

IN COURT OF APPEALS

Center for Biological Diversity, Howling
for Wolves.

VS.

Minnesota Department of Natural Resources, and Tom Landwehr, in his official capacity as the Commissioner of the Minnesota Department of Natural Resources,

STATE OF MINNESOTA)
) ss.
COUNTY OF ITASCA)

1. I am a Wildlife Research Biologist for the Division of Fish and Wildlife, Minnesota Department of Natural Resources (“DNR”). I office at 1201 East Highway 2, Grand Rapids, Minnesota 55744. I have been a Wildlife Research Biologist since October 1998. A copy of my curriculum vitae is attached to this affidavit as Exhibit A. Included within my curriculum vitae is a list of publications I have authored within the previous 10 years.

2. I hold a Ph.D. in Zoology and Physiology from the Department of Zoology and Physiology of the University of Wyoming. I have a Master's degree in Wildlife Ecology from the University of Missouri-Columbia and a Bachelor of Science degree in Fisheries and Wildlife Biology from Iowa State University.

3. As a Wildlife Research Biologist for the Minnesota DNR, I presently coordinate wolf and furbearer population monitoring and research activities, among other related duties. This includes several annual wolf and furbearer trend surveys, DNR's periodic (every five year) wolf population assessment, and coordination of most DNR wolf research projects.

4. Minnesota's wolf population steadily increased from the 1970s until 2000, and has been comparatively stable since that time. The Minnesota 'component' of the Great Lakes Distinct Population Segment of wolves exceeded federal recovery goals more than 20 years ago, and 13 years ago the combined Great Lakes wolf population (Minnesota, Wisconsin, and Michigan) exceeded numeric recovery goals recommended by independent scientists and incorporated into the 1992 Endangered Species Act ("ESA") wolf recovery plan. Following two previous attempts that were reversed by court action, on January 27, 2012 the Great Lakes wolf population was once again removed from the federal threatened-species list and management authority was returned to the State.

5. Based on population data collected during winter 2007-8, approximately 3,000 wolves were estimated to be in Minnesota, more than double the level deemed sufficient to meet federal recovery goals. Annual data from four independent data

sources indicates that the population has been relatively stable since 2007, except for indications of an increase in the last 1.5 years.

6. Since 1978, with only slight modifications thereafter, the Minnesota DNR has utilized a consistent method (hereafter, “periodic wolf survey”) for periodically estimating both the number of wolves and the number of square miles occupied by wolves in Minnesota. These periodic wolf surveys have been conducted in 1978, 1988, 1998, 2003, and 2007, with future surveys scheduled in the year following delisting (i.e., this winter) and continuing at 5-year intervals thereafter (as outlined in the DNR’s Wolf Management Plan). The methods employed have been described and published in a peer-reviewed scientific journal, and the data resulting therefrom has been utilized by the U.S. Fish and Wildlife Service (“USFWS”) as their numeric metric for evaluating wolf population size in Minnesota in relation federal recovery goals.

7. Since 1976, the DNR has conducted an annual track survey each fall (hereafter, “scent station survey”) that records presence or absence of wolf sign along approximately 400 survey routes within the state, of which approximately 200 occur within current wolf range. The survey provides information on trends in the size of the (fall) wolf population in between the periodic wolf surveys mentioned above. Since the last periodic wolf survey, indices from the scent station survey indicate a stable and then increasing trend in fall wolf abundance, with the most recent (2011) index the highest yet recorded since the survey’s inception.

8. Since 1994, the DNR has also conducted an annual track survey each winter (hereafter “winter track survey”) that also records the presence or absence of wolf

sign along approximately 50 survey routes throughout wolf range in Minnesota. The survey provides information on trends in the size of the (winter) wolf population in between the periodic wolf surveys mentioned above. Since the last periodic wolf survey, indices from the winter track survey indicate a stable and then increasing trend in winter wolf abundance, with the most recent (2011) index the highest yet recorded since the survey's inception.

9. Since 1978, intentional trapping of wolves in response to wolf depredations, with no specific numeric constraint on the number of wolves that could be killed, was authorized under the ESA. Annual information on the number of verified depredations in Minnesota is collected by U.S. Department of Agriculture Wildlife Services and DNR, and it serves as a secondary source of information regarding wolf population trend between DNR's periodic wolf surveys. Since the DNR's last periodic wolf survey (2007), the number of verified depredations has fluctuated, but they have generally been at levels at or above those observed prior to 2007, and data from partway through 2012 suggests that the number of verified wolf complaints will be the highest on record.

10. Since 1967, Dr. L. David Mech has annually estimated, using radio-telemetry and aerial surveys, the number of wolves occupying an approximately 800-square-mile area of the Superior National Forest. Although this area represents only a small portion of Minnesota's current wolf range, the data provides an additional source of information regarding the wolf population trend in that area. Since the DNR's last

periodic wolf survey (2007), the number of wolves in this study area has held stable at the highest average level recorded since 1967.

11. In spite of differing methodologies, the data collected by DNR and other agencies (see paragraphs 6 - 10 above) has generally provided corroborating assessments of wolf population trends in Minnesota, thereby adding confidence that DNR's current assessment is accurate. Specifically, since 2007, multiple independent sources of data indicate that the wolf population has been stable or recently increased, and I am aware of no data to the contrary.

12. Statements within the Petitioners' declarations assert that the DNR will be "unable to measure the effects of the hunt on the state's wolf population" without conducting another periodic wolf survey prior to the hunt. This is not true. As discussed above, DNR has multiple *annual* sources of population status data for wolves that have established track records for collectively providing reliable data on wolf population trend. Actual field-based population estimates are not required to assess changes in population status. In fact, having such data, on an annual basis just prior to each harvest season, would be considered a rarity for the many sustainably hunted wildlife populations throughout the world. Change can accurately be assessed with indices of relative abundance like those discussed above. Furthermore, even if a periodic wolf survey were to be completed in the year prior to the first wolf harvest, the next periodic survey would not be conducted for five years, and any changes that occurred in the wolf population over that time would be a cumulative effect of all biotic, abiotic, and anthropogenic factors acting upon the population. Hence, assessment of any "...effects of the hunt on

the state's wolf population," or more correctly, changes in abundance between years, will still be based on the multiple annual indices of relative abundance currently collected by or available to DNR, along with additional annual population monitoring tools being considered.

13. The above-described wolf monitoring activities, including the intervals at which all are conducted, provided sufficient population assessment information necessary for the USFWS to remove wolves from the ESA in 2012. Furthermore, the USFWS has formally accepted Minnesota's existing monitoring approach as part of the official post-delisting monitoring plan required by ESA.

14. Within Minnesota, DNR has sustainably managed regulated harvest of bobcats (whose population size is similar to wolves) for over thirty years based primarily on surveys similar to the ones discussed above that provide annual indices of abundance and hence population change through time. Using this management approach, and in spite of recent record harvest levels, the bobcat population is now the highest estimated since regulated harvests were established in the 1970s.

15. Minnesota's wolf population contains an estimated 500 wolf packs, and given an average litter size of approximately five, it appears that as many as 2,500 wolf pups are born each year. Given that the population has been relatively stable in recent years, this indicates that as many as 2,500 wolves also likely die in Minnesota each year as a result of senescence, disease, starvation, intra-specific killing, natural accidents, legal depredation control, human-caused accidental death, and poaching. The Petitioners' declarations assert that "the deaths of hundreds of wolves will decrease the ability of

wolves to serve as the top predator,” a conclusion that appears to assume that wolves are currently capable of playing a key ecological role in spite of over 2,000 likely wolf deaths a year, but that wolves will be unable to fill this role after the “deaths of hundreds of wolves.” This is a flawed assumption. Furthermore, applied examples and considerable research data indicates that wolf populations can likely sustain 30% annual human-caused mortality, in addition to normal rates of natural mortality, without causing the population to decline across years. In my opinion, the level of public harvest proposed by DNR will clearly have little if any impact on the long-term ability of wolves to serve their many important ecological roles, nor will it hinder the opportunity for public observation or wolf-related ecotourism.

16. In my opinion, the DNR’s proposed conservative harvest falls well within the bounds of sustainability. With an estimated mid-winter population around 3,000, I project that the post-birth summer wolf population may reach 4,800 wolves, meaning that up to approximately 1,450 (30%) wolves could die as a result of human causes with little if any impact to wolf population size the following year. The DNR’s proposed quota of 400, along with a projected depredation take of perhaps 275 wolves this year, still represents less than half of the current estimated sustainable level of human-caused mortality, and it is highly unlikely additional forms of human-caused mortality (illegal killing, wolf-vehicle collisions) will come close to bringing total human-caused mortality above this threshold. Furthermore, I am of the opinion that a non-trivial percentage of the deaths attributable to depredation control and public harvest will be offset by

reductions in other forms of mortality, meaning the actual population-level effect of any given public harvest will effectively be less in numeric magnitude.

17. Several of the Petitioners' declarations suggest concern that wolf trapping will lead to elevated risks of accidental catch of domestic pets or lynx, or even children. I am unaware of any incidents of children being captured in a wolf (or other) trap in any state or province where wolf trapping has occurred for decades. Regarding lynx, DNR already requires lynx avoidance techniques in the Lynx Zone, techniques that our wolf regulations are consistent with. Although domestic pets can be accidentally captured in traps, it is rare. In my opinion, the concerns expressed are not based on realistic risk assessment. It assumes that in comparison to current conditions, there will be more trappers, more total traps, or more traps deployed of a type that are capable of causing such concern. In my opinion, the number of trappers will be largely unaffected by the existence of a wolf harvest season. I believe that licensed wolf trappers will consist of a subset of existing trappers that already trap other species, not previous non-trappers that decide to start wolf trapping. Second, even though a portion of these existing trappers (i.e., licensed wolf trappers) may now be able to set traps specifically for wolves, there is only a limited amount of time in a day to set and tend traps, and deployment of any notable number of wolf traps will require a reduction in traps set for other species—and hence an offsetting reduction in risk. Third, it is certainly possible that accidental catch of certain animals could occur in the types of traps set for wolves, but in my opinion not at a higher rate than could occur in traps currently set for other species. With one minor exception, no changes were made to either the types of trapping devices legal for use in

Minnesota or the manner in which they can be deployed. The one change made (allowing licensed wolf trappers to set their snares using larger loops higher off the ground), will not in my opinion lead to any higher risk than what may currently exist, and may even have lower risk in some cases.

FURTHER YOUR AFFIANT SAYETH NOT.

John D. Erb

Subscribed and sworn to before me on
this _____ day of September, 2012

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