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Re: A request for a moratorium on lethal control and permanent removal (rescind or suspend SOP13) of Mexican wolves in the Blue Range Wolf Recovery Area until an expert taskforce on genetic issues can be convened to provide guidance to these actions.

Dear Sirs:

The Association of Zoos and Aquariums (AZA) is a non-profit organization dedicated to the advancement of zoos and aquariums in the areas of animal care and husbandry, conservation, education, science and recreation. AZA's 216 accredited institutions draw more than 156 million visitors annually and have more than eight million zoo and aquarium members who provide almost \$100 million in support. These institutions teach more than 12 million people each year in living classrooms, dedicate millions annually to education, conservation and scientific research programs and support over 1,800 field conservation and research projects in 80 countries.

AZA, through its Mexican Wolf Species Survival Plan (SSP) and member institutions, has been actively involved with the reintroduction and recovery of the Mexican wolf since the 1970's. This involvement has been primarily accomplished through the AZA's long-term partnership with the U.S. Fish and Wildlife Service (USFWS), the state wildlife agencies in the Southwest, and with Mexico's Direccion General de Vida Silvestre. The 46 Mexican Wolf SSP member facilities have been excellent recovery program partners with the USFWS and will continue to be so. The AZA Mexican Wolf SSP—which represents the only source of the wolves used in reintroduction—has been an important component of the success of the current Mexican Wolf

reintroduction project and, in fact, has made this reintroduction project and Mexican wolf recovery possible. Our intentions in this request are to further the success of the Mexican wolf recovery program.

The primary role of the Mexican Wolf SSP is to manage the captive population. The primary purposes of the captive population are: to protect the genetic resource; to provide wolves for reintroduction; and to ensure genetic and demographic augmentation of wild Mexican wolf populations. Ideally, a reintroduced population should mirror the full genetic complement of its founding population. For this reason, the genetic goals of the captive population should be the same as for the reintroduced population. Also, genetic goals cannot be assured until sensible demographic goals are identified and the stability of the reintroduced population is achieved. It is the opinion of the SSP that decisions such as lethal-control or permanent removal of wolves in the wild need to be considered first in the light of scientifically-generated genetic and demographic goals for the reintroduced population.

In 1995, based on genetic evidence for three captive lineages of Mexican wolves (Garcia-Moreno et al 1996; Hedrick et al 1997) and the recommendation of the Mexican Wolf Recovery Team's Genetics Committee, the USFWS recognized these three lineages as Mexican wolves. The Genetics Committee provided the Mexican Wolf SSP with direction in managing and merging these three lineages to best protect this genetic resource. Due to the SSP doctrine of managing to maximize the retention of genetic variability and because of the different captive histories of the three lineages, the Genetics Committee recommended that the three lineages be merged with a lineage representation goal of 80% McBride (MB) lineage, 10% Ghost Ranch (GR) lineage and 10% Aragon (AR) lineage, and monitor the merging of these lineages for fitness. If fitness did not decrease, which it has not, increasing the representation of the lesser lineages to 25% representation each (Fredrickson et al 2007; Hedrick and Fredrickson 2007) was recommended. A reintroduced population of Mexican wolves should mirror this goal.

In July 2007, the reintroduced wild population was represented by an estimated 77% MB, 13% GR and 10% AR. These statistics would appear favorable on the surface however, when the genetics of the wild population are further examined, it becomes apparent that the representation of the lesser lineages (GR and AR) is not fully integrated. The survival of these lineages in the reintroduced population cannot be assured without better integration of the lineages in the reintroduced population and achieving scientifically-generated demographic goals for this reintroduced population. The GR and AR lineages are held only by a relatively few individuals within the small reintroduced wild population, and the removal or loss of any of those few individuals would negatively impact these percentages significantly. Furthermore, some important GR and AR alleles are not represented at all in the current wild population. Until the time that the representation of the three lineages is better integrated into the entire reintroduced wild population and demographic stability is achieved in the reintroduced population, there is a need for careful genetic consideration in any permanent removals from the wild or the lethal-control of any wild wolves. There also continues to be a need for releases from the captive population to facilitate this integration and to ensure that rare alleles of the founding lineages are represented in the wild (Fredrickson et al 2007).

Despite a poor growth rate for the Mexican wolf reintroduced population, the species continues to be removed and lethally controlled under the provision of Standard Operating Procedure 13.0 (SOP13). SOP13 is not required under the final rule and is significantly impacting wolf recovery efforts and resources. We recognize that public relations is important in recovery of any species however, the application of SOP13 appears to be arbitrary and capricious even to those who support the federal and state wildlife agencies and their efforts to recover the most endangered wolf in the world.

In a number of instances, the SOP 13 removal order is not likely removing the depredating wolf—more likely, it is a nearby wolf attracted to the trap lures. This is contrary to wolf recovery and wolf biology. Such removals cause significant disruption of wolf packs resulting in pack or individual behavior that could, in fact, increase the likelihood of more wolf depredation problems. The arbitrary and capricious application of SOP13 as simply a “remove a wolf, any wolf” policy does not lend itself to supporting wolf recovery or reducing livestock depredations.

In addition, although it is commendable that the “three strikes” slate is “wiped clean” after 365 days for any wolf; this section of the SOP does not adequately address the realities of wolf biology. During pregnancy and pup rearing, wolves are under significantly more pressure to provide sustenance and the value of these wolves toward achieving demographic goals is higher. Depredations during these periods should be treated more leniently as they are not of the same import and significance as, for example, three depredations over three weeks time in the same allotment by a definitively identified lone wolf. We would offer that a sporadic depredation pattern spread over a large land area and extended time frame as packs are disrupted by other management activities resulting in pack fragmentation is also not indicative of a true problem wolf requiring lethal control or permanent removal.

It is the opinion of the SSP that it is imperative that the Adaptive Management Oversight Committee (AMOC) rescind or at least suspend SOP13 until a more scientific genetic, demographic, and wolf behavior approach is decided upon and implemented.

Every decision that the SSP has made over the years on behalf of the Mexican wolf is ultimately driven by what is best genetically and demographically for this endangered species. Therefore, we strongly urge the USFWS to immediately convene an expert taskforce on genetic issues, with a commitment that AMOC use the recommendations of the taskforce to adopt a new SOP that addresses all the pertinent genetic issues relative to the wild population. The genetics SOP should be completed and implemented as quickly as possible. This should be feasible – particularly since this was a topic of previous scientific meetings. AZA believes that this process should be completed before the initiation of wolf denning in March 2008

Distinguished scientists associated with the Mexican wolf recovery effort and the SSP, and the American Society of Mammalogists involved in population management and species recovery worldwide, have vocally supported the need for re-affirmation and application of science in the recovery of the Mexican wolf. The AZA strongly urges the USFWS to reassemble the recovery team to provide guidance or at least reassemble the independent genetics committee to provide scientific genetic and demographic goals to this reintroduced population of the most endangered wolf in the world. The AZA believes that the success of this controversial predator reintroduction program is vital to the health of the Southwest's ecosystems and the changes outlined above would greatly improve the opportunity for increased long-term viability of this small population of the endangered Mexican wolf in the United States.

Sincerely,

Steve Olson
Vice President, Government Affairs

Citations referred to in this request:

Fredrickson, R.J., P. Siminski, M. Woolf and P.W. Hedrick . 2007. Genetic rescue and inbreeding depression in Mexican wolves. *Proc. R. Soc. B.* 274:2365-2371. (doi:1098/rspb.2007.0785)

García-Moreno, J., M.D. Matocq, M.S. Roy, E. Geffen, and R.K. Wayne. 1996. Relationships and genetic purity of the endangered Mexican wolf based on analysis of microsatellite loci. *Conservation Biology* 10:376-389

Hedrick, P.W. and R.J. Fredrickson. 2007. Captive breeding and the reintroduction of Mexican and red wolves. *Molecular Ecology* (2007) doi:10.1111/j.1365-294X.2007.03400.x

Hedrick, P.W., P.S. Miller, E. Geffen and R. Wayne. 1997. Genetic evaluation of the three captive Mexican wolf lineages. *Zoo Biology* 16:47-69. (doi:10.1002/(SICI) 1098-2361(1997)16:1<47::AID-ZOO7>3.0.CO;2-B)