting from injurious and noninjurious harassment are impossible to assess at this time. Although I believe that harassment has a role in wolf recovery programs, authorizing non-government parties to conduct harassment – especially injurious harassment – must be accompanied by training and careful oversight to minimize the possibility of significant adverse impacts from incidental take. At this point we have insufficient information on the forms of harassment and on the training and oversight by Michigan DNR, and impact assessment is simply not possible. Therefore, at this time I recommend that we do NOT authorize Michigan DNR to designate agents to conduct injurious or noninjurious harassment actions against gray wolves.

I recommend that, consistent with the recently issued subpermit to Wisconsin DNR, we require that all lethal control actions and other wolf mortalities or serious injuries be reported to FWS in 5 days, in addition to the general annual reporting requirements.

References

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- Mladenoff, D.J., T.A. Sickley, R.G. Haight, and A.P. Wydeven. 1995. A regional landscape analysis and prediction of favorable gray wolf habitat in the Northern Great Lakes region. *Conserv. Biology* 9:279-294.
- Paul, W.J. 2004. Wolf depredation on livestock in Minnesota, annual update of statistics – 2003. U.S. Dept. of Agriculture, Animal & Plant Health Inspection Service, Wildlife Services. Grand Rapids, Minnesota. 13 pp.
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- Wydeven, A.P., J.E. Wiedenhoft, R.N. Schultz, R.P. Thiel, W.H. Hall, E. Heilhecker, and J.E. Hawley. 2005. Progress report of wolf population monitoring in Wisconsin for the period April – September 2004 & annual summaries for 2004. Unpublished report by Wisc. Dept. Natural Resources, Park Falls, WI. 28 pp.

Wolf Numbers in Wisconsin & Michigan 1972 - 2005

(excluding Isle Royale; 2004-05 estimates are preliminary as of 4/13/05)

