October 4, 2010

Via Federal eRulemaking Portal:
http://www.regulations.gov
docket FWS-R2-ES-2010-0045

Dear Sir or Madam,

This is to comment on the Fish and Wildlife Service's 90-day *warranted* finding on reclassifying the Mexican gray wolf (*Canis lupus baileyi*) as an endangered subspecies, separate from other threatened and endangered gray wolves, as requested in the Center for Biological Diversity's petition of August 11, 2009.

In response to our petition and a related one filed by WildEarth Guardians and the Rewilding Institute, the Fish and Wildlife Service (the Service) acknowledges the Mexican wolf's status as a subspecies, acknowledges that there is substantial information that it may qualify to be placed on the endangered species list as a subspecies and as a distinct population segment, and requests additional information that would, in part, address how *significant* are the threats to the Mexican wolf's survival, and how *substantial* and *operative* they are:

> In considering what factors might constitute threats, we must look beyond the exposure of the species to a factor to evaluate whether the species may respond to the factor in a way that causes actual impacts to the species. If there is exposure to a factor and the species responds negatively, the factor may be a threat and, during the subsequent status review, we attempt to determine how significant a threat it is. The threat is significant, if it drives, or contributes to, the risk of extinction of the species such that the species may warrant listing as threatened or endangered as those terms are defined in the Act. However, the identification of factors that could impact a species negatively may not be sufficient to compel a finding that the information in the petition and our files is substantial. The information must include evidence sufficient to suggest that these factors may be operative threats that act on the species to the point that the species may meet the definition of threatened or endangered under the Act. (Federal Register vol. 75, no. 149, p 46896)

The present comments provide newly available or compiled information since the August 11, 2009 submission of our petition, bolstering the petition's already substantive case that the threats to the Mexican wolf's survival are operative and contribute to its risk of extinction, and thus that the threats are substantial and sufficiently significant to merit placement of the Mexican wolf on the endangered species list as its own entity – either as a subspecies or as a distinct population segment (DPS). Our comments include reference to the Service's newly released Mexican wolf conservation assessment (2010), to demonstrate that the plight of the Mexican wolf is worsening due in large part to its listing at the species level and not at the subspecies or DPS level, and the concomitant absence of a valid recovery plan for the Mexican wolf.

During the preceding 14 months since submission of our petition, the Service has identified another numeric decline in the Mexican wolf's sole wild population. The January 2009 Mexican wolf interagency field team population survey identified 52 wolves including two breeding pairs. The January 2010 count identified 42 wolves including two breeding pairs – a nineteen percent fall. This represents the fourth straight year of declining wolf numbers, except for one year, 2008, in which the numbers stayed the same at 52.

In May 2010, the Fish and Wildlife Service released a conservation assessment of the Mexican wolf, constituting a new summary of data and analysis. The conservation assessment includes this statement concerning the resiliency of the wild population:

> Qualitatively, the population faces significant, although unquantified, extinction risk from demographic stochasticity due to the sheer fact that the population numbers only 42 wolves. The captive population, while critical to the reintroduction, is not intended to serve as a safety net for extirpation of the Blue Range population. The ability of the population to increase rapidly in size and outgrow this susceptibility is constrained by several factors, including the low reproductive and/or recruitment rate and high levels of mortality and removal (p. 67).

As noted in our petition, the low reproductive and/or recruitment rate has been linked to inbreeding depression identified in the wild population. The window of time to meaningfully ameliorate this condition ranged in 2007 from two to four wolf generations:

> Based on the immediate fitness concerns related to inbreeding depression documented in the Blue Range population, as well as in support of maintaining the long-term adaptive potential of the Mexican wolf, it has been recommended that Ghost Ranch and Aragon ancestry be increased above 10 percent to as much as 25 percent by releasing more wolves with Ghost Ranch and Aragon ancestry to the Blue Range population while the population is still small, as the addition of just a few wolves into a small population will more significantly alter the ancestry represented than would those few releases into a large population (Fredrickson et al. 2007). The representation of the three lineages as of July 25, 2008, was 77.39 percent McBride, 8.43 percent Aragon, and 14.19 percent Ghost Ranch (Siminski and Spevak 2007). Rapid expansion of the population after these releases would further promote maintenance of genetic diversity (Fredrickson et al. 2007). Thus, documentation of the effect of inbreeding depression on litter size demonstrates that inbreeding has the potential to threaten, or at least hinder, the Blue Range population by negatively affecting the growth rate of the population. That is, the release of cross-lineage wolves has the potential to increase the fitness, growth rate, and genetic variation of the Blue Range population (Fredrickson et al. 2007). Results from the captive population, however, suggest that the fitness increase observed among F1 wolves [cross-lineage wolves] wolves may be largely lost in two to four generations. (p. 60)

Since wolves typically reach sexual maturity at age two, two wolf generations from 2007 could be occur as early as 2011. Four wolf generations might extend till 2015. Despite these looming biological deadlines, there have been just two wolves *initially released* (that is, released from the

captive breeding pool and not previously in the wild), since 2007 and no population expansion, even as F1 wolves in captivity will imminently exhaust their period of enhanced genetic fitness that is so consequential to the ability of the wild population to increase its numbers and avoid extirpation.

Furthermore:

> The ability of management to address inbreeding depression in the Blue Range population is constrained by regulatory and discretionary management mechanisms that do not incorporate consideration of genetic issues yet result in limitation or alteration of the genetic diversity of the population. For example, initial releases of cross-lineage wolves may be constrained by lack of space (i.e., unoccupied territories) in the Primary Recovery Zone, and the high removal rate of wolves due to boundary violations results in an ever-changing degree of representation of the three lineages. The AZA Mexican Wolf SSP has recommended that until the representation of the Ghost Ranch and Aragon lineages has increased and demographic stability is achieved in the wild population, careful consideration of genetic diversity should be prioritized during decisions to permanently remove wolves (AZA 2008a). The Service has not developed any specific protocols to promote genetic fitness in the population in response to recent research and professional recommendations. However, it has recognized the importance of genetic considerations into management actions. (p. 60)

The regulatory and discretionary management mechanisms that undermine the ability of the Service to address inbreeding depression are issues that were examined and addressed in the 3- and 5-year reviews of the Mexican wolf. For example, the Three-Year Review (Paquet et al 2001) recommended: "Immediately modify the final rule (Parsons 1998) and develop the authority to conduct initial releases into the Gila National Forest" (p. 66). And it recommended: "Immediately modify the final rule to allow wolves that are not management problems to establish territories outside the Blue Range Wolf Recovery Area" (p. 66). Nevertheless, the Service has delayed modifying the final rule in the intervening nine years, despite a 2004 petition by the Center calling for these changes, and despite a 2006 Center lawsuit seeking a response to the petition, that was mooted in 2007 when the Service initiated a scoping process for the rule-change. Even the scoping process, which concluded in January 2008, has not resulted in an EIS and proposed rule.

Issuance of an EIS and proposed rule is now on hold until progress is re-initiated on developing a new recovery plan for the Mexican wolf. Yet this process too is on hold. A draft Mexican wolf recovery plan to replace the inadequate and legally deficient 1982 Mexican wolf recovery plan was completed in 1995, but never finalized by the Service. Expeditious progress had been made on another draft in 2005, when the Service suspended meetings of the recovery team and thereby aborted that progress. No new recovery team has yet been appointed.

The Service has repeatedly stated that the 2005 federal district court ruling that overturned its 2003 national gray wolf reclassification rule and thereby invalidated the southwest gray wolf distinct population segment, precluded its ability to proceed with recovery planning for the Mexican wolf. This dubious rationale, however, suggests that only through returning the

Mexican wolf to its 1976 to 1978 status listed as a subspecies, or listing it as a DPS, may the Service finalize a new recovery plan.

Thus, to recap, the ability of the Service to meaningfully address just one of the grave threats to the Mexican wolf's survival, low birth and pup survival rates caused by inbreeding depression, hinges on a rule-change process that has been delayed for over nine years, and is now further delayed to ensure its harmony with an anticipated recovery plan. However, that recovery plan has been delayed for fifteen years, and may never be completed and finalized unless the Mexican wolf is listed as a separate subspecies or DPS.

The sequence above demonstrating bureaucratic paralysis under the present conterminous-states gray wolf listing rule (the 1978 rule), shows how the failure to list the Mexican wolf separately operates to the significant detriment of the sole wild population, which is declining toward extirpation. But that population is essential to the Mexican wolf's recovery: "The captive population, while critical to the reintroduction, is not intended to serve as a safety net for extirpation of the Blue Range population" (conservation assessment, p. 67). And as discussed in our petition and as acknowledged in the conservation assessment, the captive population is also undergoing genetic deterioration.

Another new factor in shaping the Mexican wolf's fate illustrates how a species-level listing for gray wolves may benefit the more numerous northern wolves but imperil Mexican wolves. The August 2010 ruling by the Federal district court in Montana for the Center and our allies in opposing the Service's delisting of the northern Rocky Mountain wolf population, will enable these wolves to continue to grow in numbers and range. Northern Rocky Mountain wolves have expanded their range southward in recent years, and have been reported in Colorado and even in northern New Mexico.

While this range expansion bodes well for re-establishing a population of wolves in the southern Rocky Mountains, the order-of-magnitude disparity in size of the northern wolf population, at approximately 1,600 animals, compared to the Mexican wolf population at fewer than 50 animals, suggests that northern wolves may displace the Mexican wolf and undermine the subspecies' uniqueness. This could occur either through interbreeding and resulting genetic swamping of the Mexican wolf, or through intraspecific aggression between the two subspecies occasioned by territorial disputes, resulting in direct mortality of the smaller Mexican wolves.

While intergradation of wolf subspecies or clades occurred historically, and may be necessary for long term conservation of the Mexican wolf and northern wolves, in the shorter term, arrival of northern wolves in the range of the Mexican wolf would clearly threaten the Mexican wolf's subspecific integrity. For intergradation to best mimic the original cline in gray wolf types, and to contribute to conservation of the Mexican wolf subspecies, a population of the Mexican wolf must become established in a region sufficiently far south so as to be buffered by Mexican wolves further north; the more northern Mexican wolves would interbreed with northern wolves, creating a zone of intergradation somewhat separate from the Mexican wolf's southernmost redoubt. This would ensure that the adaptive benefits of the Mexican wolf genome in a southern landscape can persist through natural selection even with mediated introgression of northern wolves' genes. Yet, with just one small Mexican wolf population on the ground presently, even if only five or ten northern wolves appear on the landscape in the next few years,

they would significantly water down the Mexican wolf's genetic uniqueness. But before establishing additional populations, the Service insists on developing and finalizing a new Mexican wolf recovery plan – which, as noted, it will only do under a new listing rule. (The 1982 Mexican wolf recovery plan calls for establishing two viable Mexican wolf populations in the wild, but the Service does not adhere to that plan because of its lack of delisting criteria – hence the absence of even a single viable population in the wild.)

Finally, it is worth noting that study newly released this year confirms that with so few wolves, the population is not yet able to substantially effect its ecosystem. Thus, the Endangered Species Act first statement of purpose, to conserve the ecosystems on which threatened and endangered species depend, is being frustrated through the Mexican wolf's rarity. The study is by Robert L. Beschta and William J. Ripple, "Mexican wolves, elk, and aspen in Arizona: Is there a trophic cascade?" Forest Ecology and Management 260 (2010) 915–922. Its findings include: "The low number of Mexican wolves relative to their primary prey (elk) suggests that an ecologically effective density of wolves has not become established in east-central Arizona. Furthermore, the lack of recent aspen recruitment in stands accessible to elk indicates an absence, to date, of a tri-trophic cascade."

In light of the aforementioned analyses and our petition, your status review must find that listing the Mexican gray wolf as a subspecies or as a DPS are both warranted actions. In light of the perilous plight faced by the Mexican wolf, the Service should issue such a finding and follow it with issuance of a proposed subspecies or DPS listing rule, as expeditiously as possible.

Thank you for your consideration.

Sincerely,

Michael J. Robinson
Conservation Advocate