



September 19, 2013

Public Comments Processing

Attn: FWS-R2-ES-2013-0098

Submitted electronically via <http://www.regulations.gov>, docket FWS-R2-ES-2013-0098.

To Whom it May Concern,

Please consider these scoping comments for the environmental impact statement (EIS) for revising the 1998 Mexican wolf experimental, non-essential rule, the provisions included within the first two chapters of the preliminary draft EIS, the shaping of EIS alternatives including the four action alternatives and our recommendation for an additional conservation alternative, and the intended Mexican Wolf Management Plan for wolves found outside of the Mexican Wolf Experimental Population Area (MWEPA).

Introduction: The Center for Biological Diversity's longstanding defense of Mexican wolves.

We are delighted that, over a decade after expert recommendations that it do so, nine years after a Center for Biological Diversity petitioned it to do so, and on the heels of a settlement agreement to resolve our litigation seeking that you do so, at long last the U.S. Fish and Wildlife Service ("Service") is revising the 1998 reintroduction rule.

The Center for Biological Diversity ("the Center" or "we") is a non-profit conservation organization with over 625,000 members and supporters that works through science, law, education, advocacy and creative media to secure a future for imperiled wildlife and native plants and their ecosystems. The Center was founded in 1989 on a private-land inholding in the Gila National Forest, part of today's Blue Range Wolf Recovery Area. The Center is now based in Tucson, Arizona, but has maintained an office and staff in the Gila ever since. The Center has been closely involved in Mexican gray wolf recovery since securing a 1993 Service commitment to reintroduce the Mexican wolf into the wild.

The Center commented on the 1997 proposed rule for the reintroduction of the Mexican wolf, and we have availed ourselves of every subsequent opportunity to help the Mexican wolves survive and for their subspecies eventually to recover. Since the reintroduction program commenced in 1998, the Center has closely monitored the unfolding of all-too-often tragic events. We have roamed the areas where wolves roam, have talked with wolf managers, scientists and ordinary people who have encountered wolves, and have filed countless Freedom of Information Act requests. We have educated and inspired the public and our members to fight for protection of the Mexican wolf, by leading tours of the recovery area, holding more than 150 informational presentations for thousands of people, organizing a children's art contest, writing dozens of opinion and news articles, informing hundreds of news articles and broadcasts about Mexican wolf issues, and tabling in public places.

In addition, the Center has remonstrated with government officials, proffered written comments to government agencies including the Service, testified at public hearings, and participated in meetings of the Mexican Wolf Adaptive Management Working Group and the Southwest Gray Wolf Distinct Population Segment Recovery Team. In 2004, the Center petitioned the Service under the Administrative Procedure Act (APA) for implementation of the recommendations of the 2001 Mexican Wolf Three Year Review (Paquet Report). In 2009, we petitioned to revise the Mexican wolf's listing status under the Endangered Species Act, *i.e.*, as a subspecies or distinct population segment ("DPS") and other gray wolves. And in 2010, we petitioned the Service to develop a recovery plan for the Mexican wolf.

In 1998, 2004 and 2010, the Center intervened in lawsuits brought by the livestock industry against the Service, as an intervener-defendant on the side of the Service. The plaintiffs in each suit, none of which was successful, sought to compel the Service to trap or shoot Mexican wolves to effect their removal from the wild. The Center has also litigated against the Service to protect Mexican wolves, including in 2006 and 2012 to garner a substantive response to our APA petition and compel finalization of the 2007 rule-change process that the Service never finished (2012).

The latter litigation led to a settlement agreement to finalize a rule-change for the Mexican wolf non-essential experimental population by January 12, 2015, which will be the 18th anniversary of the final rule authorizing the reintroduction. That deadline is driving the development of the instant EIS. We are pleased that the Service has finally taken the next step in a process for revising the rules that govern Mexican wolf reintroduction.

Nevertheless, the proposed rule and the range of alternatives must be improved considerably. The proposed management plan for wolves outside the MWEPA is deeply flawed as well and must be abandoned or at a minimum, substantially reworked. The ensuing discussions address the salient issues, with references to the preliminary draft EIS ("pdEIS") unless otherwise noted.

I. The non-essential experimental population must be re-designated as experimental-essential.

The proposed rule tiered to this scoping notice and the preliminary draft EIS states:

Based on the best scientific and commercial data available, we must determine whether the experimental population is essential or nonessential to the continued existence of the species. The regulations (50 CFR 17.80(b)) state that an experimental population is considered essential if its loss would be likely to appreciably reduce the likelihood of survival of that species in the wild. All other populations are considered nonessential.¹

"Likely to appreciably reduce the likelihood of survival of that species in the wild" is not a high bar to clear given the reintroduced Mexican wolf population's present status and projected trajectory, as we demonstrate in the sections below. Breaking this down, if loss of the population would be [1] *likely* to [2] *appreciably* [3] *reduce* the [4] *likelihood* of the [5] *survival* of the *species* in the *wild*" (emphases added), then the population must be essential. The courts require

¹ 78 Fed. Reg. 35732 (June 13, 2013).

that the Service give meaning to every word in a statute,² and, absent other guidance, courts must interpret the words in ESA through their ordinary, dictionary meaning,³ denoted as follows:

- (1) “likely” includes “within the realm of credibility, plausible;”
- (2) “appreciably” includes “possible to perceive;”
- (3) “reduce” includes “diminish;”
- (4) “likelihood” includes “something probable;” and,
- (5) “Survival of the species” in the wild logically excludes populations doomed by genetic defects, reduced below effective reproduction rates, or confined to captive breeding facilities.⁴ Also pertinent, regulations at 50 CFR §17.80(b) define “survival” as the condition in which a species continues to exist in the future while retaining the potential for recovery.⁵

In 1998, the Service designated the Mexican gray wolves to be released as a nonessential, experimental population on the grounds that the captive population would preserve the genetic integrity of the subspecies and that the designation and associated “management flexibility” (i.e. wolf “control” actions) would ultimately reduce illegal killing, thus aiding the wild population:

The Service finds that even if the entire experimental population died, this would not appreciably reduce the prospects for future survival of the subspecies in the wild. That is, the captive population could produce more genetically fit surplus wolves and future reintroductions still would be feasible if the reasons for the initial failure are understood.⁶

This justification no longer applies, even though the draft rule tied to this scoping notice, 78 Fed. Reg. 35719 (June 13, 2013) reiterates it. That is in large part because the captive population may soon no longer be able to produce enough genetically fit surplus wolves, and since future reintroduction programs would likely not be attempted should the current reintroduced population go extinct.

The Service also explained in 1998 that:

Designation of the released wolves as nonessential experimental is considered necessary to obtain needed State, Tribal, local, and private cooperation. This designation also allows for management flexibility to mitigate negative impacts, such as livestock depredation. Without such flexibility, intentional illegal killing of wolves likely would harm the prospects for success.⁷

This second justification, expressed in the draft preliminary EIS, and implied but (cannily) not reiterated in the draft rule, is not a relevant or permissible factor for consideration under the ESA. Rather, the plain language of 50 C.F.R. § 17.80(b) provides that the only

² “It is well-settled that we should give words of statutes their ‘plain meaning.’” *United States v. Ferguson*, 369 F.3d 847, 851 (5th Cir. 2004) (quoting *Demette v. Falcon Drilling Co.*, 280 F.3d 492, 502 (5th Cir. 2002)).

³ “In discerning words’ plain meaning, we may consult the dictionary. *See, id.* N.3, *supra*.”

⁴ *The American Heritage Dictionary*, 3rd Ed. Houghton Mifflin, New York (2000).

⁵ 78 Fed. Reg. 35732 (June 13, 2013).

⁶ 63 Fed. Reg. 1752 (Jan. 12, 1998).

⁷ 63 Fed. Reg. 1752 (Jan. 12, 1998).

relevant consideration is whether the loss of the population would be likely to appreciably reduce the likelihood of the survival of the species in the wild. At its core, this inquiry is a scientific one, and there is no room for a rationale – whether based in fact or not – based on management control flexibility in this definition.

Moreover, this justification is rebutted by the reality that the rate of illegal killings of Mexican wolves is very high – despite this so-called “flexibility” – and indeed, is much higher than that of other wolf populations that are protected under the Endangered Species Act. Also, detrimental to the survivability of the Mexican wolf population is Federal wolf management, including the live capture and wolf shootings. Thus, wolf control that has enabled such management flexibility has not only failed to reduce illegal killings sufficiently to ensure prospects for the population’s survival and recovery, but has had the contrary effect: Had management control actions been much less frequent, the illegal killings would not, in and of themselves, have blocked population success. Hence, protective mechanisms that are precluded by the population’s designation as “non-essential” continue to be necessary in order to ensure Mexican wolf conservation.

The proposed rule revalidates part of the 1998 determination:

[E]ven if the entire population died, this situation would not appreciably reduce the prospects for future survival of the subspecies because Mexican wolves are still maintained in the captive-breeding program. Furthermore, the captive Mexican wolf population could produce enough wolves that future reintroductions in the wild would be feasible and we have a now proven capacity to successfully start a wild population from captive stock. All Mexican wolves selected for release are genetically redundant to the captive population, meaning their genes are already well represented. This factor minimizes any adverse effects on the genetic integrity of the remaining captive population in the event Mexican wolves released to the wild do not survive.⁸

Yet, as set forth below, the best information categorically demonstrates that this rationale is patently false. The non-essential, experimental population must be re-designated as experimental-essential, reflecting the biological and legal reality that recovery occurs in the wild, not in captivity, and that the captive population can no longer serve as a backstop for failure of the wild population. Such a re-designation would ensure that management actions by the Service and other federal agencies undergo ESA section 7(a)(2) review, thus creating critical parameters on the Service’s and other agencies’ authorities to “manage” the Mexican wolf, and ensuring its conservation.

The genetic deterioration of the captive population greatly reduces the likely success of any future reintroduction program in the event of the current population’s extirpation.

The 1998 reintroduction rule stated:

⁸ 78 Fed. Reg. 35732 (June 13, 2013)

If captive Mexican wolves are not reintroduced to the wild within a reasonable period of time, genetic, physical, or behavioral changes resulting from prolonged captivity could diminish their prospects for recovery.⁹

Recent research confirms that after several generations in captivity, animals across disparate taxa lose the genes that express characteristics that are essential to their success in the wild. Frankham (2008) found that “characteristics selected for under captive conditions are overwhelmingly disadvantageous in the natural environment” and that these adverse evolutionary changes “jeopardize the ability of captive populations to reproduce and survive when returned to the wild.” He advised that “genetic adaptation to captivity should be minimized for populations likely to be used for reintroduction,” and that the most effective way to minimize genetic adaptation to captivity is to “minimize the number of generations in captivity” and return the species to the wild “as rapidly as possible.”¹⁰

Mexican wolves survive from the captive-breeding of three lineages that were merged in 1995. The McBride lineage was first bred in captivity in 1981 -- 32 years or approximately 11 generations ago. Wolves from the Ghost Ranch lineage were first bred in captivity in 1961 -- 52 years or approximately 17 generations ago. The Aragon lineage, for which original capture records were not maintained, likely was bred in captivity for a similar span. As early as 1983, Bogan and Mehlhop noted that captive Mexican wolves “showed some tendencies toward [*i.e.*, morphological affinities with] dogs, but whether these tendencies are from hybridization or from the effects of captivity is unknown.”¹¹ Subsequent genetic analysis showed that these animals were purebred Mexican gray wolves, and not hybridized, from which one might reasonably deduce that the effects of captivity were already degrading the Mexican wolf’s genome 30 years ago.

Frankham (2008) also showed that 50 generations in captivity has resulted in a population containing a relative fitness in the wild environment of only 14% of that of a wild population; recovery to 70% fitness of the wild population was achieved after 12 generations back in the wild, but the original fitness was not fully regained.¹² Because the Mexican wolf has already lost significant genetic diversity, 50 generations in captivity would prove catastrophic and well beyond the point at which recovery from captive stock is still possible; it is likely, given the Mexican wolf’s genetically depauperate condition stemming from the captive population’s exceedingly low number (seven) of founding animals, that 25 or fewer generations in captivity would prove beyond the point of no return.

With two of the three founding Mexican wolf lineages already over 15 generations in captivity, there is an approaching limit, even if the date cannot be ascertained precisely, to the point when further releases from captivity to the wild could establish a new, potentially-viable population to replace the current reintroduced population in the event of its extirpation. In fact, after significant changes resulting from genetic adaptation to captivity, the creatures bred in captivity – aside from suffering liabilities for survival in the wild – will in crucial respects no

⁹ 63 Fed. Reg. 1752 (Jan. 12, 1998).

¹⁰ Frankham, R. 2008. Genetic adaptation to captivity in species conservation programs. *Molecular Ecology* 17(1):325-333.

¹¹ Bogan & Mehlhop. 1983. Systematic relationships in gray wolves (*Canis lupus*) in southwestern North America. Occasional papers of Museum of Southwestern Biology.

¹² Frankham (2008).

longer constitute Mexican wolves; rather, they will have morphed into something more akin to domestic dogs.

In 2010, the Service released a Conservation Assessment on the Mexican wolf, which stated that “the captive population, while critical to the reintroduction, is not intended to serve as a safety net for extirpation of the Blue Range population,”¹³ and warned that “the fitness increase observed among F1 [cross-lineage] wolves may be largely lost in two to four generations,”¹⁴ *i.e.*, by around 2022 at the latest. That fitness increase is the only thing that can stave off inbreeding depression which will otherwise affect not just the wild population, currently afflicted, but the captive one as well.

Last year, only 20 captive wolves reproduced, and 62% of the 258 captive wolves overall were at least seven years old, “meaning that most of the population is comprised of old wolves who will die within a few years” and that “additional gene diversity will be lost as the captive population continues to age.” As the Service has recognized:

As of 2012, the gene diversity of the captive program was 83.37 percent of the founding population, which falls below the average mammal SSP (93 percent) and below the recognized SSP standard to maintain 90 percent of the founding population diversity. Below 90 percent, the SSP states that reproduction may be compromised by low birth weight, smaller litter sizes, and related issues.

Representation of the Aragon and Ghost Range lineages in 2012 was 18.80 percent and 17.65 percent, respectively (Siminski and Spevak 2012, p. 6). More specifically, the representation of the seven founders is very unequal in the captive population, ranging from about 30 percent for the McBride founding female to 4 percent for the Ghost Ranch founding male. Unequal founder contributions lead to faster inbreeding accumulation and loss of founder alleles. The captive population is estimated to retain only 3.01 founder genome equivalents, suggesting that more than half of the alleles (gene variants) from the seven founders have been lost from the population.

The genetically effective population size (N_e) of the captive population is estimated to be 20 wolves and the ratio of effective to census size (N_e / N ; that is, the number of breeding animals as a percentage of the overall population size) is estimated to be 0.0846 (Siminski and Spevak 2012, p. 7). The genetically effective population size is defined as the size of an ideal population that would result in the rate of inbreeding accumulation or heterozygosity loss as the population being considered. The effective sizes of populations are almost always smaller than census sizes of populations. A rule of thumb for conservation of small populations holds N_e should be maintained above 50 to prevent substantial inbreeding accumulation, and that small populations should be grown quickly to much larger sizes ($N_e \geq 500$) to maintain evolutionary potential (Franklin 1980, entire). The low ratio of effective to census population sizes in the captive population reflects the limitations on breeding (due to a lack of cage space) over the last several years, while the

¹³ USFWS. 2010. Mexican Wolf Conservation Assessment. Region 2, Albuquerque, New Mexico, p. 67.

¹⁴ *Ibid.*, p. 60.

low effective population size is another indicator of the potential for inbreeding and loss of heterozygosity.¹⁵

As a practical matter, the genetic viability of the captive population now partially *depends* on the success of the reintroduced population, as the Service explains in the draft preliminary EIS in discussing the benefits of enlarging the area in which captive-bred wolves could be released:

Movement of more captive wolves into the wild [i.e. releases] would also lessen restrictions on the growth of the captive breeding population which, in the absence of additional holding facilities, is currently constrained by space limitations.¹⁶

Hence, saving the captive population from inbreeding depression requires the continued existence of the wild population which renders the wild population quintessentially essential to the entire subspecies' survival.

The January or February 2013 live-capture of the alpha female of the Rim Pack, living in Arizona, was conducted in order to surgically remove her ovaries for possible future use in an intended “genetic re-rescue” of the captive population. Genetic re-rescue seeks to re-create the fitness bounce (“genetic rescue”) from the original, 1995 merger of the three Mexican wolf lineages, which had been maintained independently. Because of mismanagement, however, the fruits (or pups) of that genetic rescue have largely been squandered; yet the original, pure lineages were not maintained. Genetic re-rescue would entail the production of a second cohort of out-bred Mexican wolves. The wild-born Rim Pack alpha female (F858), one of the last purebred McBride lineage wolves, may assist in saving the captive-population in the future through her cryogenically-stored gametes, which may – if veterinary advances permit – recreate the original genetic rescue. Other wolves still in the wild likely hold the same potential importance.¹⁷ That the situation has deteriorated so precipitously reflects the Service's poor management of the situation; it also directly undermines the Service's specious rationale that loss of the wild wolves would not appreciably reduce the survivability – let alone recovery – of the Mexican wolf. Following years of Service mismanagement, the wild wolves are now more important than ever to the subspecies' survival.

The reintroduced population is essential to the continued existence of the Mexican wolf in the wild because the Service would be unlikely to reintroduce a replacement population, if needed, in a timely manner or at all.

The draft proposed rule states that that federal regulations (50 CFR §17.81(c)) require “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.”

Thirty-one years after the Mexican Wolf Recovery Plan called for the establishment of at least two reintroduced, “viable” populations, the Blue Range population is the only wild

¹⁵ 78 Fed. Reg. 35705 (June 13, 2013).

¹⁶ pdEIS, p. 30 (Siminski and Spevak 2012).

¹⁷ Rich Fredrickson, personal communication (Sept. 18, 2013).

population of Mexican gray wolves.¹⁸ Reintroduction efforts in Mexico, begun in October 2011, have yet to establish a population south of the border, and there are no guarantees of that program's success.

In the hypothetical but unfortunately-realistic scenario of the Blue Range reintroduced population dying out, the likelihood that the Service would initiate another reintroduction program – and run it successfully – is close to nil, even without the rapidly-closing window of time for the captive population to be able to produce diverse wolves for release elsewhere. According to records we received under FOIA, the Service has done *no planning* for additional reintroduction areas.¹⁹ Furthermore, the agency has failed to heed the 1982 Mexican Wolf Recovery Plan, which acknowledged that two wild populations would not suffice for recovery and delisting.²⁰ The Service has had the authority under that recovery plan to create a second population, but has not begun to do so.

The Service has not achieved the recovery plan's "prime objective" 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 wolves in the middle to high elevations of a 5,000-square-mile area."²¹ At present, the reintroduced population is not secure from extirpation, and for genetic reasons and small size it is not viable and self-sustaining; nor, for that matter, has it ever numbered 100 animals.²²

Furthermore, the Service has repeatedly begun, then delayed and eventually aborted revisions to the 1982 Mexican Wolf Recovery Plan, which does not include recovery criteria and was intended to provide guidance only through September 30, 1984.²³ Without a new recovery plan, and given that it never mentions its responsibility to establish two viable populations according to the present recovery plan, the Service is even less likely to promulgate a rule establishing a new Mexican wolf population in the event of extirpation of the present, reintroduced population.

The Service's ongoing failure to follow scientific recommendations in a timely manner – which has been reflected by the instant proposed rule amendments, which were first recommended by Service experts in 1999 and have been affirmed in independent scientific and

¹⁸ USFWS. 1982. Mexican Wolf Recovery Plan, p. 32.

Recovery Plan, p. 32.

¹⁹ Susan MacMullin, Field Supervisor, letter to M. J. Robinson, May 11, 2005. There is no reason to believe that any additional reintroduction planning has occurred since 2005.

²⁰ Recovery Plan, pp. 23-24, 63-68.

²¹ Recovery Plan, p. 23.

²² Even at 100 animals, as the Service has acknowledged (i.e. Mexican Wolf Conservation Assessment, 2010), the population would not be viable. The recovery plan's quantified objective of "at least 100 wolves" stems from the erroneous assumption that that number would provide "adequate genetic diversity" (p. 23) Given this outdated assumption, the recovery plan's prime objective should henceforth be measured through a population number and through genetic composition that, combined, would ensure viability, not by at least 100 animals.

²³ Recovery Plan, pp. 20, 23. In 1995, the Service produced a draft update to the 1982 recovery plan, but never finalized the draft. In 2005, the Service indefinitely halted the meetings of a recovery team comprising outside scientists, state and tribal representatives and so-called stakeholders (including one from the Center for Biological Diversity) that had been working since 2003 to update the 1982 recovery plan; in 2010, the team was disbanded. In 2012, the Service similarly halted meetings of another recovery team that had labored since 2010 in the same project; that latest team remains quiescent.

agency reviews several times since,²⁴ and in its parallel failure to follow scientific recommendations in management that do not require rule-making – provide ample reason to doubt that were the Blue Range population to be extirpated, the Service would propose, implement, and achieve success through a second reintroduction program.

Examples of Service mismanagement are plentiful. Despite scientists' pleas, the Service refused to release sufficient wolves into the wild to address inbreeding. In an August 2004 memorandum to fellow members of the Southwest Gray Wolf Recovery Team, copied to the Fish and Wildlife Service, referencing the previous month's federal shooting of a genetically irreplaceable wolf,²⁵ Dr. Philip Hedrick of Arizona State University urged timely release of more genetically important wolves, with the following warning:

Genetic factors may be very significant threats to the reintroduced Mexican wolf population in both the short and long term. Crossing the three lineages produced animals with low inbreeding coefficients. Reducing (or managing) the inbreeding level in the wild population has already become an important factor. Also the McBride lineage [originating from the wolves caught from 1977-1980] was founded from only 3 individuals. Combining the lineages increased the numbers of founders to 7 (two from each Ghost Ranch and Aragon). For success of a reintroduction program, having low inbreeding and high genetic diversity (as many founders as possible) are quite important factors. In my opinion, USFWS should act to overcome these potential problems as soon as possible by incorporating ancestry from both the Aragon and Ghost Ranch lineages.²⁶

Yet, despite having released a “new” (*i.e.*, never free before) pack of five wolves from the captive-breeding pool into Arizona the month before Dr. Hedrick's memo, and that same month releasing another pack of seven, previously-captured wolves (*i.e.*, translocating them) in New Mexico, the Service did not release any additional new wolves in 2004.

In 2005, the Service proposed an arbitrary, year-long moratorium on the release of new wolves to the wild, in response to demands issued by wolf opponents at two private meetings convened in February 2005 with senior officials of the agency's Southwest regional office at the request of Rep. Steve Pearce (R-N.M).²⁷ The Associated Press reported that Mexican wolf recovery coordinator John Morgart “doesn't believe the moratorium would hamper the program because releases of captive-reared wolves have all but stopped already and because there is a pool of wolves with wild experience now in captivity that could be released” [*i.e.*, translocated]. The AP quoted Dr. Morgart as stating:

I don't see it as a huge inhibition to our program at all Yes, it puts some constraints on us that we wouldn't ordinarily have. It also makes an important statement.²⁸

²⁴ For details of the Service's dilatory record, we incorporate by reference our March 29, 2012 letter to Interior Secretary Ken Salazar, requesting a rule-change and releases to the wild, to which the Service responded in a cursory manner on Dec. 14, 2012.

²⁵ See Colleen Buchanan email to others in FWS, “San Carlos Wolf M574,” 4/6/2004

²⁶ P. Hedrick e-mail to recovery team, “Mexican wolf ancestry,” 8/2/2004.

²⁷ Mexican Wolf Blue Range Reintroduction Project Adaptive Management Oversight Committee, “DRAFT Proposal on a response to public issues raised at recent meetings sponsored by Congressman Pearce at Glenwood and Socorro, New Mexico,” 4/26/2005.

²⁸ Associated Press, “Fish and Wildlife proposes restrictions for wolf program,” *Silver City Sun News*, 4/28/2005, p. 6A.

In 2006, the Service finally released a pack of four new wolves in Arizona. Then in 2007, biologists identified as a “possible” goal one or two “initial releases,”²⁹ but the Service did not release any wolves from the captive-breeding pool that had not previously been in the wild. In 2007, Dr. Hedrick and Dr. Richard J. Fredrickson (now at the University of Montana) and two other scientists correlated inbreeding among Mexican gray wolves in the wild with fewer observed pups and suggested a genetic basis for determining how many pups are born and/or survive in the wild population.³⁰

In January 2008, citing the genetic evidence published the previous year, the Association of Zoos and Aquariums, which oversees the captive breeding program, urged the Service to continue releasing wolves from the captive population.³¹ That November, a captive-bred, new wolf was released into Arizona – the last such initial release to take place until January 2013.

In March 2009, Dr. Fredrickson wrote the Service:

There continues to be an unacknowledged disconnect between the USFWS management of the BRP [Blue Range population] and the establishment of a genetically diverse population. Currently the BRP has a narrow genetic base with descendants of the former Bluestem and Aspen packs dominating the ranks of the alpha wolves. Bluestem is especially overrepresented. If not dealt with, this will serve to increase inbreeding and reduce fitness in the BRP in future generations. There is also either a lack of concern, acceptance, or understanding that the best biological opportunity to broaden the genetic base, increase fitness, and accelerate population growth of the BRP is closing with the aging of the F1 [first cross-lineage] generation of captive-bred wolves. Likewise, opportunities are now also limited for using backcross wolves (MB x F1) for genetically augmenting the BRP. In the case of the BRP time is opportunity, and the costs of lost opportunity are high. Over the last five years the USFWS has through inaction lost one of its best options for reinvigorating the moribund reintroduction program.³²

These comments had no effect on management. Although two captured wolves had been released (translocated) in 2009 prior to Dr. Fredrickson’s comments, no more were released that year. In 2010, a single captured wolf was released in but again, no new wolves were released from the captive-breeding pool. A 2010 progress report stated that “lack of appropriate initial releases and successful translocations from captivity” contributed to “fewer known adult wolves available for pair formation.” This frank acknowledgment was accompanied by a pledge to “replac[e] the individual animals lost through initial releases and translocations.”³³ Nevertheless, in 2011 the Service released just *two* previously-captured wolves (and no new wolves) to replace the eight wolves known to have died or gone missing in 2010. Failure to replace enough lost

²⁹ Mexican Wolf Reintroduction Project 2007 Interagency Field Team (IFT) Annual Work Plan (1/11/2007), p. 2, posted on-line at http://www.azgfd.gov/w_c/wolf/documents/MWAnnualWorkPlanfor2007.AllAgencies.Final.pdf.

³⁰ Fredrickson, R. J., Siminski, P., Woolf, M. and P. W. Hedrick. 2007. Genetic Rescue and Inbreeding Depression in Mexican Wolves. *Proc. R. Soc. B*, 274:2365–2371.

³¹ Letter of Steve Olson to Dr. Benjamin Tuggle, Duane Shroufe and Bruce Thompson, 1/2/2008.

³² R. J. Fredrickson, Comments on the “Draft Mexican Wolf Conservation Assessment,” submitted to Fish and Wildlife Service, 3/9/2009.

³³ U.S. Fish and Wildlife Service, Mexican Wolf Recovery Program: Progress Report #13, January 1 – December 31, 2010, on-line at http://www.fws.gov/southwest/es/mexicanwolf/pdf/2010_progress_report_final.pdf; p. 29.

wolves set the stage for one of those two released wolves to breed with a dog, and later to consort with another dog. The Service eventually had the wolf shot on Dec. 14, 2011, further undercutting survival and recovery.

In a 2010 review, professors Hedrick and Fredrickson indicted the Service for mismanagement, stating as follows:

Mainly because of non-scientific considerations, further releases [to the wild] 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.³⁴

Their sobering prognosis reflected the effects of delay:

Finally, there may not be a second chance for genetic rescue here because none of lineages are still maintained separately in captivity. 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-lineage 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.³⁵

The two scientists continued:

Unfortunately, this evaluation also suggests that some aspects of genetic rescue should have been carried out in a more timely manner and that for Mexican wolves, the recovery of the reintroduced population is now in jeopardy, partly because of poor implementation of genetic rescue management.³⁶

Also in 2010, in a new “Mexican Wolf Conservation Assessment,” the Service acknowledged that the wild population was “at risk of failure,” and that captive wolves are not intended to replace the wild population if it were to be lost – re-confirming that the imperiled Blue Range population is essential to conservation of the Mexican gray wolf:

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

³⁴ Hedrick, P.W. and R. Fredrickson. 2010. Genetic rescue guidelines with examples from Mexican wolves and Florida panthers. *Conservation Genetics* 11:615-626, p. 621.

³⁵ *Ibid.*, p. 622.

³⁶ *Ibid.*

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.³⁷

The low reproductive and/or recruitment rate was linked to inbreeding depression identified in the wild population. The Service noted that the window of time to meaningfully ameliorate this condition was closing:

[I]nbreeding 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.³⁸

That year, officials announced intentions to release a new wolf pack in Arizona but did not follow through, delaying release of the pack to 2011 but not following through then, either, just translocating two previously-caught wolves.³⁹

In 2013, the Service released one new wolf but recaptured him within weeks, re-released him with another previously caught wolf, and captured him again. The Service also announced plans to release a new wolf pair, but did not follow through.

Although the Service has proffered various excuses for these many failures, the core reason boils down to its fear of the livestock industry and unwillingness to confront its fervent intolerance. Should the livestock industry achieve its openly-stated goal of removing *all* Mexican wolves from the wild, there is absolutely no reason to believe that the Service would then promulgate a rule initiating another reintroduction program. And were the Blue Range population to be extirpated in coming years even as the number and genetic status of captive, breeding wolves continues to decline, it is likely that other reintroduction efforts, even if authorized and well managed – both dubious assumptions – would have insufficient genetic diversity to succeed. Thus, the reintroduced population of the Mexican wolf may end up being the only wild population in existence.

The Service's own draft proposed rule states that the reintroduced population is "fundamentally necessary" for Mexican wolf recovery:

Continuing the effort to reestablish the nonessential experimental population, and making modifications to improve it, will substantially contribute to the recovery of the species, as it is currently extirpated in the wild except for the nonessential experimental population in the United States and a fledgling reestablishment effort in Mexico. We recognize that more than one population of Mexican wolves will need to be established for recovery (Service 2010, pp. 68-70); therefore, achieving the objective of at least 100 wolves for

³⁷ U.S. Fish and Wildlife Service. 2010. Mexican Wolf Conservation Assessment. Albuquerque,; p. 67.

³⁸ Ibid., p. 60.

³⁹ "Anticipated Release of Mexican Wolves Delayed until 2011," Fish and Wildlife Service Region 2 press release, 10/8/2010.

this population serves as a fundamentally necessary component of Mexican wolf recovery.⁴⁰

“Fundamentally necessary” effectively means the same thing as “essential.” Only three places in the southwestern United States and Mexico maintain the habitat capacity to support relatively large numbers of Mexican wolves: the Blue Range Wolf Recovery Area, the Grand Canyon ecosystem and the southern Rocky Mountains.⁴¹ In that respect alone, it is clear that the reintroduced population is essential to recovery.

Despite the genetic evidence that the reintroduced population should be re-designated as experimental-essential, the draft proposed rule posits several objections, including that “if importance to recovery was equated with essentiality, no reestablished populations of a species would qualify for nonessential status.” Yet, for the Mexican gray wolf, perhaps unlike some other species and subspecies, failure to recover would quite likely equate to extinction. All of the best available information clearly shows that the Mexican wolf will not continue in captivity for long, due to inbreeding (as discussed above) and limited resources which have squeezed the captive-breeding program and would be exacerbated through competition with other species requiring captive-breeding, should recovery no longer be possible.

Given the genetic infirmities inhering in the captive population, the Service’s reluctance to take affirmative steps that would be necessary to initiate another reintroduction, and given the fact that the reintroduced population is one of three that will be necessary to recover the Mexican wolf in one of the three places in which a relatively large population could plausibly be established in the Southwest or Mexico, the wild population’s importance to recovery now equates to it being critically essential to the continued existence of the subspecies.

The non-essential designation has not lessened illegal killings sufficiently if at all, but has thwarted conservation of the reintroduced population.

The proposed rule states:

[O]ur finding of whether a population is nonessential is made with our understanding that Congress enacted the provisions of section 10(j) to mitigate fears that reestablishing populations of threatened and endangered species into the wild would negatively impact landowners and other private parties.⁴²

Even assuming that they are well-founded, a designation of experimental-essential can mitigate such fears through “take” authority conveyed in section 10(j). In addition, such a designation would necessitate review under section 7(a)(2) to determine whether issuance of take permits would jeopardize the continued existence of the Mexican wolf in the wild.

According to the draft preliminary EIS, 50 wolves are known to have been illegally killed from 1998 through 2012,⁴³ the largest category of deaths and a primary contributor to the

⁴⁰ 78 Fed. Reg. at 35732-35733.

⁴¹ Carroll, C., M.K. Phillips, C.A. Lopez-Gonzalez, and N.H. Schumaker. 2006. Defining recovery goals and strategies for endangered species: the wolf as a case study. *Bioscience* 56:25-37.

⁴² 78 Fed. Reg. 35731 (June 13, 2013)

⁴³ pdEIS, p. 35. This presumably reflects not just the 37 illegal shootings (p. 21) but also a proportion of the 12 or 14 (depending on page number in the EIS) vehicle-caused mortalities, in which driver violated the 1998 rule by not

population's demographic and genetic troubles. In explaining the proposal to liberalize take, the EIS states what the proposed rule leaves unsaid in invoking a finding required by ESA 10(j):

We expect that modifying the provisions governing the take of Mexican wolves will reduce the likelihood of indiscriminate, illegal killing of wolves and will substantially lessen the overall risk of human caused wolf mortality. Reduced human caused mortality, would substantially contribute to the higher population growth rate necessary for the establishment of a viable, self-sustaining Mexican wolf experimental population.⁴⁴

But the rate of known, malicious, illegal killings and the rate of disappearances are significantly higher in the reintroduced Mexican wolf population than in other wolf populations that were protected under the ESA (a factor that should be quantified and discussed in the EIS and proposed rule). These higher rates prevail despite rules for the Mexican wolf population that authorize take of Mexican wolves in instances in which listed northern Rocky Mountain wolves would not have been taken. For example, the rule authorizing the reintroduction of an experimental non-essential population to Yellowstone National Park and central Idaho limited Federal control of depredating wolves through the following qualifications, that comprised one strand in the definition of a wolf or wolves as "problem" animals subject to take:

No evidence of artificial or intentional feeding of wolves. 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.⁴⁵

No such qualifications provide any similar protection for Mexican wolves. Similarly, northern Rockies wolves were not required to be removed for crossing the boundaries of their recovery area or even of the experimental population areas set up for them. Similarly-dispersing Mexican wolves must be captured, according to the 1998 reintroduction rule. But the comparative increase in Federal take under the Mexican wolf reintroduction rule has been accompanied by a greater number and proportion of Mexican wolves killed illegally.

If the Federal take had not been so high, the effects of the illegal take likely would not have harmed the prospects for success, creating precisely the scenario that the non-essential designation was supposed to avert. That is because Federal take is even higher than the known number of illegal killings, and one high cause of mortality would have been easier for the population to withstand than two high causes of mortality (or, in the case of Federal take, mortality and live-removal).

According to the pdEIS, 52 wolves were removed from the wild between 1998 and 2012 and not released back (a number that includes those deliberately and accidentally killed), while

reporting the accidental running-over of a wolf, which in of itself would not be illegal; if so, we are pleased that the Service is finally accounting for the totality of illegal killings and not just the illegal shootings. But the number 50 would not count the many radio-collared wolves that have disappeared, some suspiciously and many likely to have been shot.

⁴⁴ pdEIS, pp. 34-35.

⁴⁵ 59 Fed. Reg. 60272 (Nov. 22, 1994).

illegal shootings numbered 37.⁴⁶ (One of those wolves, the alpha male of the Saddle Pack, M574, shot on July 11, 2004 for depredations, was killed despite an April 6, 2004 email from Service biologist Colleen Buchanan warning that this wolf was the “most genetically valuable wolf in the wild,” was not “genetically redundant” even with other wolves in captivity, and should not be killed.⁴⁷) We submit that many of those 52 wolves including M574 would have been protected from Federal removal under a designation of experimental-essential, requiring review of Federal actions, making the loss of the 37 illegally killed wolves much less catastrophic for the population. The proposed re-designation of the population as experimental, non-essential is unjustified by the biology, law and regulation, and would continue to undercut conservation of the reintroduced population.

II. Federal Wolf Control and Opportunities for Private Killings of Wolves Must End or be Greatly Reduced, and Not Increased, in All Alternatives

Federal trapping, poisoning, and destruction of pups in their dens was the primary cause of the Mexican wolf’s original endangerment, including in Mexico where the Service sent personnel and government-produced poisons to organize wolf “control” in that nation, beginning in 1950.⁴⁸ Since reintroduction began, as shown above and as acknowledged in the Mexican Wolf Conservation Assessment, agency take is the primary cause of known losses to the population. Given the failure of harsh take regulations to stanch illegal killings, and the toll of Federal wolf control, it is completely arbitrary to now propose to liberalize take regulations further, and even to avoid any alternatives to such liberalization. Similarly, given the high number of wolves lost to illegal killings and suspicious disappearances, and the cost to prospects for recovery, all steps must be taken to *reduce* such shootings by non-governmental actors rather than to legalize them. We propose three management measures that could and should be codified in regulation, to reduce Federal and private take alike and thereby better protect the population: Do not remove for depredations any wolf known to have scavenged on the carcasses of (non-wolf-killed) livestock; end the issuance to members of the public of telemetry receivers programmed to the wolves’ radio-collar frequencies (and retrieve those already dispensed); and cease providing precise wolf locations to the public at large and to individual ranchers.

Hold wolves blameless for depredations if the wolves have previously scavenged on livestock.

Owners of livestock must be required to take responsibility for their cattle on public lands, and to remove or render inedible in a timely manner the carcasses of stock that are not killed by wolves. Such measures would prevent wolves from being attracted to carcasses, scavenging on them, remaining localized in areas where additional, live domestic animals may be particularly

⁴⁶ pdEIS, table 1-1, p. 15.

⁴⁷ Colleen Buchanan email to others in FWS, “San Carlos Wolf M574,” 4/6/2004.

⁴⁸ Robinson, Michael J. 2005. *Predatory Bureaucracy: The Extermination of Wolves and the Transformation of the West* (Boulder: University Press of Colorado).

vulnerable, and/or becoming habituated to preying on livestock. Exculpating wolves that scavenge livestock carcasses for any future depredations would serve to create an incentive to prevent scavenging.

The Three Year Review recommended requiring livestock owners to take responsibility for carcass removal disposal, noting that:

At least 3 packs were removed from the wild because they scavenged on dead livestock left on national forest lands. Such scavenging may predispose wolves to eventually prey on livestock.⁴⁹

Indeed, such predation has led to many wolves being removed by government.

The Five Year Review did not recommend this measure. However, its cursory analysis of the correlation between wolves scavenging and subsequently depredating understates the incidents in which wolves first scavenged on livestock carcasses and subsequently depredated on livestock,⁵⁰ and should not be relied on in the preliminary draft EIS to justify not including at least one alternative that would address this glaring problem.

First, the Five-year Review analysis was based solely on visual observations of wolves scavenging; it should have also included scavenging instances documented from necropsies performed on dead livestock. Second, the limited (once or twice a week, for the most part) monitoring of the wolves almost certainly missed other scavenging incidents, many of which would have preceded the depredations; it is inappropriate to assume that only those events documented actually occurred. Third, record-keeping of scavenging in the reintroduction program started off as haphazard, and since 2004 has been almost entirely absent, by design. As an early example of the failure of consistent record-keeping through negligence, Nick Smith of New Mexico Department of Game and Fish informed the undersigned that the Gavilan Pack scavenged on a dead cow prior to that pack's killing of cattle in New Mexico in January 2000, but this was never put in writing. Later, after it became evident to us and after we were concurrently informed by concerned agency personnel, without authorization, that scavenging was not being documented, the Center repeatedly requested during meetings of the Adaptive Management Oversight Committee that a directive require documentation of scavenging discovered through necropsies and other investigations. Such a directive was never issued, and USDA Wildlife Services continues to systematically fail to document instances in which their personnel investigated dead livestock fed upon by wolves except in the cases that wolves caused the deaths. This deliberate shying away from collecting valuable data undermines the integrity of the current EIS and rule-making process.

Specific mistakes in the Five Year Review scavenging analysis include the following, all of which we repeatedly corrected for the Fish and Wildlife Service during development of the review:

1. The background of wolf F592, shot and killed by the Service on May 27, 2003, is misrepresented in the Five Year Review chart of depredating wolves.⁵¹ As evidenced in documents that we obtained via FOIA (and provided the AMOC in our comments on the

⁴⁹ Paquet, P.C., J.A. Vucetich, M.K. Phillips, and L.M. Vucetich. 2001. Mexican wolf recovery: three-year program review and assessment. Prepared by the Conservation Breeding Specialist Group for the United States Fish and Wildlife Service, Albuquerque, New Mexico. Apple Valley, Minnesota, p. 69.

⁵⁰ Five-Year Review, Administrative Component, pp. 27-33, 55.

⁵¹ Ibid. p. AC-57.

- draft of the Five Year Review), F592 scavenged on livestock in March 2001 prior to beginning to depredate,⁵² and she ended up traversing dozens of miles to finally depredate precisely where she had first scavenged two years previously – an indication that scavenging and depredating are strongly tied. The Five Year Review chart erroneously states that F592's first depredation, on April 18, 2001, preceded her scavenging (which the chart wrongly says began on May 1, 2001). And the chronology regarding wolf F511's depredations and scavenging incidents is also incorrect; this wolf too began depredating subsequent to scavenging (and was captured and subsequently died of capture myopathy).
2. The Mule Pack's history is similarly misrepresented in the Five Year Review chart, which classifies M190 as "feeding on a carcass that was a direct result of a depredation" and lists M190's first scavenging and depredation incident on May 11, 2001, despite another record indicating his first scavenging incident occurred on Jan. 16, 2000.⁵³
 3. The Pipestem Pack's scavenging and depredation history is also misrepresented in the Five Year Review chart, which lists three members of the pack as "feeding on a carcass that was a direct result of a depredation" on April 4, 1999, despite the fact that such was not established.⁵⁴

In other instances, the Five-year Review chart misleads by implying that depredations preceded scavenging, when in fact the depredated stock and the scavenged stock were discovered at the same time, in the same area, and chronology was never established. The Gavilan Pack's experience in Arizona is one such instance.

The Five Year Review scavenging analysis only extended from 1998 through 2004, yet identified five wolves that scavenged before depredating during that span. Since then, a few more incidents have come to light, including that of the Hon Dah Pack whose members scavenged in April, 2005 before depredating—ultimately costing the lives of 10 of the 12 members of this pack.⁵⁵

The pdeIS must analyze the degree to which scavenging leads to depredations (and thus to wolf removals), and whether the Mexican wolf population can withstand any such losses, much less the full, unreported losses that our data above suggest have been and will continue to tax the population. Furthermore, the EIS must include alternatives that require at a minimum better record-keeping, if not an actual solution to the problem. (We urge the latter, more proactive remedial approach over merely a record-keeping requirement.)

Carcasses can be removed or rendered inedible through several means. They can be dragged away by backhoe or behind a vehicle. They may be soaked in gasoline and burned.

⁵² Wendy Brown email to other Service personnel, March 12, 2001: "The Campbell Blue wolves remain separated. Last Friday, March 9, both were located on carcasses of livestock on private land. Neither had killed the animals, but were scavenging."

⁵³ According to the Mexican Wolf Project Interagency Update covering January 4 -18, 2000, "On January 6 the [Mule] pack was found eating on the carcass of a dead horse. Investigation of the carcass determined the wolves did not kill the horse."

⁵⁴ According to the Mexican Wolf Reintroduction Update covering March 21 – April 7, 1999, "On April 4, the rancher reported a possible depredation (calf) to project personnel, who retrieved the carcass. Heavy snow obliterated sign in the area. USDA Wildlife Services conducted a necropsy on the calf. Examination of remains was inconclusive as to cause of death. Wolves were in the area during this period. A dead bull and cow in the vicinity had also attracted bears and other predators."

⁵⁵ John Oakleaf email to interagency personnel, April 4, 2005, "San Mateo Wolves": "The flight on Saturday also discovered Hon-Dah on a cow carcass. The cow was looked at by Wildlife Services on Sunday. It was not killed by wolves."

They can be dumped into a pit and covered with soil and rocks. They can be exploded into tiny portions by dynamite. They can be treated with lime. While some of these methods are not feasible or appropriate in all circumstances, some method may be made feasible in any case.

While it may necessitate additional work to locate and dispose of such carcasses prior to wolves scavenging on them, the process of looking for them should be part of the responsibilities of those permitted to use public lands for grazing. Furthermore, livestock owners who spend time looking for carcasses are more likely to find sick or injured stock that may still be saved. The requirement to remove or destroy such carcasses may incline stock owners to avoid placing excessive numbers of animals in areas in which low food or water availability makes the stock more vulnerable. The time spent on finding and disposing of carcasses could easily be offset by the benefits of improved husbandry.

There are several possible ways to enforce such a requirement. As quoted earlier in these comments, the Service's rule that established an experimental non-essential population of wolves in the northern Rocky Mountains regulates "attractants" including livestock carcasses, even though it did so loosely and with poor enforcement. A better means would be to define a "depredating wolf," a "problem wolf," or a "nuisance wolf" (or all three) as an animal that has preyed on livestock and is reasonably anticipated to do so again, but that has not fed upon any carcass (or portion of a carcass) of livestock that died of a non-wolf cause. Thus, wolves that scavenge would be exculpated and held blameless for any and all subsequent depredations – providing a powerful community incentive not to create such wolves immune to legal take. With such a definition in place, the following language could aid in enforcing such a requirement:

Feeding of wolves or attracting them with food is prohibited. Livestock carcasses on lands managed consistent with a federal or state lease, agreement or contract shall be removed or rendered inedible (through lime, fire, explosives or other authorized means consistent with public safety). Improperly disposed livestock carcasses located in the area of depredation will be considered attractants. Incidents of wolves in the vicinity of or scavenging or having scavenged on attractants shall be recorded and maintained. No take of wolves may occur in areas where attractants have attracted wolves.

No take of wolves that are not depredating wolves [or problem wolves] shall be authorized for livestock protection purposes and no take of wolves shall be authorized in the vicinity of attractants, including livestock carcasses, unless such attractants are specifically being used in the take operation.

Another means of requiring and enforcing livestock carcass removal would be to fold such requirements into the permits granted by land management agencies to authorize grazing. The Supreme Court in *U.S. vs. Light* (1911) ruled that livestock grazing on public lands is a privilege – not a right – and that "The United States can prohibit absolutely or fix the terms on which its property may be used." The Supreme Court has twice reaffirmed this ruling, most recently in a unanimous decision in *Public Lands Council vs. Babbitt* (2000). Therefore, such a requirement would not face any legal obstacle, contrary to statements in the Five Year Review. Putting a requirement to dispose of livestock carcasses into grazing permits would be facilitated by reclassifying the Mexican wolf population from experimental, non-essential to experimental-essential, triggering ESA Section 7(a)(2) consultation for federal actions that might adversely

affect the species. Such consultation could specify that requirements for livestock carcass removal are reasonable and prudent measures to avoid jeopardy.

The Five Year Review not only neglects the very relevant effect of allowing public lands grazers to make livestock carcasses available to wolves and habituating them to livestock, but also fails to identify what level of predator control ultimately caused by such neglect, if any, the Mexican wolf population might be able sustain at this point, without further damage to the subspecies' genetic integrity. Predator control must be reduced substantially to enable the reintroduced population to survive and increase, and requiring carcass removal or destruction is one important component of allowing more wolves to survive in the wild.

Reflecting this reality, Oregon authorities have instituted (inadequate) requirements for carcass removal before removing (non-listed) wolves from the wild. It is absurd that the highly imperiled, endangered Mexican wolf would receive less protection. In our experience, non-wolf-killed livestock carcasses are commonly encountered in many grazed areas of the Gila and Apache national forests, particularly in the Beaverhead area of the Gila N.F., where a succession of wolf packs have lived only to be destroyed or mysteriously disappear. Similar conditions may be found in significant swaths of other areas of the Southwest where wolves may be allowed to roam at the conclusion of the instant rule-making. The Center has repeatedly brought the issue of carcasses and the danger they represent to wolves to the attention of the Service and other federal and state agencies, to no avail. This problem should be analyzed fully in the EIS and addressed in the final rule.

Some scavenging by wolves on livestock stems not merely from negligence, but reflects a strategy by people who oppose wolf recovery to habituate wolves to prey on livestock, knowing that this can lead to the removal of such wolves under the existing (and proposed) reintroduction rules. Wolves of the Campbell Blue and the Durango packs appear to have been victims of such a strategy. The Campbell Blue Pack of Mexican gray wolves consisted of M166 and his successive mates, killed or captured one by one. M166 was one of the first of 11 wolves released in Arizona in March 1998 in the first round of releases of Mexican Wolves to the wild; he was also the last to stay in the wild. The August 3, 1998 minutes of a interagency field team meeting documented that M166 and his original mate, F172 (destined to get shot by poachers 4 days later), "killed an adult cow elk 400 m[eters] (1/4 mile) from a corral full of cows and calves."⁵⁶ Clearly, wolf M166 had no interest in livestock.

In April 2000, F592 was released and she paired with M166. They left the recovery area that summer, and even though they showed no interest in cattle and continued to prey on elk, in July 2000 they were trapped and taken into captivity. Two months later, F592 tried to climb over a chain link fence and broke her leg. She was given veterinary care, and recovered. In December 2000 both wolves were re-released into the Gila National Forest, and immediately split apart. It was a drought year, and cattle were dying throughout the Gila in great numbers. Separately, both wolves scavenged on a succession of livestock carcasses of animals they did not kill. Through much of February 2001, wolf 166 fed on a bull that had trespassed and grazed in a region where cattle were seasonally banned and had died from a fall. The rancher refused to allow the Service or the Forest Service to remove the carcass.⁵⁷ Around the same time, F592 was feeding on a dead cow on private land whose owner also refused to remove the carcass.⁵⁸

⁵⁶ Aug. 3, 1998 handwritten minutes of IFT meeting, obtained via FOIA.

⁵⁷ Wendy Brown, Feb. 9, 2001 email to IFT members, "update on 166 and dead livestock."

⁵⁸ Laura Schneberger letter to Captive Breeding Specialists Group (undated)

In March 2001, the two wolves re-united and shortly afterwards began preying on cattle together – the first time for either one of them. That spring both were captured by aerial net-gun. M166 spent the rest of his life in captivity. F592 was held for almost two years, then re-released in the Gila Wilderness with a new mate in spring 2003. She immediately left her new mate and traveled dozens of miles to national forest lands near where she had scavenged, and began hunting cattle again, resulting in her being the first wolf shot by government in the reintroduced population.

The Durango Pack's scavenging and demise in 2007 was facilitated by deliberate placement of a cow about to give birth, very near to the location of the wolves' den-site, and her branding there, facilitated by a programmed radio telemetry receiver given to stockmen. *High Country News*, which broke this story, reported that a ranch-hand employed by the Adobe Ranch in New Mexico (which utilizes state, federal and private lands) boasted to assistant editor John Dougherty in a face-to-face interview that he had brought the cow close and branded her in order to induce the wolves to depredate and then be removed (which did happen to one wolf, shot by government, before her mate and pup mysteriously disappeared).⁵⁹ The employee later denied his quoted statements. Inexplicably, the Service and other agencies posed an impossibly-high bar for even considering that the *High Country News* article might be true, and the Service continued to order the removal of wolves depredating Adobe Ranch livestock even after the incident was brought to light. Though the apparent malefactor's retracted statements may not have sufficed to secure a conviction in a (hypothetical) criminal proceeding, they should be given appropriate weight in the instant EIS and rule-making.

Government-supplied Telemetry Receivers and Flight Locations May be Facilitating Illegal Killings and should be withheld from private hands.

In addition to the wolves illegally shot, a minimum of 50 radio-collared Mexican wolves, many in the prime of life, have gone missing and are presumed dead, including animals traveling together that disappeared from monitoring simultaneously (such as most recently the Middle Fork Pack). A 2011 study of wolf disappearances in Europe quantified the likely proportion of such disappearances attributable to illegal killings;⁶⁰ in the instant EIS, the Service should use the same methodology to assess how many disappeared Mexican wolves may have been shot.

Likely not coincidentally, the Service and other agencies have widely distributed to livestock owners, as long-term loans, telemetry receivers that are programmed to the frequencies of wolves' radio collars, allowing those hostile to wolf recovery the ability to locate them. Borrowers include those who in court filings and in public statements have avowed their determination to rid the wild of Mexican wolves. The programmed receivers make the wolves vulnerable to illegal shootings. The aforementioned *High Country News* articles stated: "Armed ranchers on ATVs routinely patrol Forest Service roads in Catron County, tracking wolves with radio receivers provided by the Fish and Wildlife Service."

Given the high rate of illegal shooting of Mexican wolves and the large number of wolves disappearing under suspicious circumstances, as a rudimentary, prudent measure, wolf-frequency-programmed receivers should only be in the hands of government employees

⁵⁹ John Dougherty, "Last Chance for the Lobo," *High Country News*, Dec. 24, 2007.

⁶⁰ Liberg, O.G., Chapron, P., Wabakken, H.C., Pedersen, N.T., Hobbs and H. Sand. 2011. Shoot, shovel and shut up: cryptic poaching slows restoration of a large carnivore in Europe. *Proc. R. Soc. B.*

responsible for protecting and recovering the wolves, and in the hands of scientists who are studying them.

That individuals might illicitly track wild animals through telemetry to kill them is not hypothetical. Information posted online by the Arizona Game and Fish Department suggests that the disclosure of a mountain lion's radio frequency enabled a hunting outfitter using his own privately-owned telemetry equipment to locate the cougar for his client to kill.⁶¹ An Arizona Game and Fish Department biologist suspected broader misuse of privately owned telemetry equipment to kill collared cougars.⁶²

Disturbingly – and remarkably for a government agency – the Service has admitted that it *lost track* of the identities of some individuals to whom it “loaned” Mexican wolf-program telemetry receivers.⁶³

Little or no evidence can be marshaled (but should be, if it exists, for the EIS analysis) of conservation benefit through increases in good-will and wolves that are alive but would otherwise have been killed, to offset the ongoing, catastrophic losses to the wolf population that are being caused by telemetry receivers distributed to members of the public who are hostile to wolves, and that are (also) caused by already-liberal take regulations. Attitudes towards wolves are strongly-held, remarkably stable, and seldom shift among adults.⁶⁴ (The surprise when this is not so, in part explains the enduring emotional wallop of Aldo Leopold's “fierce green fire” account of his epiphany over the ecological and social value of wolves, after having shot a Mexican wolf in the Blue Range in 1909.) The take authority and the distribution of telemetry receivers come at a high price in wolf blood, but little or no tangible benefit for wolf conservation.

Similarly, there is little or no benefit, and likely an ongoing toll in wolf lives, of the weekly posting of wolf locations on the Arizona Game and Fish Department website with Service concurrence and cooperation, along with private though presumably more intermittent notification of individual ranchers. The EIS should analyze the purported benefits and costs of sharing such information. Though not as instantaneously available as information from privately-held telemetry receivers, the public (and private) postings provide information that makes wolves more vulnerable (for example, to someone hunting wolves using a predator-call device that could draw wolves in from miles away); for that reason, the routine posting of wolf locations should be discontinued.

Any management plan for wolves outside the MWEPA must stringently protect fully endangered wolves from take.

Whatever the final delineation of the Mexican Wolf Experimental Population Area (MWEPA) boundaries, wolves outside of (and not deriving from) the MWEPA must be protected from take even more so than those within the MWEPA. On a fundamental legal level, that is because they are fully protected as endangered and are not experimental. Beyond that,

⁶¹ http://www.azgfd.gov/w_c/jaguar/documents/FinalRonThompsonRedacted100427.pdf, pp. 42-46.

⁶² http://www.azgfd.gov/w_c/jaguar/documents/CompleteInterviewTranscript-MichelleCrabb.pdf, pp.38-39, 45-46.

⁶³ Chris Roberts, “New Mexico ranchers’ use of technology to track wolves debated,” El Paso Times, Aug. 16, 2010.

⁶⁴ Bruskotter, J.T., R. H. Schmidt and T.L. Teel. 2007. Are attitudes toward wolves changing? A case study in Utah. *Biological Conservation*, 139:211-218.

just as for experimental wolves, the EIS must demonstrate that a section 10(a)(1) take permit for such fully endangered wolves will in fact advance recovery, such a permit's purpose.

Particularly south of Interstate 10, where elk are absent and deer and javelina are only locally abundant, but where livestock are omnipresent, protections from take will need to be more stringent than in the Blue Range Wolf Recovery Area (BRWRA). As seen, take has contributed significantly to the genetic and demographic crisis facing the reintroduced population in and near the BRWRA. The 1982 recovery plan suggests that Mexican wolves in desert habitats maintained larger home ranges to compensate for lower prey distribution, than do more northern wolves. Young and Goldman's classic *The Wolves of North America* (1944), including in its mapping of a wolf runway crossing the U.S.-Mexico border, suggests the same. Under these circumstances today and in the foreseeable future, wolves south of I-10 will encounter more vulnerable livestock in their searches for sustenance, and will accordingly need more protections from take, as described in the sections above. We believe that wolves emanating from Mexico in southern New Mexico, Arizona or Texas (though the EIS states that the latter is not proposed in the management plan), south of I-10, should be protected from the take to be authorized in a section-10(a)(1) permit. Any permitted take of such wolves should solely be for veterinary or similar, short-term interventions intended to return wolves to healthy existence within or close to their chosen habitats in the shortest possible time. A 10(a)(1) permit must not be issued under the usual guise of protecting livestock.

III. Comments on specific provisions in the preliminary draft EIS.

Definitions (pp. xii – xiii)

Agent/Designated Agent: We request removal of this term instead of providing new authority to individuals to take wolves through Section 10 (a)1(A), Section 6 Agreement, or a Service-Approved Management Plan.

Authorized Agencies/personnel – We believe such agencies should not include USDA Wildlife Services.

Depredation -- We oppose allowing USDA Wildlife Services to confirm on its own suspected wolf depredations.

Lawfully Present Livestock – This definition should be revised to include “. . . or on legal allotments (not trespassing and observing all requirements of the allotment operating instructions) on Federal lands.” Such a provision would have saved San Mateo AM796, shot on Feb. 20, 2007 for three depredations, one of which involved a cow that remained on a pasture after it was supposed to have been vacated. The Forest Service characterized the cow as “lawfully present.” The definition of “lawfully present livestock” needs to be clarified to include the permittee's obligation to follow USFS operating instructions as a condition on the privilege of grazing on public lands.

Pets -- We request removal of this term instead of providing new authority to individuals to take wolves attacking pets.

Problem Wolves – We oppose the proposed liberalized standard for this term, triggered by depredating lawfully present domestic livestock just two times within six months. This would increase take from the level authorized in the 1998 rule (two times within one year *on private or tribal land* for domestic animals other than livestock.⁶⁵) Removing wolves for two depredations within six months is even more punitive than the now discredited and discarded SOP 13.0 which resulted in a genetic contraction and demographic stagnation between 2003 and 2008. We request that the definition specify that “problem wolves” are animals that have not previously scavenged on non-wolf-killed stock. Finally, we would like removal of the reference to pets in this definition.

Translocation -- “Affixing a radio collar” should not be an absolute requirement of translocation. We hope there will come a time when the use of radio collars can be scaled back or eliminated.

Introduction, Purpose and Need for Action (pp. 1-16)

The pEIS states that “these actions would be implemented through a Final Nonessential Experimental Rule.” Such a declaration is pre-decisional and not supported by the best available science. The population should be designated as essential to the continued existence of the Mexican gray wolf in the wild.

The proposed rule states that “the purpose of our proposed action is to establish a viable, self-sustaining experimental population of Mexican wolves within the MWEPA” and that allowing “Mexican wolf dispersal from the BRWRA into the MWEPA will further the conservation of the species by allowing wolves access to additional habitat for establishment.”⁶⁶ This statement is false if the proposed rule establishes a population objective of ≥ 100 wolves, liberalizes take throughout the MWEPA above a threshold of 100 wolves and even below it, and prevents dispersal outside the MWEPA. It would be true if the proposed rule establishes a population objective of ≥ 350 wolves and includes protections that will allow the expanded BRWRA population to grow to at least 350 without restricting dispersal. Our discussion below explains why the BRWRA population needs to be at least 350 wolves and why that number should be an objective for an enlarged BRWRA and not for the MWEPA as a whole.

The BRWRA population objective and threshold for permitted take should be at least 350 wolves, and the BRWRA should be expanded.

Carroll et al (2013) supports the need to establish at least three interconnected (by dispersal linkages) subpopulations of Mexican gray wolves totaling at least 750 animals with no population dropping below 200, within portions of the states of Arizona, New Mexico, Utah and Colorado. If two (hypothetical) populations each contained 200 wolves, a third would have to

⁶⁵ 63 Fed. Reg. 1772

⁶⁶ 78 Fed. Reg. 35732 (June 13, 2013)

contain 350 to achieve recovery.⁶⁷ Since it is impossible to know which subpopulation, if any, will need to support a higher population, it is prudent and precautionary to establish a 350 wolf threshold for the only population currently in existence. This is the minimum population objective that will be certain to contribute to eventual recovery of the newly to-be-listed Mexican gray wolf. No injurious take should be permitted for the reintroduced BRWRA population before it has reached 350 wolves or if it subsequently drops below that number

Distressingly, despite the pEIS confirming that “inflexible management regulations” causing “a low number of releases and a high number of removals [are] counterproductive to the achievement of the population growth needed for the establishment of a viable, self-sustaining experimental population of Mexican wolves,”⁶⁸ all action alternatives would increase removals and/or other take over the present standards, except for the welcome relaxation of the requirement to capture wolves establishing home ranges wholly outside the BRWRA and FAIR, which causes a small proportion of captures. Yet, no alternative would compel an increase in the number of releases.

The Three Year Review estimated that 468 wolves could live in the BRWRA based on deer and elk numbers (not counting wolves that might also subsist on javelina, beavers, jackrabbits, bighorn sheep, pronghorn, turkeys and other miscellaneous animals).⁶⁹ By expanding the BRWRA to include portions of additional national forests in Arizona and New Mexico, as discussed in three alternatives in the pEIS, additional space for releases will be made available within close dispersal habitat of the present BRWRA-based and (cooperating) Fort Apache Indian Reservation-based wolf population. This would raise the carrying capacity of the (new) BRWRA above 468 wolves, and therefore the revised objective of 350 wolves would be eminently achievable.

However, if the 350 (much less 100, as proposed) wolves were to be distributed throughout the vast MWEPA, as presently designated or as enlarged southward, that would again lower the standard created in the as-yet-ignored 1982 recovery plan. The recovery plan stated that the part of the prime objective prescribing re-establishment of a viable, self-sustaining population of at least 100 wolves in the middle to high elevations of a 5,000-square-mile area, was based on the area needed to support at least that many wolves.⁷⁰ Those wolves were eventually to connect with at least one additional population.⁷¹

Distributing the same or a slightly larger number of wolves over a much larger area would excessively dilute the population rather than bolster it with connectivity to additional (hypothetical) populations. The wolves should be allowed to roam freely, throughout all lands within the MWEPA and, we argue below, outside the MWEPA as well, but not with their numbers essentially capped at a threshold originally intended as part of a primary objective for just the first population.

Wolf numbers should not be diluted too much including distributing 350 wolves throughout the entire MWEPA; to reiterate, that number should be the objective for the (expanded) BRWRA. With so few wolves at present, the BRWRA population is not yet able to substantially affect its ecosystem. Ripple and Beschta (2010) found that “the low number of

⁶⁷ Carroll, C., R. J. Fredrickson, R. C. Lacy. 2013. Developing metapopulation connectivity criteria from genetic and habitat data to recover the endangered Mexican wolf. *Conservation Biology* in press.

⁶⁸ pEIS, p.19, lines 32-35.

⁶⁹ Paquet et al 2001, p. 48.

⁷⁰ Recovery Plan, p. 23.

⁷¹ *Ibid.*, p. 32.

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.⁷² 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, and that would continue if the population, slightly grown from its present size, was merely to be distributed over a vaster region.

The pdeIS states that “we do not consider a minimum population of around 100 wolves to equate to ‘self-sustaining’ or ‘viable’ (USFWS 2010).”⁷³ Yet, the proposed action is based on a “population objective of establishing a population of at least 100 wolves” (p. 52). In practice, this could serve as an upper limit of 100 wolves because nowhere does the Service recommend exceeding 100 wolves, in effect lowering the prime objective standard of the 1982 recovery plan and, as discussed above, lowering the fundamental objective of one of rationales for that admittedly too-low prime objective, which is conserving viability. In fact, the proposed rule for implementing the proposed action relaxes prohibitions on taking Mexican wolves with no threshold, and even more so at a population threshold of 100 wolves. In practice, the proposed action could be deemed completed at a population of 100 wolves even though the Service admits that such a population is neither “self-sustaining” nor “viable.”

Wolves should not be captured and moved simply for leaving the MWEPA.

In addition to “genetic variation”⁷⁴ within members of a population or species, “representation” also refers to the distribution of members among a variety of ecosystem types. Yet, in particular the proposed management plan for outside the MWEPA as intended to apply south of I-10, but also the contemplated expansion southward of the MWEPA, would entail issuance of take permits under sections 10(a)(1) or 10(j) that would likely preclude full or even partial representation of the Mexican wolf in habitats in which it evolved.

The Mexican gray wolf was first identified as a unique subspecies from a male killed at 6,700 feet elevation in the mountains of Chihuahua, Mexico by two biologists for the U.S. Bureau of Biological Survey, predecessor agency to the Fish and Wildlife Service.⁷⁵ “In southeastern Arizona and southwestern New Mexico, *baileyi* intergraded with *mogollonesis*,” Goldman later wrote. “Although wolves are known to wander over considerable distances, the transition from *baileyi* to *mogollonesis* [whose range encompasses that of the current BRWRA] is remarkably abrupt.”⁷⁶ E. Raymond Hall later confirmed *baileyi* as a subspecies along much the same boundaries.⁷⁷ In 1980, Michael A. Bogan, and Patricia Mehlhop suggested that two extinct southwestern subspecies – the Texas gray wolf (*C. l. monstrabilis*) and the Mogollon mountain wolf (*C. l. mogollonensis*) – could in fact be attributable to *baileyi*.⁷⁸ The 1982 Mexican Wolf Recovery Plan was agnostic on whether *baileyi* should be synonymized with

⁷² Beschta, R.L. and W. J. Ripple, “Mexican wolves, elk, and aspen in Arizona: Is there a trophic cascade?” *Forest Ecology and Management* 260 (2010) 915–922

⁷³ pdeIS, p. 21, lines 8-9.

⁷⁴ pdeIS, p. 22, line 8.

⁷⁵ Nelson, E.W. and E.A. Goldman. 1929. A new wolf from Mexico. *Journal of Mammalogy* 10:165–166.

⁷⁶ Young and Goldman, 1944. *The wolves of North America*, vol. 1. Dover, 1944, p. 471.

⁷⁷ Hall, E.R. 1981. *The mammals of North America*. John Wiley and Sons.

⁷⁸ Bogan, & Mehlhop. 1983..

these other two subspecies, but adopted the revised taxonomy with the statement that the “additional room provided by the Bogan and Mehlhop assessment” would help the recovery team find “suitable wolf release areas.” Nowak suggested “accept[ing] *baileyi* as a separate subspecies as originally delineated,” explaining: “I have long been impressed by the tendency to small size shown by gray wolves of Mexico and the border region. A complete gray wolf skull found at a late Pleistocene site in Nuevo Leon is the smallest of any adult North American *C. lupus* that I have seen.”⁷⁹ He also endorsed placement of *baileyi* “beyond its designated range, on the grounds that it could have occupied such sites naturally, if other wolves had not already been there, and indeed, may have been attempting to do just that after the other wolves had been extirpated.”⁸⁰ (Indeed, the BRWRA is within the originally identified range of *mogollensis*.) Nevertheless, for fidelity of subspecies to ecosystem, it is imperative that wolves be protected and recovered in the Sky Islands ecosystem in which they evolved.

The pDEIS states that the release of Mexican wolves in Mexico creates a “requirement” for a “management plan for Mexican wolves that enter the United States and occur in areas...outside of the MWEPA.”⁸¹ There is no such legal or regulatory requirement and the management plan is not necessary.

The Service is correct that “recovery and long-term conservation of the Mexican wolf in the southwestern U.S. and northern Mexico will likely ‘depend on establishment of a metapopulation or several semi-disjunct but viable populations spanning a significant portion of its historic range in the region’ (Carroll et al. 2006).”⁸² However, the fact that all action alternatives would prevent dispersal among future populations by requiring the “capture and return [of] Mexican wolves originating from the nonessential experimental population that disperse outside of the MWEPA”⁸³ is a fundamental flaw in the EIS.

The current population of 75 wolves may yet increase to over 100 even before the instant rule-making is completed by the settlement-agreement date of Jan. 12, 2015. What then would be the point of a rule-making intended solely to achieve this admittedly inadequate goal? Instead, the rule-making should seek to set the stage for recovery -- and a recovery plan should be finalized concurrent with this rule-making – and should not include provisions (much less in every action alternative) that would block establishment of two new populations, north of I-40, now known to be necessary for recovery.⁸⁴ For this reason, there should be no requirements for wolves’ “capture and return” for crossing I-40; and for reasons previously discussed, no requirement for the same treatment for crossing I-10. Note that the experimental population rule reintroducing wolves to the northern Rocky Mountains included no such requirement to capture wolves that left the experimental population areas, although neither did the rule preclude such captures.

Elements of the proposed action and alternatives (pp. 24-39, 64)

1.3.1.1 Removal of the designation of the White Sands Wolf Recovery Area (WSWRA) as an area for the reintroduction of Mexican wolves. We do not favor this alternative. The Chihuahuan

⁷⁹ R. M. Nowak to J. Johnson (USFWS), “Mexican Wolf Reintroduction” (memo), 7/15/1986

⁸⁰ Ibid.

⁸¹ pDEIS, p. 22, lines 41-43.

⁸² pDEIS, p. 23, lines 8-15

⁸³ pDEIS, p. 25, lines 44-45

⁸⁴ Carroll et al 2006, 2013.

Desert characterizing this recovery area is typical of the Mexican wolf's historic range, as originally considered. Deer have rebounded in at least some BLM areas adjoining White Sands (i.e. Chalk Hills, Michael Robinson's personal observation, Dec. 2012). WSWRA is 2.2 million acres in size, with only supervised human access, no livestock, and within dispersal range of the BRWRA as currently configured, and even closer if the San Mateo Mountains are added to the BRWRA. Before de-designating White Sands, the Service should assess its current carrying capacity and compare it to the areas it is considering adding to the BRWRA.

1.3.1.2. Remove the small portion of Texas lying north of U.S. Highway 62/180 to the Texas-New Mexico boundary from the MWEPA. We oppose this measure, which would remove the habitat and prey availability of Guadalupe Mountains National Park solely on the basis that it lies near the MWEPA boundary, which as we expressed, should not serve as a trigger for removal. With that illogical provision changed, Guadalupe Mountains NP and adjoining areas provide potentially important habitat.

1.3.1.3. Move the southern boundary of the MWEPA in Arizona and New Mexico from Interstate 10 to the United States-Mexico international border. As noted, expanding the MWEPA would expand the reach of the 10(j) rule, which in its present and proposed forms authorize take that is inconsistent with survival much less recovery of the BRWRA population, and would be even worse in desert, non-elk habitats south of I-10. However, we do not support capture of wolves crossing from within to outside of the MWEPA. Given that the Service is proposing to capture wolves that leave the MWEPA, then if this adopted and upheld, we would support moving the boundary of the MWEPA southward. However, we recommend instead that the Service simply not commit to capture wolves leaving the MWEPA instead of expanding the MWEPA.

1.3.1.4 Expand the BRWRA to include any or all of the Sitgreaves National Forest and the Payson, Pleasant Valley, and Tonto Basin Ranger Districts of the Tonto National Forests in Arizona and the Magdalena Ranger District of the Cibola National Forest in New Mexico. As part of this expansion we would eliminate the designation of the Primary 1 and Secondary Recovery Zone within the BRWRA. We provisionally support the first provisions, and unequivocally support the second. For reasons explained above, expanding the BRWRA only makes sense with increase of the objective for the population to 350 animals. Allowing direct release of wolves throughout the recovery area, whatever its configuration, is vitally important for genetic reason and has been supported in the Three- and Five-year reviews, the Conservation Assessment, and by independent scientists and organizations such as the American Society of Mammalogists. This is the single most urgent change to make for the Mexican wolf. (This comment also applies to 1.3.2.1 Initial releases of captive-raised Mexican wolves.) Note also that the proposed rule erroneously removes the Apache National Forest in Arizona from a description of the proposed BRWRA. That is a damaging (and probably inadvertent) proposed removal of hundreds of thousands of acres of the current BRWRA within New Mexico, and should not be copied into the final rule.

1.3.2.2. Natural dispersal of wolves from the Blue Range Wolf Recovery Area (BRWRA) into the Mexican Wolf Experimental Population Area (MWEPA); Management of Mexican wolves in the MWEPA. We support this wholeheartedly. This is the second change which scientists

unanimously have long recommended as essential to reintroduction and ultimate recovery. The Service's case for the proposed changes is compelling, and also applies to the need to allow wolves to roam outside of the MWEPA.

1.3.2.3 Modification to the provisions for take (see the definition of "take" provided in the List of Definitions) of a Mexican wolf within the Mexican Wolf Experimental Population Area. We oppose each of these measures because of their likely effect of increasing killings and removals: Section 6 Authorization. The proposal to enhance the power of state wildlife agencies might theoretically not increase take, but it would dilute the Service's authority and could be used to improperly abdicate its responsibility and even *de facto* delist and return to state management before any recovery plan, let alone recovery.

Authorizing individuals to take wolves. This would allow zealous enemies of Mexican wolf recovery to set traps for or otherwise hunt targeted wolves and under cover of these activities illegally kill other wolves.

Immunity for Federal agencies and "authorized personnel." If passed, "mistaken identity" shootings by Wildlife Services personnel, such as the January 19, 2013 incident which violated section 9 of the ESA but likely was not prosecuted due to the McKittrick policy, would henceforth be immunized from prosecution, by regulation, even should the Justice Department rescind the nonsensical (but also non-regulatory) McKittrick policy. This would encourage more such "mistakes."

Permit livestock owners and their agents to kill wolves biting livestock on public lands as soon as there are 100 wolves. The Service continues to believe that it can kill its way to recovery.

When one looks behind the authorities upon which the Service claims that "wolf control" and liberal take "can also help to reduce human animosity and illegal take" (p. 34, line18) there is nothing but the opinion of wolf authorities with little or no personal experience with either Mexican wolves or – more importantly – the particularly ideological opposition from a select segment of people in or near the BRWRA. They might be right, but there is no evidence to support those opinions. In contrast, a recent study of attitudes toward wolves after hunting of them was authorized shows that – rather than increasing tolerance by permitting killing – there was actually less tolerance: "Approval of public hunting and trapping and official, lethal control of wolves implicated in domestic animal attacks were associated with *diminished* individual tolerance for wolves. . . . Contrary to the claim by the . . . Service . . . , we found unstable attitudes toward, *declining tolerance of*, and a *growing threat of poaching* wolves. (emphasis added).⁸⁵ In fairness, this study was not of attitudes in the MWEPA regarding Mexican wolves. However, it is the best science presently available – and it contradicts an article of faith which long has affected the Service's actions.

The Service repeatedly acknowledges, as it must, in this DEIS that 100 wolves are neither viable nor self-sustaining and are at most a "first step" toward the robust numbers necessary for survival, persistence, and recovery. Changing the "trigger" for killing wolves on public lands to

⁸⁵ A. Treves, L. Naughton, and V. Shelly, 2013. Longitudinal Analysis of Attitudes Toward Wolves. Conservation Biology 27(2):315-323

only 100 – and that 100 in a hugely expanded area --sets an impermissibly low bar for such drastic action over loss of a domestic animal whose owner will also be reimbursed.

Revising trapping prohibitions. Private leghold traps and snares should be banned in areas inhabited by Mexican wolves. Of 13 known instances of wolves in private traps, seven were injured, including two who suffered amputations and two who died.⁸⁶ The Service has omitted a critical element of “due care.” Neither in the pEIS, nor in the proposed rule (p.86, prohibitions (5)(iii) (A)-(E)) is there any requirement that trappers check their traps frequently enough to minimize death or amputation. The generalized “following the regulation, proclamations and/or laws within the state” is inadequate. It impermissibly delegates to states basic safety measures for the wolves. With New Mexico having withdrawn from participation under the current governor, there is no reason to believe that state regulations are or will be adequate. The Service do everything possible to reduce take. In particular, trappers should be made to check the trap as soon as it is sprung – as well as at least every 12 hours visually in case a required remote activation device fails.

Take for Pets. This will permit wolf haters to obtain dogs and cats from a pound to bait wolves and legally kill them. The Center recently reviewed responses to a FOIA request on F1105, a genetically valuable wolf shot on Dec. 14, 2011 by Wildlife Services following her consorting with a dog on private land within the BRWRA. The responses included video taken by the dog’s owner, in which he can be heard exclaiming to a companion his delight as the wolf spends more time with and appears attracted to the dog; presumably, this same individual was the person who later demanded the wolf be shot for frequenting his property. This proposed loophole will be exploited.

1.3.3. Voluntary, cooperative management actions on private lands. We support this and suggest it might provide a basis for systematically examining whether management actions can increase tolerance for wolves.

1.3.4. Develop and implement management actions on tribal land within the Mexican Wolf Experimental Population Area (MWEPA) by the Service or an authorized agency in voluntary cooperation with tribal governments. We support this except for binding the Service to remove wolves when requested from tribal lands. Tribal sovereignty does not require this, and it was not in the regulations for northern Rocky Mountain wolf reintroduction.

1.3.5. Implementation of a management plan (*Mexican Wolf Management Plan*) for the Mexican wolf for those portions of Arizona and New Mexico outside of in the Mexican Wolf Experimental Population Area (MWEPA). We oppose this insofar as a management plan will include an overly-broad 10(a)(1) take permit, for example to protect livestock.

Issuance of permits on private or tribal land anywhere within the modified and expanded MWEPA to allow livestock owners or their agent to take any wolf that is present on private or tribal land (p. 64). We oppose this provision that would reward wolf-haters for negligent or malicious baiting of wolves with livestock carcasses to precipitate depredation. Subsequently,

⁸⁶ Turnbull, T.T., Cain, J.W. and G.W. Roemer. 2012. Anthropogenic Impacts to the Recovery of the Mexican Gray Wolf With a Focus on Trapping-Related Incidents. Wildlife Society Bulletin.

other wolves would die, and not just in shootings but potentially through other efficient means as well.

IV. An Alternative Proposal—The Conservation Alternative

We offer the following alternative for consideration as the “Proposed Alternative” in the DEIS. It is a modification of Alternative Two presented in this document.

1. Expand BRWRA by adding the Forest Service districts specified in 2.3.2 Alternative Two, of the preliminary draft EIS.
2. Reclassify the expanded BRWRA population as an “essential” experimental population.
3. Adopt a population objective of at least 350 wolves for the expanded BRWRA population.
4. Allow unrestricted dispersal of Mexican wolves outside the expanded BRWRA.
5. Maintain the present MWEPA boundaries but remove the “capture and return” provision, thus allowing wolves to disperse unrestricted outside the MWEPA.
7. Authorize releases of captive wolves anywhere within the expanded BRWRA and translocations throughout the BRWRA and MWEPA.
8. Increase the threshold for any permitted take, and in particular for any relaxation of current standards for take, to at least 350 wolves in the expanded BRWRA population.
9. Do not remove wolves from the wild that come up from Mexico.

This conservation proposal is based on the best available science in support of the establishment of a viable, self-sustaining wolf population in an expanded BRWRA and in support of future recovery of the Mexican gray wolf, *Canis lupus baileyi*. It would meet the Endangered Species Act mandates of furthering the conservation and ensuring the continued existence of Mexican wolves in the wild.

Thank you.

Sincerely,



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