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Via Federal eRulemaking Portal
Public Comments
Attn: FWS–R2–ES–2013–0056
Division of Policy and Directives Management
U.S. Fish and Wildlife Service
4401 N. Fairfax Drive
MS 2042–PDM
Arlington, VA 22203

I. INTRODUCTION

Please accept the following comments on behalf of the Center for Biological Diversity in response to the U.S. Fish and Wildlife's Service's ("Service") proposed rule: *Endangered and Threatened Wildlife and Plants; Proposed Revision to the Nonessential Experimental Population of the Mexican Wolf*, 78 Fed. Reg. 35,719 (June 13, 2013) (hereinafter (Proposed Revision").[1]

The Proposed Revision is in response to the Center's rulemaking petition, which nearly a decade ago requested revisions to the 1998 rule ("1998 10(j) Rule") for the Mexican gray wolf (*Canis lupus baileyi*) ("Mexican wolf") under the Administrative Procedure Act.[2] Although the Service initiated this rulemaking and conducted scoping in response to the Petition in 2007, the process lay dormant until earlier this year, when the Service settled the Center's challenge to this delay; the settlement agreement requires the Service to complete the rulemaking by January 12, 2015.[3] The Proposed Revision is a long time in coming.

To comply with the APA and Endangered Species Act and to further Mexican wolf survival *and* recovery, the Service must improve the Proposed Revision in several respects.[4] It must assess whether the Mexican wolf population is "essential" to the species' continued existence, an

[1] The Center for Biological Diversity ("Center") is a non-profit environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has more than 625,000 members and online activists dedicated to the protection and restoration of endangered species and wild places. The Center has worked for many years to protect imperiled plants and wildlife, including the Mexican gray wolf, as well as open space, air and water quality, and overall quality of life. We appreciate the opportunity to provide comment.

[2] 5 U.S.C. § 553(e) ("APA"); Center for Biological Diversity, PETITION FOR RULEMAKING (Mar. 29, 2004)) ("Petition"); 63 Fed. Reg. 1752 (Jan. 12, 1998); 50 C.F.R. § 17.84(k) ("10(j) rule"); 16 U.S.C. § 1539(j).

[3] *See Ctr. for Biological Diversity v. Jewell et al.*, Civ. No. 12-1920 (RCL) (Docket Number 22) ("Settlement").

[4] 16 U.S.C. §§ 1531-1544 ("ESA").

assertion that cannot seriously be questioned. Short of this, the Service must revise the proposal as described herein. With the following improvements to the 10(j) Rule, Mexican wolves have the potential to withstand ongoing threats, recover, and become viable in the wild once again.

II. BACKGROUND

Before outlining the required improvements to the Proposed Revision, an overview of the relevant factual background is necessary. Hence, below is a discussion of the 1998 10(j) Rule, reintroduction and recovery program, and ongoing threats. This highly-pertinent factual context is lacking in the Service's preamble to the Proposed Revision, which is a glaring oversight, particularly when considering that the facts below comprise some of the best available information about Mexican wolf reintroduction and bear squarely on the substantive proposals that are at issue in this rulemaking.

A. The Recovery Plan and Reintroduction Program

The Service's 1982 recovery plan for the Mexican wolf called for reintroduction of Mexican wolves to areas of their historic range.[5] At that time, "the status of the Mexican wolf was so dire that the recovery team could not foresee full recovery and eventual delisting."[6] Thus, to stabilize the Mexican wolf, the Recovery Plan set a "prime objective" of "maintaining a captive breeding program and reestablishing a viable, self-sustaining population of at least 100 Mexican wolves" by 2005, "in the middle to high elevations of a 5,000-square-mi area (12,950-square-km) within the Mexican wolf's historic range," in order to "ensure the immediate survival" of the Mexican wolf.[7] However, the Service did not begin to implement this objective until 1993, over a decade later, and only then pursuant to a settlement of a lawsuit filed by conservation organizations in 1990. In a stipulation dismissing that lawsuit, the Service finally agreed to implement the Recovery Plan and to reintroduce the Mexican wolf into the wild as "expeditiously as possible."[8]

Five years later – and 16 years after the 1982 Recovery Plan first identified reintroduction as a prime objective for the Mexican wolf's "immediate survival" – and from a source population of only seven remaining Mexican wolves, the Service finally issued the 1998 10(j) Rule and reintroduced Mexican wolves to the BRWRA. The Service issued a final environmental impact

[5] U.S. Fish and Wildlife Service, MEXICAN WOLF RECOVERY PLAN (1982) [hereinafter "1982 Recovery Plan"].

[6] 78 Fed. Reg. 35,719, 35,726 (June 13, 2013) (citing 1982 Recovery Plan at 23).

[7] *Id*. (citing 1982 Recovery Plan at 23).

[8] *Wolf Action Group et al. v. United States et al.*, Civ. No. 90-0390, stip. (D.N.M. May 21, 1993).

statement in 1996 to guide the reintroduction.[9] Like the Recovery Plan 14 years before it, the 1996 FEIS recognized the critical importance of reintroduction to Mexican wolf survival.

The 1998 Rule has governed the Mexican wolf reintroduction program for 15 years. It denominates the Blue Range Wolf Recovery Area ("BRWRA"), including a primary recovery zone in Arizona to be used during the initial reintroduction period, and a larger, adjoining secondary recovery zone in Arizona and New Mexico. The rule provides that "the Service will evaluate Mexican wolf reintroduction progress and prepare ... full evaluations after 3 and 5 years that recommend continuation, modification, or termination of the reintroduction effort."[10] The Service also designated the reintroduced wolves as "non-essential" (rather than "essential") to the Mexican wolf's continued existence, declining to consider whether the population should be designated as "essential" instead.[11]

The 1998 10(j) Rule also designated the White Sands Wolf Recovery Area as a back-up reintroduction area, and authorized release of wolves in that recovery area's primary zone if necessary for recovery and feasible.[12] However, no Mexican wolves have yet been reintroduced to the White Sands Wolf Recovery Area.

The hallmark of the 30-year-old Mexican Wolf reintroduction program pursuant to the 1998 10(j) Rule has been marked by the Service's perpetual delay in completing key aspects of the program in a timely fashion and its failure to address threats. For instance, in a 2001 "Three-Year Review" of the reintroduction, as required under the 1998 10(j) Rule, Mexican wolf experts recommended its continuation, but with three specified, immediate modifications – two of which were to be implemented "immediately" but which the Service is only now finally proposing to adopt through the Proposed Revision.[13]

Thus, the Three-Year Review advised the Service to "immediately" amend the 1998 10(j) Rule: (1) to provide authority to release Mexican wolves into the Gila National Forest, which comprises the bulk of the secondary recovery zone of the BRWRA; and (2) to allow wolves that

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[9] U.S. Department of the Interior, U.S. Fish and Wildlife Service, FINAL ENVIRONMENTAL IMPACT STATEMENT: REINTRODUCTION OF THE MEXICAN WOLF WITHIN ITS HISTORIC RANGE IN THE SOUTHWESTERN UNITED STATES (Nov. 1996) ("1996 FEIS").

[10] *Id*. § 17.84(k)(13).

[11] 16 U.S.C. § 1539(j)(2)(B) ("Before authorizing the release of any population under subparagraph (A), the Secretary shall by regulation identify the population and determine, on the basis of the best available information, whether or not such population is essential to the continued existence of an endangered species or a threatened species.").

[12] *Id*. § 17.84(k)(9)(ii).

[13] 50 C.F.R. § 17.84(k)(13); Paquet, P.C., Vucetich, J.A., Phillips, M.K. & Vucetich, L.M., 2001, Mexican Wolf Recovery: Three-Year Program Review and Assessment, *Prepared by the Conservation Breeding Specialist Group (CBSG), Apple Valley, Minnesota; for the United States Fish and Wildlife Service, Albuquerque, New Mexico* [hereinafter "Three-Year Review"]; 63 Fed. Reg. at 1770 (describing BRWRA).

are not management problems to establish territories outside the BRWRA. It also advised the Service to require livestock operators using public lands to remove or dispose of the carcasses of non-wolf-killed stock, in order to reduce the likelihood that wolves become habituated to feeding on livestock.[4]

Consistent with these recommendations, the Center's 2004 Petition requested revisions: (1) to allow the Service to release Mexican wolves into the secondary recovery zone; (2) to allow the Service to permit wolves to establish territories outside the boundaries of the Blue Range Wolf Recovery Area ("BRWRA"); and (3) to define "nuisance" and "problem" wolves to exclude animals that scavenge on the carcasses of livestock that die from non-wolf causes.[14]

Two of these recommendations were underscored by the Five-Year Review, which was completed in 2005 by the Mexican Wolf Adaptive Management Oversight Committee ("AMOC"), also in accordance with the 10(j) rule.[15] Like the Three-Year Review and the Center's Petition, the Five-Year review also recommended continuation of the reintroduction program subject to modifications to allow wolves to roam outside of the Recovery Area, and to combine the primary and secondary recovery zones so that the Service would have authority to reintroduce wolves to New Mexico.[16]

In response to the Center's 2004 Petition and 2006 litigation, the Service initiated this rulemaking in 2007. But after it initially conducted a scoping period in 2007, the Service allowed the rulemaking to lay dormant for another six years. Hence, the Proposed Revision represent the only subsequent action by the Service taken to date to revise the 1998 Rule and adopt these recommended changes.

Meanwhile, in the early 1990s and again in 2003 and 2009, the Service began processes to revise the 1982 Recovery Plan. The recovery plan revision process has progressed very slowly ever since.[17] In 2011, a Service-assembled team of scientists known as the Science and Planning

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[14] Petition at 4.

[15] AMOC, MEXICAN WOLF BLUE RANGE REINTRODUCTION PROJECT 5-YEAR REVIEW (Dec. 31, 2005) ("Five-Year Review"). AMOC consists of representatives from FWS and the Arizona Game and Fish Department, New Mexico Department of Game and Fish, U.S. Forest Service, Wildlife Services (an agency within the U.S. Department of Agriculture), and White Mountain Apache Tribe

[16] *See* Arizona Game and Fish Department and New Mexico Department of Game and Fish, ARIZONA-NEW MEXICO REVIEW OF THE U.S. FISH AND WILDLIFE SERVICE'S 3-YEAR REVIEW OF THE MEXICAN WOLF REINTRODUCTION PROJECT (Sep. 30, 2002) at 4. These findings were also supported by an independent analysis that was conducted by the Arizona Game and Fish Department and the New Mexico Department of Game and Fish. The Five-Year Review attempted but did not repudiate the third recommendation – *i.e.*, that the Service revise the 1998 10(j) Rule to require livestock operators to remove carcasses from public lands and dispose of them in order to reduce the possibility that wolves become habituated to feeding on livestock.

[17] In 2007, the American Society of Mammalogists passed a resolution requesting that FWS expedite the process of revising the Mexican wolf recovery plan to ensure the recovery and sustainability of populations. In 2008, the

Subgroup developed a draft revised recovery plan for the Mexican wolf. However, likely because it contains strong measures for Mexican wolf conservation, the Service has halted meetings of the larger recovery team, and the recovery plan revision process itself.[18] The draft revised recovery plan gathers dust at the Service's Ecological Services Office in Albuquerque, while the Director claims that the recovery planning process is ongoing.[19] In short, the Service has capitulated to political considerations, undermining scientific integrity and conservation, and bringing the crucial Mexican wolf recovery planning process to a standstill.

As warned 13 years ago in the Three-Year Review, the very survival of the Mexican wolf is at stake, but a severe situation has only worsened into a crisis since then.[20] The number of Mexican wolves and breeding pairs that are in the wild today remain far below projections or the *minimum* – 100 wolves – that is considered necessary for survival of the species. Under the reintroduction program, Mexican wolves should have reached 100 in number by 2006, but as of January 2013 there were only 74 wolves.[21] As valuable genetic material is lost, the situation becomes urgent.[22]

Center and allies petitioned the Service under the APA to release a final, revised recovery plan, but the Service refused to do so. The Service's failure to respond to our petition risks a legal challenge for unreasonable delay.

[18] *See* U.S. Fish and Wildlife Service, DRAFT MEXICAN WOLF REVISED RECOVERY PLAN (Sep. 16, 2011) [hereinafter "Draft Revised Recovery Plan"]. In 2012, Public Employees for Environmental Responsibility ("PEER"), filed a complaint of scientific and scholarly misconduct and released documents showing how the science-based recovery criteria in the revised recovery plan is being undermined by improper political interference by the Service and State wildlife agencies in Utah and Arizona.

[19] Letter from Dan Ashe, U.S. Fish and Wildlife Service to Michael A. Mares, Ph.D., American Society of Mammalogists (July 27, 2012).

[20] Three-Year Review at 27 ("[s]urvival and recruitment rates [for Mexican wolves] are far too low to ensure population growth or persistence" and "[w]ithout dramatic improvement in these vital rates, the wolf population will fall short of predictions for upcoming years"); *see also* U.S. Fish and Wildlife Service, MEXICAN WOLF CONSERVATION ASSESSMENT (June 2010) at 62 ("The Blue Range population is at risk of failure due to the cumulative effect of identified threats.").

[21] Center for Biological Diversity, *Chart of Mexican Population Figures and Estimates* (Dec. 17, 2013).

[22] *See* Fredrickson, R.J., Siminski, P., Woolf, M. & Hedrick, P.W., 2007, Genetic rescue and inbreeding depression in Mexican wolves, *Proceedings of The Royal Society B*, v. 274, p. 2365 [hereinafter "Fredrickson *et al*. (2007)"]; Asa, C., Miller, P., Agnew, M., Rebolledo, J.A.R., Lindsey, S.L., Callahan, M. & Bauman, K., 2007, Relationship of inbreeding to sperm quality and reproductive success in Mexican Gray wolves (*Canis lupus baileyi*), *Animal Conservation*, v. 10, p. 326. Fredrickson *et al*. (2007) wrote: "Thus far, the wild population has produced smaller pack and litter sizes than other grey wolf populations in North America, despite abundant prey in the reintroduction area" and that this may result largely from a "high fixed genetic load," "few cross-lineage wolves" being introduced largely due to high rates of human-caused mortality and removals for management reasons." Hedrick and Fredrickson (2010) lamented that "mainly because of non-scientific considerations, further releases were greatly reduced in the 4-year period 2005–2008 to only a total of five wolves. At this point, both the reintroduced population and the program of genetic rescue are presently at great risk because of the low growth rate of the wild population." Hedrick, P.W. & Fredrickson, R., 2010, Genetic rescue guidelines with examples from Mexican wolves and Florida panthers, *Conservation Genetics*, v. 11, p. 615. Hedrick and Fredrickson (2010) also warned that "there may not be a second chance for genetic rescue here because none of [the] lineages are still maintained separately in captivity." *Id*. Thus:

At the current rate, there will be only 122 Mexican wolves in the wild in 2022 – a population number that, according to the 1996 FEIS, should have been reached by now.[23] This dire situation is "due to the current regulatory structure of the reintroduction program, an out-of-date recovery plan, illegal shooting of individual wolves" – including illegal shootings as well as shootings at the hands of agency personnel working under the auspices of the Recovery Program – and "the effects of continued inbreeding[,]" *e.g.*, small litter sizes and low pup-survival rates.[24]

> Although semen was collected from one Aragon and six Ghost Ranch wolves from 1996 to 2000, the efficacy of artificial insemination using frozen semen from strongly inbred wolves is uncertain. It was assumed that the increase in fitness from lineage crossing would be used expeditiously to enhance the numbers of wild wolves and that a second round of crosses would not be necessary. However, mainly because of non-scientific reasons, the cross-linage wolves were not incorporated into the reintroduced population in a timely manner and this opportunity may have been lost. If the reintroduced population does not increase soon, it may be necessary to consider extraordinary measures, such as introducing northern gray wolves, a closely related subspecies (Leonard et al. 2005), into the reintroduced Mexican wolf population.

Id. As Wayne & Hedrick (2011) observed:

> Although genetic considerations are important in the recovery of the reintroduced Mexican wolf, some management policies and actions have had quite detrimental effects on the reintroduced population. First, the reintroduced population is limited in range and individuals that leave the recovery area are generally caught or killed. Second, initial releases of captive wolves with no previous wild experience is limited to a small area in Arizona and not permitted in New Mexico, which contains some of the best wolf habitat. The cumulative effects of wolf removals primarily because of boundary issues and livestock depredations, caused the overall removal/mortality rate (64%) to exceed that predicted (47%) for the reintroduced population in the first 5 years. For the [Blue Range population] to compensate for the high mortality, the recruitment rate needs to be quite high. Because there have been few new introductions recently, in combination with the low fitness of some of the alpha wolves from a single lineage, persistence of the reintroduced population is in question.
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> …
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> The negative impacts on the population from the moratorium that was placed on reintroductions and the large-scale removals during the period from 2005 to 2009 shows a critical need for scientifically based management.

Wayne, R. & Hedrick, P., 2011, Genetics and wolf conservation in the American West: lessons and challenges, *Heredity*, v. 107, p. 16.

[23] Carroll, C., Fredrickson, R.J. & Lacy, R.C., 2013, Developing metapopulation connectivity criteria from genetic and habitat data to recover the endangered Mexican wolf, *Conservation Biology*, v. 00(0), p. 1 [hereinafter "Carroll *et al*. (2013)"]. Attached to these comments are two charts; one chart compares the 1996 FEIS's population estimates of the Mexican wolf to estimates of the numbers of breeding pairs of Mexican wolves from 1998 through the present, and the other chart lists the 33 Mexican wolves that have been killed by federal agency employees. *See* Center for Biological Diversity, *Chart of Mexican Population Figures and Estimates* (Dec. 17, 2013); Center for Biological Diversity, *Chart of Mexican Wolves Killed by Government* (Dec. 17, 2013).

[24] Letter from American Society of Mammalogists, Society for Conservation Biology & Society for Ecological Restoration to Dan Ashe, Fish and Wildlife Service (June 20, 2012) at 2.

The prospects for Mexican wolf recovery now depend not only on revisions to the 10(j) Rule consistent with Three-Year Review and other experts, but also on the science-based establishment of linkages to wolf habitat throughout the western United States – twin aims that under current leadership, the Service appears to lack the political will and leadership to achieve.

In summary, the hallmark of the Mexican Wolf reintroduction program has been perpetual delay and resistance by the Service in implementing key revisions to the program in a timely fashion. We recommend that you complete the recovery plan revision process as expeditiously as possible, and concurrently finalize revisions to the 10(j) Rule as explained below.

III. COMMENTS

A. GENERAL COMMENTS

1. The Service Must Treat the Public Process under the APA and NEPA with Integrity, and May Not Preordain the Outcome

The Service must ensure the integrity of the rulemaking process, but there is evidence that the Service has already conclusively determined – and assured the Arizona Game and Fish Department, and maybe others – that it will finalize revisions to the 10(j) Rule that would require it to capture wolves that disperse from the MWEPA. In an August letter, Arizona Game and Fish Department thanked Service Director Dan Ashe for reassuring him that the final 10(j) Rule revisions will require FWS to capture wolves dispersing from the MWEPA.[25]

There are many important reasons why it would be improper to finalize a rule that required capture of wolves that disperse from the MWEPA. Such a preordained outcome is based on political considerations rather than the best available science, in contravention of the APA, NEPA, and the ESA. But it is entirely inappropriate – and contrary to fundamental principles of notice and comment – for Service officials to make political promises regarding the content of the final revisions to the 10(j) Rule, without first considering the reasons for not including that particular provision. In light of incontrovertible evidence that the Service has inappropriately committed to final outcomes during this process in order to appease political interests, any final revision which specifies that specifies that Mexican wolves that disperse outside of the MWEPA will be mandatorily captured and returned to the MWEPA will be fatally flawed.

2. The Service Should Refer to the Species by the Correct Common Name, which is "Mexican Gray Wolf"

The final rule should acknowledge the full name of the subspecies under discussion: Mexican gray wolf (*Canis lupus baileyi*). The Proposed Revision uses the term "Mexican wolf" throughout. While this abbreviated nomenclature is acceptable after the first written usage and

[25] *See* Letter from Larry Voyles, Arizona Game and Fish Department to Dan Ashe, U.S. Fish and Wildlife Service (Aug. 1, 2013).

in colloquial writing and speech, taxonomic and genetic studies have documented that the Mexican gray wolf is a subspecies of gray wolf and regulatory documents should reflect this.

3. The Service Should Decouple Mexican Wolf Reclassification and 10(j) Revisions from the National Process Regarding The Gray Wolf

For a multitude of reasons that are explained in comments also being filed today, the Center opposes national gray wolf delisting. As we requested in a 2009 ESA listing petition, the Center does support reclassification of Mexican wolf as a subspecies. However, irrespective of any timeline for highly-flawed and controversial proposed delisting of gray wolf, the long-overdue 10(j) revisions and development and implementation of recovery plan should be decoupled from the gray wolf status review. There is no requirement for maintaining them on the same track, and doing so unnecessarily holds up progress on Mexican wolf recovery.

4. The Proposed Revision Does No Accurately Describe the 1998 10(j) Rule's Required Management Response to Wolves who Disperse Outside the BRWRA and Into the MWEPA.

The 1998 10(j) Rule only requires removal of wolves that establish territories wholly outside the recovery area boundaries, not merely wolves that leave the recovery area.

B. GENERAL COMMENTS ON THE PROPOSED REVISION

1. The Proposal Fails to Further Mexican Wolf Conservation.

The ESA's purpose is conservation, which consists of both survival and recovery. The proposal must conform to the best available scientific and commercial information and must be consistent with the factual record.[26] As explained below, the Proposed Revision fails to meet the conservation standard or to adhere to the "best science" standard or the factual record. Generally, the Proposed Revision is an attempt to "re-boot" the 1998 10(j) Rule, but conservation demands more than that now. Specifics are set forth below.

2. The Proposal Fails to Incorporate the Three-Year Review's Recommendation to Require Livestock Owners Take Responsibility for Wolf Conservation by Removing and Disposing of Livestock Carcasses from Public Land.

The Proposed Revision (and the EIS that underlies it) fails to incorporate all of the recommendations from the Three-Year Review.[27] A glaring omission from the Proposed

[26] 50 C.F.R. § 17.81(c)(2) ("Any regulation promulgated under paragraph (a) of this section shall provide … [a] finding, based solely on the best scientific and commercial data available, and the supporting factual basis, on whether the experimental population is, or is not, essential to the continued existence of the species in the wild.").

[27] The objectives of the Three-Year Review stem from the following statement in the preamble to the 1998 10(j) Rule, 63 Fed. Reg. at 1754:

Revision is the Three-Year Review's recommendation that a requirement that ranchers using public lands takes some responsibility for livestock carcass disposal.

The Three-Year Review noted that livestock are "omnipresent" in the BRWRA, and advised that "[b]ecause of the extensive temporal and spatial distribution of livestock, interactions with wolves are unavoidable" and, therefore, "livestock producers using public lands can make a substantive contribution to reducing conflicts with wolves through improved husbandry and better management of carcasses.[28] Hence, the review formally recommended that "livestock operators on public land … take some responsibility for carcass management/disposal to reduce the likelihood that wolves become habituated to feeding on livestock."[29] The review noted that about two thirds of the BRWRA is permitted for grazing, and that wolf packs have been removed from the wild because they scavenged on dead livestock that had been left on national forest (public) lands.[30] Thus, because scavenging may predispose wolves to eventually prey on livestock, the Three-Year Review reasoned that this common-sense approach would "greatly facilitate coexistence between ranchers and wolves in this portion of the recovery area carcasses."[31]

The Three-Year Review is the only comprehensive review of the Mexican wolf reintroduction program conducted by outside experts, selected by a renowned scientific body, the IUCN and its Conservation Breeding Specialists Group, at the request of the Service, for their expertise in wolf biology and recovery, and population modeling. Although the Three-Year Review authors had access to less data that was available to the authors of the Five-Year Review (when measured chronologically since March 1998), the Three-Year Review's analysis and conclusions have

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> The Service and cooperating agencies will measure the success or failure of the releases by monitoring, researching, and evaluating the status of released wolves and their offspring. Using adaptive management principles, the Service and cooperating agencies will modify subsequent releases depending on what is learned from the initial releases. The agencies will prepare periodic progress reports, annual reports, and full evaluations after three and five years that will recommend continuation, modification, or termination of the reintroduction effort. The reports will also evaluate whether, and how, to use the back-up White Sands Wolf Recovery Area.

[28] Three-Year Review at 54.

[29] *Id*. at 67-68.

[30] *Id*.

[31] *Id*. While some predation on livestock is inevitable, reasonable means of reducing the frequency of occurrence will enhance wolf recovery so that is respectful of the needs and concerns of livestock producers. Consequently, livestock producers using public land in occupied Mexican wolf range should be required to exercise reasonable diligence in finding livestock that have died to either dispose of the carcass or enable the Service to do so. Such diligence will probably reduce predation on livestock, which in turn will improve the cost-effectiveness and certainty of the reintroduction project.

proven more accurate than those reached by the Five-Year Review, which was conducted by agency insiders who selected data to reach conclusions supporting their institutional biases.[32]

Animals in the genus *Canidae,* which include wolves, are well-known to seek out and eat carrion.[33] This is true for wolves.[34] Indeed, there is an abundance of evidence to support the need to prevent Mexican wolves from scavenging on livestock carcasses, including through regulation. In various circumstances, the Service, other agencies, and the scientific record all demonstrate how allowing wolves to scavenge on livestock carcasses increases the likelihood that the wolves will depredate livestock.

For example, the 1994 northern Rocky Mountain gray wolf reintroduction rule required livestock carcass disposal before wolves could be "controlled" due to livestock depredations:

> The Service and authorized agencies of the Service would use the following conditions and criteria to determine the status of problem wolves within the nonessential experimental population area:
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> . . .

[32] We incorporate by reference the Center for Biological Diversity's Sept. 19, 2013 comments on the draft preliminary environmental impact statement. Those comments demonstrate, among other examples, how missing and incorrect data, and flawed interpretation, underlay an erroneous conclusion that wolves scavenging on livestock carcasses do not pre-dispose wolves to preying on livestock.

[33] Scientists have found that abundant livestock carrion influences canine distribution. For example, in a study in Texas, resident (radio-collared) coyotes (*Canis latrans*) were found to travel as far as 12.2 km from the center of their home ranges to where dead cows were abundant, suggesting that carcass areas influenced residents over a 468-km^2 area. Transient coyotes traveled from as far as 20.5 km away, suggesting that carcass areas influenced transients over a 1,320-km^2 area. Researchers concluded that carcass areas can influence coyotes over large areas and may concentrate both resident and transient coyotes in relatively small areas, at least for short periods. Kamler, J.F., Ballard, W.B., Gilliland, R.L. & Mote, K. 2004, Coyote (*Canis latrans*) movements relative to cattle (*Bos Taurus*) carcass areas, *Western North American Naturalist*, v. 64(1), p. 53. Conversely, restricting access to attractants including carcasses has been found effective in both conservation and management of foxes. Bino, G., Dolev, A. & Yosha, D., 2010, Abrupt spatial and numerical responses of overabundant foxes to a reduction in anthropogenic resources, *Journal of Applied Ecology*, v. 47, p. 1262.

[34] A study in an area of Alberta, Canada in which, like the BRWRA and other ecoregions in the Southwest, there is extensive overlap between wolves and cattle, found that cattle carrion represented an important food source for wolves during winter, and they often made repeated visits to so-called "boneyards" where carcasses are aggregated. The researchers found this especially problematic because the provincial government requires boneyards to be a minimum of only 400 m from livestock facilities and residences, thus bringing not just wolves but other carnivores into close contact with other stock-growing activities (*e.g.*, calving). The researchers judged this proximity could exacerbate conflict between wolves and ranchers and recommended the sanitary disposal of dead livestock to prevent wolves from becoming accustomed to feeding on stock, and thus reduce the conflict between wolves and people, and enhance survival for wolves. Morehouse, A.T. & Boyce, M.S., 2011, From venison to beef: seasonal changes in wolf diet composition in a livestock grazing landscape, *Front Ecol Environ*, doi:10.1890/100172.

> (2) No evidence of artificial or intentional feeding of wolves can be present. Improperly disposed livestock carcasses located in the area of depredation will be considered attractants. On Federal lands, removal or a decision on the use of such attractants must accompany any control action. If livestock carrion or carcasses are not being used as bait for an authorized control action on Federal lands, it must be removed or otherwise disposed of so that they do not attract wolves.[35]

This language served as at least partial deterrent to the blatant baiting of wolves in the northern Rocky Mountains. The absence of that deterrent in the Mexican wolf reintroduction program has been a significant factor undermining recovery.[36]

By way of another example, the State of Oregon has instituted a rigorous requirement for its state-managed wolves, requiring the "the removal of unnatural attractants" to avoid drawing wolves, through defining "confirmed depredation(s)" as those in which the following conditions have been met:

> (a) the owner or legal occupant of the land on which a depredation occurred has removed, treated or disposed of all intentionally placed or known and reasonably accessible unnatural attractants of potential wolf-livestock conflict, such as bone or carcass piles or disposals sites; and carcass piles or disposals sites; and
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> (b) the owner or legal occupant of the land has been implementing at least one non-lethal measure that is specific to the location, type of livestock operation, time of year, and/or period of livestock production associated with the depredation.[37]

Scientific organizations have recommended livestock carcass removal as well. At the 87th annual meeting of the American Society of Mammalogists in Albuquerque in 2007, over 500 members unanimously approved a resolution condemning the Service for failing to reinforce the recommendation to require removal of carcasses, stating that it "likely will ... exacerbate conflicts with livestock owners using public lands."[38] The mammalogists called on the Service

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[35] 59 Fed Reg. _____ (Nov. 22, 1994).

[36] To be clear, however, we request proactive and enforceable language in contrast to that in the 1994 northern Rocky Mountain wolf reintroduction rule, above, which we cite simply as an example that the Service both has the authority and has recognized and acted on the necessity in the past of addressing wolves' scavenging on livestock carcasses.

[37] Oregon Department of Fish and Wildlife, OREGON WOLF CONSERVATION AND MANAGEMENT PLAN (Updated) (Oct. 2010). Upon determining that the above requirements have been met, ODFW may implement lethal take authority on or before November 15, 2013, provided that there have been 4 qualifying depredations within the previous 6 months by the same wolf or wolves. *Id*.

[38] American Society of Mammalogists, 2007, Reintroduction and conservation of the Mexican gray wolf,

"to protect wolves from the consequences of scavenging on livestock carcasses."[39] Likewise, in 2010 the Society for Conservation Biology requested the Service to implement the Three-Year Review's recommendation to require livestock operators on public land to improve carcass management."[40]

The factual record for Mexican wolves further underscores why this common-sense recommendation is necessary. Indeed, the first Mexican wolf who was deliberately killed by the federal government since reintroduction, F592, had scavenged on a non-wolf-killed cow on private land in March 2001 prior to beginning to depredate. After capture and then re-release two years later, the wolf ended up traversing dozens of miles from her release location in the Gila Wilderness, to hunt the livestock on an adjoining grazing allotment in the northern Black Range of the Gila National Forest, very close to where F592 was first documented scavenging on private land two years previously. This is where the Service shot and killed her in May 2003. The sequence illustrates how scavenging and depredating are strongly tied together.

A look at the additional instances of individual Mexican wolves and the consequences of livestock carrion for their survival also demonstrates the critical importance of preventing wolves from scavenging on the carcasses of dead livestock. The following records from agency files were obtained via the Freedom of Information Act ("FOIA") for scavenging incidents and show that most instances the scavenging preceded subsequent depredations:

Wolf ID / Pack	**Scavenging**	**Record ID / date**
531/Hawks Nest	9/1998	D. Parsons email (9/26/1998)
Aspen alpha pair	2/15/2005 approx.	J. Morgart email (2/22/2005)
863	1/29/2007	J. Oakleaf email (1/31/2007)
Iris/798	12/31/2004	J. Oakleaf email (1/3/2005)
859	4/25/2005	J. Oakleaf email (4/27/2005)
729, 799/Ring Pack	4/25/2005	J. Oakleaf email (4/27/2005)

Journal of Mammalogy, v. 88(6), p. 1573. Note that over two years after sending this resolution the mammalogists still had not received a reply from the Service.

[39] *Id*. Letter from Suzanne B. McLaren, American Society of Mammalogists, to Rowan Gould, U.S. Fish and Wildlife (Aug. 13, 2009).

[40] Letter from Dominick A. DellaSala & John M. Fitzgerald, Society for Conservation Biology to Secretary Ken Salazar, U.S. Department of the Interior and U.S. Fish and Wildlife Service (Nov. 23, 2010). The SCB letter noted that the Three-Year Review's recommendations, "although almost a decade old, remain highly relevant to developing an effective recovery strategy for the subspecies, and illustrate how much time has passed without necessary corrective steps being taken." *Id*.

Wolf ID / Pack	**Scavenging**	**Record ID / date**
"91% (20 out of 22) of wolves involved in scavenging [sic] incidents [even]tually killed livestock."	N/A	J. Oakleaf email (9/27/2005)
1008	2/27/2006	J. Oakleaf email (2/26/2006)
1008	3/26/2006	J. Oakleaf email (3/27/2006)
859	Jan. 2006	J. Oakleaf email (4/25/2006)
Luna	1/7/2006	J. Oakleaf email (1/13/2006)
Nantac	5/2006	Monthly update (5/6/2006)

As extensive as they are, these records undoubtedly represent a fraction of the actual occurrences.

The Three-Year Review's recommendation, which was also presented in the Center's petition, which would provide that a highly-endangered Mexican wolf known to have scavenged on livestock carrion would not be labeled as a "problem" or "nuisance" wolf, and killed, provides the much-needed incentive and a common-sense approach to preventing scavenging and thereby wolf/livestock conflicts. Without incorporating it into the final revisions to the 10(j) Rule, the rule will be flawed and will fail to conform to the best available scientific data and factual record.

3. The Goal of Establishing 100 Mexican Wolves as the Threshold for Take Is Not Viable for the Survival and Recovery of the Species.

In the preamble to the Proposed Revision, the Service states that it is proposing to revise the MWEPA designation "to improve our ability to establish a viable, self-sustaining population of at least 100 Mexican wolves in the wild, which is the population objective provided in the 1982 Mexican Wolf Recovery Plan."[41] This proposal effectively amounts to an attempt to promulgate the 1998 10(j) Rule over again, rather than a proposal to address the subspecies' conservation needs presently, and must be improved in the final revisions in order to comply with the ESA's conservation mandate in the ESA, to be consistent with the best available science and the factual record.

[41] 78 Fed. Reg. at 35,727.

Under the current rule and existing reintroduction program, the population is *only now* poised to reach 100 animals. Under recruitment and mortality rates for the population from the period 2009-2012, the population will top 100 at the end of 2014, just before the final revisions would be finalized. Whereas the 1996 FEIS projected the population reaching 102 wolves, including 18 breeding pairs, by 2006, now, on the cusp of the population reaching 100 wolves, the instant rulemaking must aim much higher to further conservation.[42] A much higher population count is necessary to ensure Mexican wolf viability in the wild. The revisions to the 10(j) Rule must rely on the best science and factual record including updated estimates of wolf density and the number of wolves that are necessary for genetic diversity to comprise a viable population, rather than focus on the number 100, which is neither viable nor sustainable.

The Three-Year Review found the 100-wolf-objective one of three factors directly at odds with recovery, self-sustainability and viability, along with the small area of the primary recovery zone, "which "greatly hinders the vigor of the reintroduction phase," and the requirement that wolves only inhabit the BRWRA, which "is at odds with the naturally extensive movements that characterize gray wolves and current thinking regarding the viability of large carnivore populations," and "is not viable over the long term."[43] The Three-Year Review estimated that the Blue Range Wolf Recovery Area alone could support 468 wolves based on deer and elk density (not counting other natural prey and not counting the Fort Apache Indian Reservation, which currently supports some of the 75 wolves counted in January).[44] The appropriate, science-based conservation goal for the BRWRA population must be at least 350 or more wolves that comprise part of a meta-population that is distributed among three or more populations with a minimum total of 750 wolves.[45] These numbers are contained in the 2011 draft revised Mexican wolf recovery plan and in Carroll *et al*. (2013).[46]

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[42] *See* Center for Biological Diversity, *Chart of Mexican Population Figures and Estimates* (Dec. 17, 2013).

[43] Three-Year Review at 61.

[44] *Id*. at 48. Contrary to this un-repudiated best-scientific estimate, the Service's Southwest regional director Benjamin Tuggle has reiterated erroneous statements denying that the BRWRA has the carrying capacity to support 100 wolves, for example, in his opening remarks preceding the Hon-Dah, Arizona public hearing on Dec. 3, 2013 on this instant rulemaking.

[45] We also note that were two of these three aspirational, interconnected populations to reach a minimum of 200 animals (totaling 400), the third population would have to reach 350 animals in order to reach the required minimum of 750 wolves in total. But with only one actual population currently in existence, the BRWRA population, and with Carroll *et al*. (2013) documenting this population to have potential connectivity to the southern Rocky Mountains and to the Grand Canyon, it follows that the Service should set a threshold for "take" in this sole existing population that is no lower than the requisite 350 animals.

[46] Figure 3 in Carroll *et al*. (2013) shows that extinction risk for a single population of Mexican wolves within such a meta-population context only declines (depending on adult mortality rate) to conceivably acceptably-low levels when population size ranges from 150 to 350 animals, along with connectivity to other (currently non-existent) populations; "viability of the existing wild population is uncertain unless additional populations can be created and linked by dispersal of >0.5 migrants/generation (Fig. 1)." It must also be noted that Carroll et al. (2013)'s "baseline

Establishing numeric thresholds that appear consistent with Figure 3 and the above-quoted qualifications of risk, the draft revised Mexican wolf recovery plan uses the same Vortex computer simulation and same criteria to arrive at the number 750 wolves distributed among three populations, with the lowest population at 200 animals.[47]

The Proposed Revision falls far short of this standard. Indeed, reaching a minimum of 100 wolves throughout the modified recovery area before any "take" threshold is met would not even achieve the primary objective of the 1982 Mexican Wolf Recovery Plan, *i.e.*, to "conserve and ensure the survival of *Canis lupus baileyi* by maintaining a captive breeding program and re-establishing a viable, self-sustaining population of at least 100 Mexican wolves in the middle to high elevations of a 5,000-square-mile area within the Mexican wolf's historic range."[48]

The goal of reaching 100 wolves in the modified recovery area would also undermine a secondary objective of the Recovery Plan, which is to establish at least one additional wolf population through reintroduction.[49] Indeed, with one population of 100 animals in the 6,854-square-mile BRWRA, a second population could be maintained closely enough for dispersal-based connectivity, distributed over about 31,000 square miles of the MWEPA. But with 100 wolves potentially distributed over the approximately 31,000 square miles of the MWEPA, establishment of a second population nearby would be precluded. The distribution of Mexican wolves today is too low to affect a wolf-elk-aspen trophic cascade, and if essentially capped at around 100 wolves over a much larger area, wolf density would never trigger such a cascade.[50]

A goal of just 100 wolves would undermine conservation of the Mexican wolf. "Conservation" under the Endangered Species Act means not just *survival* – which is what the 1982 Recovery

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parameters were based on the assumption that recovery actions would be effective in reducing the Blue Range population's currently high mortality rates" and that "[a]lternate mortality-rate parameters would result in different population size and connectivity rates being required to achieve adequate population persistence (Fig. 3)." Yet, reducing mortality in the current population is by no means assured, and could get a lot worse under this rule. And in addition to mortality, connectivity will be absolutely critical in keeping extinction risk plausibly low at numbers ranging from 150 to 350. *Id*.

[47] Draft Revised Recovery Plan. The Service required the recovery team to keep this draft recovery plan confidential. Any claim of confidentiality was waived, however, when a hunters' organization leaked and widely disseminated the draft in a successful effort to stoke a political backlash.

[48] Recovery Plan at 23. Two factors entered into this survival-based objective: (1) the estimated area needed to support one Mexican wolf in average habitat available in this wolf's historic range, and (2) the number of wolves deemed advisable for adequate genetic diversity in an interbreeding population." *Id*.

[49] *Id*. at 32.

[50] Beschta, R.L & Ripple, W.J., 2010, Mexican Wolves, Elk, and Aspen in Arizona: Is There a Trophic Cascade? *Forest Ecology and Management*, v. 260, p. 915.

Plan aspired to – but *recovery* as well.[51] Mere survival – even assuming that it could be met under this proposal – is insufficient to meet the ESA's conservation mandate. As proposed, the goal of 100 wolves would not even meet the objectives of the survival-based 1982 Recovery Plan, and would undermine them. The proposal is contrary to the Service's own draft revised recovery plan, the best science, and the factual record. A population of 100 wolves would still leave the Mexican wolf in a severe genetic crisis that would threaten its long-term recovery. This must be corrected in the final revisions to the 10(j) Rule.

3. The Service Has Failed to Make a Required Finding that the Mexican Wolf Experimental Population is "Essential" to the Species' Continued Existence in the Wild.

In revising the 1996 10(j) Rule, the Service is designating a revised experimental population under ESA section 10(j) and APA section 553. As such, it is procedurally required to make an explicit finding, "based solely on the best scientific and commercial data available, and the supporting factual basis, on whether the experimental population is, or is not, essential to the continued existence of the species in the wild[.]" 50 C.F.R. 17.81(c)(2); 78 Fed. Reg. at 35,728.

The Service made the 1998 "non-essential" determination in the context of what it viewed as the potential effect on the gray wolf should the Mexican wolf population failed. The 1996 EIS and the 1998 reintroduction rule both reiterate that the reintroduction's objective is to re-establish a population distributed over 5,000 square miles ("by 2005") (EIS, p. 1-1; FR 1753, 1754). The Proposed Revision acknowledges that the "nonessential" designation was couched in the prime objective of ensuring the Mexican wolf's very *survival* in the wild. 78 Fed. Reg. at 35,728 (noting that "purpose" of the Service's designation of the Mexican wolf experimental population as nonessential was "to accomplish the prime objective of the 1982 Mexican Wolf Recovery Plan" – *i.e.*, to "establish a viable, self-sustaining population of at least 100 Mexican wolves in the wild"). As explained above, the goal of the 1982 was to bring the Mexican wolf off life support and to once again establish the species in the wild. Although not consistent with the ESA's definitions of "essential" and "nonessential," the Service decided to designate the population as "nonessential" in order to accomplish this objective.

However, this objective – *i.e.*, to "establish a viable, self-sustaining population of at least 100 Mexican wolves in the wild" – has not been realized under the "nonessential" designation. Indeed, there can be little dispute about this.[52] This is because nonessential status does not afford the Mexican wolf the legal protections that are needed for survival and recovery in the wild.

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[51] 16 U.S.C. § 1539(j)(2)(A) ("The Secretary may authorize the release (and the related transportation) of any population … of an endangered species or a threatened species outside the current range of such species if the Secretary determines that such release will further the conservation of such species."); *id*. § 1533(d) ("Whenever any species is listed as a threatened species pursuant to subsection (c) of this section, the Secretary shall issue such regulations as he deems necessary and advisable to provide for the conservation of such species.").

[52] *See, e.g.*, 2010 Conservation Assessment at 62 ("The Blue Range population is at risk of failure due to the cumulative effect of identified threats.").

Moreover, to the extent that the Service addresses the question of essentiality at all – *e.g.*, to suggest that the Mexican wolf experimental population is "nonessential" because there are additional wolves in captivity – this is arbitrary and capricious and has no basis in the ESA. The purpose of the ESA is conserve species and the ecosystems on which they depend, not to sustain barely-viable populations of endangered and threatened species in captivity. Additionally, it is contrary to the plain language of 50 C.F.R. § 17.81(c)(2), which expressly states that a determination of essentiality shall assess whether the population is "essential to the continued existence of the species *in the wild*[.]"[53]

Again, an experimental population must be considered "essential" if "its loss would be likely to appreciably reduce the likelihood of survival of the species in the wild." *Id*. The final revisions to the 1998 10(j) Rule must reflect that the Mexican wolf experimental population is "essential."

5. The Proposal Authorizes Too Much "Take," Including "Take" that Would Allow Threats to the Mexican Wolf's Survival and Recovery to Continue.

Several aspects of the Proposed Revision or additional considerations would have the effect of *increasing* allowable take of wolves. These include lowering the threshold for take of wolves in the act of attacking livestock on public lands, interpreting ESA section 6 as providing for conveyance of take authority to states, expanding the definition of "personnel" to allow individuals to take wolves, clarifying that agency personnel can take wolves as long as they claim that they are shooting at coyotes, granting take permits including for non-depredating wolves on unspecified swathes of private and tribal land, and potentially through expansion of the MWEPA south from I-10 without additional measures to protect from take.

This is unacceptable and would amount to a violation of the ESA, as the current 10(j) Rule already permits more take than the population can sustain, particularly when illegal killings are factored in. Indeed, excessive take has already stymied population growth of the experimental population and has resulted in severe genetic damage – abundant examples include the 2004 killing of the genetically-valuable alpha male of the Saddle Pack, homogenization of the population through removal and by not breeding wolves with other genetically-valuable animals. Consequently, no increases in take are appropriate and would be wholly inconsistent with the conservation mandate of the ESA, including ESA sections 7(a)(1) and 10(j), and by extension, ESA section 4(d), which specifies that any authorized take for threatened species may only be for the purpose of relieving population pressure. At 75 animals as of 2013, in an area that could support 468, there's no such population pressure at issue here.

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[53] 50 C.F.R. 17.81(c)(2) (emphasis added).

6. The Service Is Improperly Concerned About Appeasing Livestock Interests and State Agencies That Oppose Wolf Recovery At the Cost of Mexican Wolf Conservation

Under the ESA and public lands laws, Mexican wolves are the appropriate use of public lands. Any use of public lands by man – whether it be livestock grazing or anything else – cannot occur if it undermines Mexican wolf survival or recovery. Unfortunately, 15 years of the reintroduction program have empirically shown not only that livestock interests and state game agencies refuse to support Mexican wolf conservation, but actively to undermine it. If livestock grazing on public lands cannot be made compatible with Mexican wolf conservation, then it may not continue or at a bare minimum, must be conditioned to ensure such compatibility.

In any event, it is not the Service's proper place to work overtime in order to make the 10(j) revisions more palatable to interests who have maintained overt hostility toward Mexican wolf conservation. Such interests should not be the Service's prime constituency, but by authorizing so much take and failing to reign in threats – not to mention completely-inappropriate promises to state game agencies about the contents of the final revisions that undermine the integrity of the rulemaking process – that is exactly what the Proposed Revision reflects. Indeed, a glaring omission from the Proposed Revision is the lack of *any* provisions that would require livestock grazing and other activities to be conditioned so as to be rendered compatible with Mexican wolf conservation. The final revisions to the 1998 10(j) Rule must correct these deficiencies.

C. SPECIFIC COMMENTS ON THE PROPOSED REVISION

1. Expansion of direct release area, elimination of primary and secondary recovery zones within the BRWRA

The Center supports this proposal, which is also supported by the best available scientific data and the factual record, including Three-Year Review, Five-Year Review, genetics studies, and the American Society of Mammalogists. However, the ESA's conservation mandate, best available science, and factual record require expansion of this in order to allow for establishment of a Mexican wolf metapopulation in all areas of suitable habitat, including areas of suitable habitat in Utah, Colorado, the Grand Canyon watershed, as well as all additional contemplated areas of Arizona and New Mexico, down to the international border with Mexican.

2. Allowing wolves to expand into the "MWEPA" without required return to BRWRA, but not beyond the MWEPA

The Center supports this proposal, which is also supported by the Three-Year Review, Five-Year Review, genetics studies, and the American Society of Mammalogists. However, the I-40

boundary of the MWEPA is arbitrary and inconsistent with best science.[54] Moreover, the I-10 boundary would isolate wolves in Mexico and undermine ecosystem conservation in high-endemic areas of Sky Islands of the United States, where wolves would help restore ecosystems.

Also, wolves should be able to disperse freely outside of the MWEPA, consistent with other 10(j) populations (including wolves in the Northern Rocky Mountain experimental population). Where Mexican wolf conservation is in desperate need of additional areas to establish territories, there's no rationale – stated or otherwise – for such removals here.

3. Removing West Texas from the MWEPA

The Center opposes this proposal. The basis for it is not adequately explained in the Proposed Revision, which simply claims, without support, that Texas "is not likely to contribute substantially to our population objective" – of just 100 wolves – "based on habitat suitability."[55]

In truth, the proposal to remove the area within the current MWEPA that is in Texas is based solely on political and not biological criteria. This area is more remote than other nearby areas within the MWEPA, including the Lincoln National Forest immediately to its north. Indeed, this area was included within the MWEPA because of its good habitat, including Guadalupe Mountains National Park which supports a healthy prey base and remote Chihuahuan Desert habitat. Removal would make it less likely that there would be connectivity between wolves in Mexico and in the U.S.

The best available science – *not political considerations* – is the standard for revising the MWEPA. Here, the best science requires the Service to remove this proposal from consideration. Additionally, under section 10j, all members of an experimental population are to be treated as fully endangered when within national parks, so removal of wolves from these areas as the Service intends in the Proposed Revision to revise the MWEPA would not be lawful for this reason as well.

4. Removing the Authority to Release Wolves into White Sands Wolf Recovery Area

The Center opposes this proposal. Abdicating the Service's current authority to release wolves into White Sands Wolf Recovery Area is premature. According to the 1998 rule, this recovery area was specifically intended to serve as a reintroduction area in the event that the initial goal of 100 wolves was not reached within the BRWRA – which is exactly what has occurred.

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[54] Carroll *et al*. 2013; Carroll, C., Phillips, M.K., Lopez-Gonzalez, C.A. & Schumaker, N.H., Defining Recovery Goals and Strategies for Endangered Species: The Wolf as a Case Study, *BioScience*, v. 56(1), p. 25 [hereinafter "Carroll *et al*. 2006"].

[55] 78 Fed. Reg. at 35,728.

Indeed, as described in the preamble to the 1998 10(j) Rule, use of White Sands as a reintroduction area is not overly-ambitious or beyond the carrying capacity:

> Approximately five family groups of captive raised Mexican wolves will be released over a period of 3 years into the White Sands Wolf Recovery Area, if this back-up area is used, with the goal of reaching a population of 20 wolves.[56]

Habitat in the White Sands Wolf Recovery Area is classic Chihuhuan Desert that is typical of the Mexican wolf's early-described range.[57] This is remote country, eligible for wolf releases now, and should be utilized to address the genetic crisis. It is within close dispersal range of the BRWRA despite Interstate 25 and other obstacles.[58] Five more wolf packs introduced soon to this area, and 20 more wolves, could make a big difference in slowing the species' loss of genetic diversity. The Service should be utilizing its existing regulatory authority to reintroduce Mexican wolves to White Sands immediately, but in any event should not throw away this tool in the instant rule-making.

While the Three- and Five-Year reviews recommended against utilizing the White Sands Wolf Recovery Range, these observations were made in the context of deciding whether to require the Service to capture and remove wolves that establish territories wholly outside of the MWEPA. In removing that obligation, fluctuating prey numbers in this recovery area should not serve as a rationale to continuing to neglect it as an important tool in ameliorating inbreeding and in conserving the Mexican wolf.

If the BRWRA is to be expanded, as the current proposed rule contemplates, there is a need to establish additional release locations than that which would be afforded by expanding the BRWAR to include the Gila and Apache national forests. Indeed, there is a need to exercise this current authority without delay. There is no reason to remove current authority for wolf releases.

5. Developing and Implementing Management Actions on Private Lands

We are in favor of providing aid to private land-owners so as to allow wolves on private lands but proactively prevent depredations. We note that the 1998 10(j) Rule has no limitations on such an array of proactive arrangements.

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[56] 63 Fed. Reg. 1752, 1754 (Jan. 12, 1998).

[57] Bednarz, J.C., 1989, An evaluation of the ecological potential of White Sands Missile Range to support a reintroduced population of Mexican wolves, *Endangered Species Report*, v. 19 (U.S. Fish and Wildlife Service, Albuquerque, NM). Bednarz estimated that the prey base of deer, pronghorn, bighorn sheep, and lagomorphs and small mammals could support 40 wolves.

[58] In December 2012, Michael Robinson, undersigned conservation advocate at the Center, backpacked on BLM land in the Chalk Hills to the west and adjoining the missile range, and saw deer and abundant deer sign, showing that the prey base in this region has rebounded from its drought-induced lows in the first few years of this century.

6. Tribal Land Management Actions Within MWEPA

The survival and recovery of the Mexican wolf in the wild is ultimately the responsibility of the United States, as it is U.S. society that removed these animals from the landscape and nearly drove the Mexican wolf to extinction, making reintroduction and recovery necessary. The Center supports and commends Native American tribes, in particular the White Mountain Apache Tribe, which is taking part in Mexican wolf conservation, as such participation is necessary for Mexican wolf conservation. Nevertheless, we maintain that public lands and all suitable habitat, as informed by the best scientific data and factual record, must be the priorities for conservation and threat reduction. That said, we oppose automatic removal of wolves from tribal lands.

7. Identifying Section 6 of the Act to Authorize Take for State Wildlife Agencies with Mexican Wolf Management Authority

We oppose this provision, which would provide additional, harmful leeway to anti-wolf state agencies to decide which wolves to remove and would block wolf releases. The Arizona Game and Fish Department already uses its leverage in this way, and this provision would give this agency even more control.

From 2003 to 2009, the Arizona Game and Fish Department created and led AMOC, until the Service renounced the AMOC's decisions per a 2009 settlement agreement with conservation organizations including the Center. During this period in which the Arizona Game and Fish Department exercised effective control, the population dropped over several years (with only one year with population increase). After the settlement agreement prohibiting this undue influence, the population began a (thus far) sustained rebound.

The Service has the legal responsibility to recover the Mexican wolf and should maintain and consolidate that authority rather than delegate it again. The Service should issue a final revision to the 10(j) Rule that make clear that it has the sole authority over which wolves to release.

8. Clarifications that Individuals May Take Mexican Wolves under Specific Circumstances

The Center opposes these clarifications. Allowing individuals to be appointed as "personnel" to take wolves would allow for the deputizing of anti-wolf representatives from counties and other anti-wolf individuals, and provide opportunities for illegal take of wolves – for example, in setting traps for targeted wolves that capture non-target wolves. It would undermine professionalism, which is an incredibly important objective when it comes to Mexican wolf management, and legal compliance and record-keeping that is expected of government employees that make them at least potentially accountable to the public (through FOIA, for example). Given the high number of illegal killings, this is unacceptable.

9. Clarifications of Allowable Take for Federal Agencies and Authorized Personnel

The Center opposes these clarifications. Rather than addressing illegal shootings – a primary, immediate threat to the Mexican wolf survival and recovery – the Service is proposing to expand the circumstances in which Federal agencies and authorized personnel may take wolves. This would legalize "mistaken" wolf shootings, requiring anti-wolf advocates to simply claim that they thought the animal was a coyote. Indeed, the final revisions must include a directive that personnel working on wolf recovery shall not engage in other predator-control activities while assigned to the wolf project.

Allowing individuals to be appointed as "personnel" who may take wolves would allow for the deputizing of those who are staunchly opposed to the presence of Mexican wolves, and provide opportunities for illegal take of wolves in an area where illegal shootings are already a major threat. This revision would diametrically oppose the factual record. It removes the possibility for professionalism, rule-following and record-keeping expected of government employees that make them at least potentially accountable to the public (through FOIA, for example). Given the high number of illegal killings, this is unacceptable.

10. Revising Conditions that Determine when The Service May Issue a Permit to a Livestock Owner or Their Agents to Take Mexican Wolves that are Engaged in Killing, Wounding, or Biting Livestock on Public Lands Allotted for Grazing, From "6 Breeding Pairs" to "100 Mexican Wolves"

The proposed rule does not accurately describe the 1998 10(j) Rule, which requires that six breeding pairs exist *within the BRWRA* – and does not provide that six breeding pairs can live *anywhere* – before the Service may authorize such take. Changing the threshold for killing wolves in-the-act of attacking livestock on public lands, from the current standard of six breeding pairs within the BRWRA (which has rarely if ever been achieved) to a standard of 100 wolves within the entire MWEPA, lowers the threshold greatly because breeding pairs is the best index to genetic status, which is the critical issue for Mexican wolves.[59] As noted, there might soon be 100 wolves within the BRWRA (much less the MWEPA) even without a rule-change, but breeding pairs have consistently lagged behind; we are nowhere near, for example, the 1996 FEIS's projection of 18 breeding pairs in the wild by 2006.

Private killing of wolves on public lands should be banned because unlike in removal orders, the shooter would not have a chance to evaluate the genetic and familial issues that are important to recovery. However, if such shootings continue to be allowed, for all the reasons discussed a take threshold of just 100 wolves would be contrary to the ESA. Take of wolves under these circumstances should only be permitted when this population totals 350 or more wolves

[59] For instance, Fredrickson *et al*. (2007) shows that the ongoing inbreeding depression is causing smaller litter-sizes and lower pup-survival rates, a likely factor in the low number of breeding pairs.

including at least 35 breeding pairs (equivalent to a breeding pair per each, average ten-wolf pack).

11. Modifying Take Prohibitions: such that take with a trap, snare, or other type of capture device is prohibited and will not be considered "unavoidable or unintentional" take unless "due care" was exercised to avoid death or injury, including (1) following state's trapping regulations, proclamations, and/or laws; (2) securely fastening traps so that if captured, a Mexican wolf is unable to pull the trap free; (3) using drags of sufficient size and weight; (4) reporting capture within 24 hours; and (5) not taking via neck snares. Take through shooting won't be considered unavoidable or unintentional take.

Re-authorizing incidental take of wolves through private trapping, even though it does not loosen the current (porous) regulations, is inconsistent with the need to dramatically reduce take.[60] Trapping and snaring are also particularly difficult to regulate as wolves may be killed out of sight using a legal device. At dangerously-low population numbers and in the face of inbreeding, all take by trapping, snares, and shooting should be banned until the population reaches at least 350 wolves including at least 35 breeding pairs.

12. New Provision to Conduct One-Time Evaluation of Nonessential Experimental Population Five Years after Final Rule, in addition to Status Reviews Every Five Years.

We do not oppose such a review as long as it is conducted after finalization of the recovery plan and as long as it does not re-open the question of whether to retain the Blue Range population (as did the three- and five-year reviews). The existential threat against this population must be permanently removed as an option. The most important immediate goal should be to finalize the revised Mexican Wolf recovery plan.

13. Clarification that the Service will Consider State Lands Within MWEPA Like Other Public Lands

The Center supports this proposal.

D. SPECIFIC PROVISIONS UNDER CONSIDERATION BUT NOT PROPOSED

The Service released a number of issues for comment and consideration, even though it is not proposing them. The Center's comments on these proposals are set forth below.

[60] Turnbull *et al*. (2013) documented seven injuries to Mexican wolves and two deaths as a result of private trapping. Turnbull, T.T., Cain, J.W. & Roemer, G.W., 2012, Anthropogenic impacts to the recovery of the Mexican gray wolf with a focus on trapping-related incidents, *Wildlife Society Bulletin*, DOI: 10.1002/wsb.247, p. 10.

1. Moving Southern Boundary of MWEPA from I-10 to Border

Such a provision would have one obvious benefit: a larger MWEPA would provide additional habitat for southward dispersal from the BRWRA without mandatory capture. However, this benefit must be weighed against downsides that could undermine recovery. And the obvious benefit to conservation could be achieved through allowing wolves to roam outside the boundaries of MWEPA with no requirement to capture and move (or remove) them. Our comment is informed by the following considerations.

The Mexican wolf evolved in Sierra Madre and Sky Island habitats (*i.e.*, south of I-10), and developed its distinct morphological and genetic traits in this arid environment and with smaller and more widely-distributed prey[61] This evolutionary nexus calls for a serious effort at recovery should take place in these habitats, including providing additional protections from take, as contemplated in Carroll et al. (2006)'s description of "intermediate areas where long-term wolf recovery might require proactive conservation measures," such as road removal and restriction of lethal control in response to livestock depredation.[62]

There are no elk and fewer deer south of I-10 than in the BRWRA. Wolves will have larger home range sizes in order to find sustenance and therefore are likelier to encounter livestock and depredate.[63] Given that Federal take has already damaged viability and genetics of wolves in the BRWRA, it is highly likely that take under a (new) experimental rule, unless tightened up considerably from the proposed rule, would preclude wolf persistence south of I-10.

Wolves coming north into the United States from Mexico are currently fully protected under the 1998 10(j) Rule. If the MWEPA is expanded southward, any progeny of wolves from Mexico and from BRWRA will all be considered experimental and also subject to take that may preclude population persistence and even connectivity with the BRWRA population.

Moving the MWEPA to the border may violate the 10j requirement that experimental populations be wholly separate from non-experimental populations of the same species, once a population is established in Mexico.

We recommend that you maintain the MWEPA as it is, but allow wolves to roam past its boundaries with no requirement for their capture and removal. However, if the Service does not

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[61] Nelson, E.W. & Goldman, E.A., 1929, A new wolf from Mexico, *Journal of Mammalogy*, v. 10, p. 2; Carroll *et al*. (2006); Young, S.P. & Goldman, E.A., 1944, The wolves of North America, *American Wildlife Institute*; 1982 Recovery Plan; Johnson, T.B., Noel, D.C. & Ward, L.Z., 1992, Summary of information on four potential Mexican wolf reintroduction areas in Arizona, *Arizona Game and Fish Department Technical Report 23* [hereinafter "Young & Goldman (1944)"]; Carroll *et al*. (2013).

[62] Carroll *et al*. (2006).

[63] Young & Goldman (1944).

adopt this provision it could achieve the sole benefit with minimal or no downside by adopting standards that would ensure wolf persistence, even in the face of conflicts with livestock, in the areas south of I-10, including but going beyond the aforementioned recommended threshold for authorizing any take of a population with 350 animals including 35 breeding pairs.

We advise that simply allowing wolves to roam outside the existing MWEPA boundaries at will, would be consistent with the 1994 rule reintroducing wolves to the northern Rocky Mountains. Should you reject this obvious, straight-forward course, we believe there can be a way to expand the MWEPA southward while establishing additional, needed protections against take, and would not oppose such a measure if it had the effect of ensuring wolf persistence south of I-10, and binational wolf connectivity. We would oppose such an expansion without such regulatory standards to secure the long-term advantages of wolf conservation south of I-10 for wolves migrating north from Mexico.

1. Expanding BRWRA to Include Sitgreaves National Forest in Arizona; Payson, Pleasant Valley, and Tonto Ranger Districts of the Tonto National Forest in Arizona; and Expansion of BRWRA to Include Magdalena Ranger District of the Cibola National Forest in New Mexico.

We support these proposals, which would provide additional areas and locations for initial releases of wolves from captivity. We note however that none of these additional areas provide the quality of habitat including the remoteness from human impacts and/or the high-density prey base of the Gila National Forest and the White Sands Wolf Recovery Area.

Thus, our support is qualified; if take provisions remain tiered to the number of wolf pairs in the BRWRA, or get changed to reflect the number of wolves in the BRWRA, at a minimum those thresholds must be adjusted upward so that they are not triggered merely through greater wolf distribution while the population remains genetically or demographically insecure and at a lower density.

2. Replacing the Term “Depredation” with “Depredation Incident” and Defining it as “The Aggregate Number of Livestock Killed or Mortally Wounded by an Individual Mexican Wolf or Single Pack of Mexican Wolves at a Single Location within one 24-Hour Period, Beginning with the First Confirmed Kill or Injury.”

We support redefining *depredation* as *depredation incident*. This could save wolves if a rigid depredation-counting formula (formal or de facto) again or continues to guide decisions on wolf removals. And under a punitive model (which we do not favor), at least the “intent” of depredatory behavior should not be magnified through counting each domestic animal killed in one incident, separately. However, the phrase “lawfully present” which is in the current rule

should be reinserted in this new definition, and should preclude consideration of stock that are seasonally or otherwise not where they're supposed to be on public lands.[64]

Furthermore, the requirement in the definition in the current rule that depredations be confirmed should be retained in the instant rule-making.

Absent these two changes back to the present, reasonable standards, depredation incidents will be listed as occurring at a high-enough rate to magnify the political pressure for, or directly trigger wolf-removals.

3. Including Take for Pet Owners of any Mexican Wolf Engaged in Killing, Wounding, or Biting Pets on Private or Tribal Land within the MWEPA, Provided that Evidence of Freshly-Wounded or Killed Pet by Wolves is Present and Reported within 24 Hours. [MJ]

We oppose this provision. Authorizing people to kill wolves in defense of pets may open up new opportunities for fraudulent take – for example, in using stray dogs or cats to bait wolves. We have already shown in our comments on the draft preliminary EIS that the baiting that already occurred using livestock was used to kill the Durango Pack in 2007. It is very likely that similar abuses would stem from the instant provision. If it is to be implemented, for the reasons already described, no such take should occur until the population reaches at least 350 wolves including 35 breeding pairs.

4. Including Take for Livestock Owners or Their Agents to Take Wolves on Private or Tribal Land within the MWEPA and the Conditions for Such Take.

We oppose this provision. Providing permits to take even non-depredating wolves on private or tribal lands will also lead to baiting – first, to obtain such permits through precipitating depredations, and then to kill wolves after the permit is issued. Such a provision would also serve as barriers to wolf movements, increasing fragmentation between and within populations. Such permits would also not account for the genetic and familial values of wolves to be killed, even though the Service states that it would establish some thresholds for issuing such permits on the basis (possibly) of genetics. Any such thresholds must, for the afore-explained reasons, included establishment of at least 350 wolves including 35 breeding pairs.

[64] The alpha male of the San Mateo Pack alpha male, M796, was shot and killed on Feb. 20, 2007 on the basis of depredations on stock including a cow that was in a seasonally-closed pasture. The agencies interpreted that cow improperly as "lawfully present."

Please do not hesitate to contact us with any questions. Thank you.

Sincerely,

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