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RE: Mexican Wolf Recovery Plan 5-Year Status Evaluation

Dear Director Williams, Regional Director Lueders, and Dr. McGee,

We write today urging that you use the upcoming five-year status evaluation of the Mexican gray wolf Recovery Plan to take an honest, hard look at the current demographic and genetic status of the Mexican gray wolf population in the wild and to make essential improvements to ensure the species is set on a path to real recovery.¹ Despite the best efforts of many dedicated agencies and individuals, the Mexican wolf is currently on a trajectory more likely to result in extinction than recovery and we fear that without a candid evaluation of the facts at hand (and subsequent action), the Service will be unable to change that outcome.

Before detailing our suggested areas of focus and recommendations for improved metrics, we acknowledge that the status evaluation of the Recovery Plan is not a formal agency decision; nor does the evaluation's completion require public engagement. However, the intense public interest in the plan, as evidenced both by prior extensive comments and current litigation, should persuade the Service to seriously consider these comments as this administrative evaluation is conducted. Just because the Service is not legally compelled to listen to the public is no reason to ignore it, and we ask that you take our comments into consideration as you conduct the evaluation.

¹ U.S. Fish and Wildlife Service. 2022. Mexican Wolf Recovery Plan, Second Revision. Region 2, Albuquerque, New Mexico, USA. ["Recovery Plan" or "Plan"] "[I]n the first 5-year evaluation of the Recovery Plan, we will assess the status of each [a single U.S. and a single Mexican wild] population contributing to recovery . . . and will determine what actions are necessary to address identified needs." *Id.* 27. <https://www.fws.gov/programs/conserving-mexican-wolf>.

We have identified three significant ways in which the recovery plan is out of step with the current realities of the Mexican gray wolf population, factors which were not yet manifest at the time during either the First or Second revision of the recovery plan. First is that the recovery of the Mexican wolf in Mexico has badly faltered and is currently stalled out. Second, physical evidence of inbreeding may be emerging in the wild population and there is no plan in place for addressing it. Third, the recent 10j authorization for wolf reintroduction of gray wolves in Colorado jeopardizes the health of the Mexican wolf population in ways that were not foreseen in earlier planning efforts.

1. Mexican gray wolf recovery in Mexico is a quagmire.

After 12 years and approximately 75 wild releases of captive-born and translocated animals, Mexico's wild population of Mexican wolves likely numbers fewer than 15 individuals.

After the Service (and its predecessor agency) nearly exterminated all Mexican wolves in the wild, it changed course under the Endangered Species Act of 1973² and established a binational captive breeding program with Mexico to preserve the Mexican wolf from extinction. The Service's first recovery plan was published in 1982 and the first Mexican wolves were released from captivity in the wild in the U.S. in 1998. Releases of Mexican wolves into the wild in Mexico began in October 2011. Since then, after about 75 releases of captive-bred wolves and translocations of wolves from the wild U.S. population over a 12-year period, by September 2023, the Service estimates there are fewer than 15 wolves in the wild population in Mexico.³ Mexico has temporarily suspended wild releases. Despite many adult releases, the median known wild survivorship of wolves is just 78 days.

In addition to the vanishingly small size of the Mexico population, its genetic status is precarious. All of the wild born wolves in Mexico with studbook numbers are descended from the same male, M1215. He is the father of F1448, F1449 and M1403. He was also the mate of F1448 in 2020 and 2021, and any surviving offspring from those litters would be highly inbred. Because there are no more functioning radio collars on Mexico's wolves, it is unknown which animals are alive and what the genetic diversity is. *The current Recovery Plan depends upon a faltering, separate Mexico wild population of at least 200 wolves, to achieve recovery objectives and delisting under the ESA.*

Under the Recovery Plan, achieving the conservation principle of *resiliency* depends on a wild Mexico population "stimulated by the continued release of a substantial number of Mexican wolves from captivity to the wild, translocations, and population grown from natural reproduction increasing over time."⁴ *Representation* depends on low levels of natural dispersal between U.S. and Mexico populations and deliberate translocations.⁵ And for the third essential conservation principle of *redundancy*, the Plan explicitly states that the two wild populations (U.S. and Mexico) are necessary.⁶

Reality has dealt a harsh blow to this aspect of the Plan. The Service's scientifically unsupported "target" for 2023 for the Mexico population was 100 wolves. Further, the Plan called for 25 of the

² 16 U.S.C. 1531-1544.

³ Reznick, A. (2023, September 2). *Mexican grey wolf population has dwindled drastically across the border, environmentalists say*. Fronteras. <https://fronterasdesk.org/content/1856464/mexican-grey-wolf-population-has-dwindled-dramatically-across-border>

⁴ Recovery Plan 14.

⁵ Recovery Plan, 15.

⁶ Recovery Plan, 12, 15.

Mexico wolves surviving to breeding age during the first five years of releases and translocations – an arbitrary target not even close to fulfillment.⁷ We note the Plan contains no explanation or factual support for picking the 100 population and 25 survival-to-maturity interim targets; there is no rationale offered for the implicit conclusion that meeting the targets would relieve the Service from needing to modify or revise the Plan. But having selected these two targets as benchmarks against which to measure the Plan’s adequacy, the Service should not retroactively move the goal posts to avoid revising the Plan. The Service should thoroughly and immediately revise the plan to account for this reality.

Despite the hard work of biologists in Mexico to restore this species, they could not overcome the lack of public land, lack of effective law enforcement, lack of appropriate prey and accepted use of poison by the local populace. Mexico is a Sovereign Nation, not bound by the Endangered Species Act. These detrimental factors will not change in the foreseeable future. It would be unconscionable and unfair to this species for the Service to continue relying on this second lobo population in Mexico as redundancy against extinction or justification for continuing the non-essential designation. While Mexico should continue to be recognized as a valuable partner in Mexican wolf recovery, a revised recovery plan should allow for full recovery to be achieved within the US.

2. The infusion of genetic material into the wild population through cross-fostering may not be happening quickly enough to offset signs of inbreeding.

The recovery plan identifies release strategies to improve the genetics of the wild population, and these include releases of individual or paired adult wolves, a pack, or cross-fostering of pups into wild dens. However, the Service has consistently capitulated to the state agencies and has almost entirely relied on cross-fostering since 2016. The survivorship of cross-fostered pups to breeding age is a criterion for both downlisting and delisting of the species, but their actual breeding/genetic contribution to the population is not required to be measured.

A salient example of this problem is the Castle Rock Pack. In April 2021, three pups were cross-fostered into the wild den. The parents of the 2021 natal pups were M2654 and F2627, and among the wild-born pups was a male given the number 2627, who was removed from the wild in March 2022. He was moved into captivity at Sevilleta, then to the Ladder Ranch, back to Sevilleta and ultimately, released into Mexico on November 22, 2022. He died just a few weeks later, on December 10, 2022, after being hit by a vehicle.

His tragic story comes with an equally sad “footnote.” The middle digits on all four of his paws were fused, the first documented case of syndactyly in the Mexican gray wolf population. Syndactyly was considered morphological evidence of inbreeding in the Isle Royale wolves.⁸ While it is the first documented instance of this congenital maladaptation in the Mexican wolf population, it is not surprising: 2627 was highly inbred, and his paternal great- great- grandparents were the same full pair as his maternal grandparents (M1341 and F1042). His mother has been the breeding female of the Castle Rock Pack since at least 2020 and was still listed as the breeding female in 2023. The sire of the 2020,

⁷ Recovery Plan, 27.

⁸ Robinson, J. A., Räikkönen, J., Vucetich, L. M., Vucetich, J. A., Peterson, R. O., Lohmueller, K. E., & Wayne, R. K. (2019). Genomic signatures of extensive inbreeding in Isle Royale Wolves, a population on the threshold of extinction. *Science Advances*, 5(5). <https://doi.org/10.1126/sciadv.aau0757>

2022, and 2023 packs is undetermined,⁹ and it is unknown how many similarly inbred wolves with this congenital malformation are surviving and reproducing in the wild population. (It is our understanding that the Service has begun to more thoroughly review the physical condition of wolves when handling.)

This is an important example because while the Service counts the survivorship of cross-fostered pups as a proxy for improved genetic diversity, it is not quantifying the parallel likelihoods of inbreeding. The Castle Rock 2021 den was either a success (3 xf pups – 2618, 2616, and 2615 – an unknown number of whom survived into 2023) or a worrisome source of perpetuating genetic problems (six biological offspring in the 2021 litter, including F2632 who is still with the natal pack as of 2023 and four siblings who are listed as lost to follow up).

While a single instance of syndactyly is not necessarily indicative of the presence of other genetic mutations, it is a cause for concern. Similarly, a coccygeal vertebral malformation reported in the necropsy of wolf 1572 may be congenital or could be a poorly healed fracture; the report was inconclusive. Notably, 1572's mother's (1557) grandfathers on her paternal and maternal sides are full siblings (507 and 578, offspring of 190 and 189), and also full siblings with his paternal great grandmother (1111). (Wolf 507 was also 2627's great grandfather.) Thus, while it apparently was inconclusive as to the origins of 1572's tail bone malformations, it is a possible result of inbreeding.

The Service's evaluation of the recovery plan should determine whether the current trajectories of the Mexican wolf population relative to the recovery criteria accounts for potentially emerging morphological signs showing the lack of genetic diversity and/or presence of deleterious alleles in the wild population. In other words, who is reproducing in the wild and what are they passing on that could carry long-term risks to the population?

Another sign that cross-fostering isn't always effective for increasing the diversity of the wild wolf population is the cautionary tale of Mexican wolf (F1958). She was cross-fostered into the Saffel Pack in 2019 after the field crew was unable to add her, as they had planned, to the Iron Creek den because the mother wouldn't leave her wild pups. She was inserted into the Saffel Den because, after hours of transport and separation from her own birth family, as well as (presumably) the investment in resources in getting her to the MWEPA, her best shot at survival was to get placed with a family. Unfortunately, the available family – the Saffel Pack – were close relatives: the wild breeding female (1567) was full siblings with the pup's captive father (1564). Thus, the contribution of this cross-fostered wolf (one of twelve pups released this way) was less significant than it could have been. (Wolf1958 is listed as Lost to Follow Up, as is her full sibling, F2736, who was released into the Iron Creek Den as a cross-foster in 2022.)

3. The recovery plan did not account for the reintroduction of gray wolves in Colorado, and nor did the Colorado wolf plan sufficiently consider the impacts to Mexican gray wolves.

In November 2020, Colorado voters approved Proposition 114 to reintroduce wolves into the state. In May 2023, the Colorado Parks and Wildlife Commission finalized Colorado's "Wolf Restoration and Management Plan," a document designed to restore the gray wolf pursuant to voter mandate.

⁹ The parentage of 2627 was provided by personal communication to Greta Anderson, as it does not appear in the 2022 Studbook.

Unfortunately, despite the years of efforts by several of the undersigned organizations, Colorado has declined to reintroduce Mexican gray wolves into the state, and the new management plan specifically designated lobos as ‘lowest in preference’ for donor populations, due, in part, to the complexities of the 10j designation under which lobos are protected.¹⁰ Thus, the December 2023 reintroduction will proceed apace with Northern Rockies gray wolves (*Canis lupus*) relocated from Oregon.

The Service should collaborate with Colorado to prioritize Mexican wolf reintroduction as part of this effort. The science shows that a zone of intergradation between Mexican wolves and gray wolves historically occurred in the Southern Rockies. Occasional interbreeding of wolf subspecies in Colorado would benefit the existing Mexican wolf population in southwestern New Mexico and southeastern Arizona, which would be connected through long-distance dispersing wolves. The benefit would come in the form of diversifying the impoverished gene pool of the current Mexican wolf population.¹¹

Conversely, if Mexican wolves are not present in the San Juan Mountains, this region will be inhabited by reintroduced northern gray wolves, some of whom would similarly disperse and reach the current Mexican wolf population. The difference in scenarios is that, if Mexican wolves inhabit the San Juans, the center of subspecies intergradation would occur in west-central Colorado and not in central or southern New Mexico and Arizona. Were northern wolves to inhabit the San Juans, there is a risk of northern wolf genes swamping the gene pool of the Mexican wolf where it exists in the wild in the Southwest today. That risk of losing some of the uniqueness of the Mexican wolf is ameliorated through the presence of Mexican wolves in the San Juans.

Mexican wolves need all of the help they can get, as one of our nation’s most critically imperiled native species and the genetic exchange that could occur between reintroduced gray wolves in Colorado and Mexican wolves, if they were permitted to roam naturally and freely, could serve to benefit both species’ eventual recovery across the West.

The FWS’s 10j rule for the Colorado introduction (September 2023) discusses the need to manage Colorado’s new wolf population to minimize impacts of Mexican wolf recovery. The Service claims that the potential for interbreeding and competition could have adverse effects on the Mexican wolf, but the timeline and intensity of those effects is unknown. The 10j rule admits that range expansion of *C. lupus* and *C. lupus baileyi* could occur, and that this would imperil lobos through the potential loss of genetic integrity for the subspecies if dispersal and interbreeding occur.

While we don’t oppose the intergradation of wolf genetics occurring naturally, we are concerned that the current recovery plan for lobos doesn’t fully account for the threats to ssp. *Baileyi* that could occur if interbreeding occurs while the Mexican wolf population is still so genetically depauperate and relatively small. If wolves in Colorado are released (as currently allowed by the state plan, though not immediately intended) just 61 miles from the New Mexico border, a northern wolf and a lobo could meet up in a matter of days.

¹⁰ We note that the preclusion of Colorado from the potential reintroduction range of the species was because of earlier 10j regulatory language; as of July 2023, reintroductions outside of historic range are permitted.

¹¹ Hedrick, P., Wayne, R., & Fredrickson, R. (2018). Genetic rescue, not genetic swamping, is important for Mexican wolves. *Biological Conservation*, 224, 366–367. <https://doi.org/10.1016/j.biocon.2018.05.006>

The New Path to Recovery

Thanks to the wisdom of a former Regional Director of USFWS Region 2 (the Southwest Region) who assembled a team of highly credentialed independent scientists and interested stakeholders in 2010, a well-reasoned, science-based plan for full recovery of Mexican wolves within the Southwestern US and Mexico already exists and sits on a shelf in the regional office (USFWS 2012).

The 2010 Science and Policy Subgroup (SPS) diligently carried out their responsibility to apply the best available science to the objective of developing specific criteria for downlisting and delisting the Mexican gray wolf from its current classification of “endangered” under the Endangered Species Act. The SPS produced a complete 268-page Draft Mexican Wolf Revised Recovery Plan on May 7, 2012, which was marked “FOR TEAM USE ONLY NOT FOR DISTRIBUTION.” As late as March 29, 2013, the SPS presented recommended recovery criteria to the USFWS.

The 2012 draft recovery plan proposed three separate subpopulations, interconnected by dispersal corridors, of at least 200 wolves each with a total population objective of 750 wolves in the US Southwest. One of the 3 primary core populations proposed is the existing population inhabiting the Mexican Wolf Experimental Population Area (MWEPA). A second area of sufficient suitable habitat was described in the Grand Canyon Region of northern Arizona extending into southern Utah. And a third region was identified in the southern Rocky Mountains of northern New Mexico and southern Colorado (see Figure 4 in Carroll et al. 2014).

Not only were these two additional populations ignored by USFWS, but Mexican gray wolves are not allowed to follow the wildlife corridors that have existed for thousands of years to disperse to them, because the 2022 recovery plan prohibits Mexican wolves from dispersing into suitable habitats north of Interstate Highway 40. After expressing their disapproval of the SPS’s recovery recommendations, the states of Arizona and Utah leaked those confidential (FOR TEAM ONLY – NOT FOR DISTRIBUTION) 2010 MWRT recommendations to the press, public, and politicians. The USFWS responded by suspending all further meetings of the 2010 MWRT.

Litigation was initiated to force USFWS to complete a final Revised Mexican Wolf Recovery Plan (No. CV-14-02472-TUC-JGZ) and settled (CV-14-02472-TUC-JGZ Document 55, Filed 10/18/16) requiring USFWS to complete a final revised Mexican Wolf Recovery Plan by November 30, 2017. Anticipating this settlement agreement, which had been negotiated earlier than the court order, USFWS initiated a different recovery process in December 2015 to complete the prior work of the 2010 MWRT. A series of “information gathering workshops” were held through February 2017.

These workshops were closed-door, invitation-only meetings. It is difficult to know for sure the affiliations of invited attendees because the documentation of attendees lists names only. But it is our understanding that only personnel affiliated with the states of Arizona, New Mexico, Utah, and Colorado, and the USFWS were allowed to participate, as well as representatives from Mexico. All other stakeholders invited to serve on the 2010 MWRT were shut out of the process. An exception was that former SPS scientists from the 2010 MWRT were invited to attend, and four SPS members did attend some but not all of the workshops. To list these four people as participants is disingenuous. Some, and perhaps all, of these workshops included closed sessions to which the former SPS scientists were not invited, and none of these four individuals were invited to preview or otherwise participate in the editing or writing of the *Draft Mexican Wolf Recovery Plan, First Revision*. Neither the draft recovery

plan nor the supporting *Draft Biological Report for the Mexican Wolf (Canis lupus bailey)* identifies who actually authored the plan.

The closed-door, invitation-only workshops process was egregiously undemocratic, illegitimate, and inequitable. Evidence suggests that political leaders and representatives of the states of Arizona, New Mexico, Utah, and Colorado largely drove this process. They were given access to the closed-door workshops to the exclusion of other stakeholders. Conspicuously absent were representatives of conservation organizations that have financially, scientifically, and materially supported full science-based recovery of Mexican wolves.

In order to balance the discrepancies between the two widely different interpretations of “best science,” (i.e., between the 2012 draft plan and the 2022 revised plan) the USFWS must now give great weight to the views of independent scientists, non-agency scientific societies (such as the Society for Conservation Biology and the American Society of Mammalogists), and independent peer reviewers who were denied representation in the process leading to the development of the *Draft Mexican Wolf Recovery Plan, First and Second Revisions*.

The preponderance of peer reviewers contracted by USFWS were highly critical of many aspects of the 2017 draft recovery plan and draft biological report which purport to provide the best available science in support of the content and recommendations put forth in the *Draft Mexican Wolf Recovery Plan, First Revision*. This should give USFWS serious cause for concern that the current plan (Second Revision; which differs only slightly from the First Revision) misinterprets or fails to use the “best scientific and commercial data” (a requirement of the ESA) relevant to the recovery, downlisting, and delisting of Mexican wolves. The extensive criticisms of the contracted peer reviewers must be honestly and transparently addressed and not merely brushed off as a contrary opinion unworthy of serious consideration. To date the USFWS has made a mockery of the peer review process.

We note that the 2010 MWRT still exists (because it has not been officially disbanded) as an entity duly established by the USFWS for the purpose of developing a revised recovery plan. This gives their extensive work legitimacy as a plan commissioned by and submitted to USFWS for consideration as a roadmap to recovery for the Mexican wolf. To ignore the existence of the SPS’s substantial and material contribution and pretend that it does not exist (both the 2017 and 2022 revisions to the recovery plan make no mention of the draft plan developed by the SPS) is an insult to the expertise and hundreds of hours volunteered by these scientists. They conducted their deliberations seriously, apolitically, and with full recognition of the “best science” mandate of the Endangered Species Act (ESA). This is the way the recovery planning process was intended to work. We acknowledge that in forming the 2010 MWRT the USFWS got it right. In abandoning the 2010 MWRT process and ignoring their recovery recommendations in favor of the closed-door/invitation-only workshops dominated by representatives of the states, they got it wrong. We outline above how the 2022 recovery plan has substantially failed to meet recovery goals and trajectories, especially in Mexico. Drastic corrections are called for.

We request that the USFWS replace the recovery criteria presented in the 2022 revised recovery plan with the recovery criteria developed by the SPS of the 2012 Mexican Wolf Recovery Team.

In conclusion, The Service should use the five-year evaluation of its current recovery plan to honestly confront original flaws in the light of subsequent events which make major changes critical to recovering the Mexican wolf:

- Remove the limit of 320 for the U.S. population and adopt an objective of at least 750 – in recognition of the recommendations of its own 2010 recovery team and the changed reality that the Mexico population has failed to contribute to recovery as projected. Remove the I-40 barrier – to allow Mexican wolves to follow natural corridors, establish additional sub-populations, and meet the changed condition that wolves will now be reintroduced into Colorado.
- During the period covered by the five-year evaluation, wolves have repeatedly validated the Service's own estimates of thousands of square miles of suitable wolf habitat by trying to move into portions of the greater Grand Canyon and Southern Rocky Mountains ecosystems. The Service should encourage this natural process.
- Rather than trying to create and maintain forever an unnatural wolf-free void between southern Colorado and northern New Mexico, the Service should concentrate on establishing a robust sub-population of Mexican wolves in northern New Mexico and southern Colorado. The farther north Mexican wolves meet the soon to be reintroduced gray wolves in Colorado, the less likely that interbreeding will affect the core Mexican wolf population.
- Replace genetic recovery criteria with a specific number of effective migrants – and evaluate progress by the direct, universally accepted, objective measures of retained founder genome equivalents, retained percentage of genetic diversity, and inbreeding coefficients.

We urge the Service to take this opportunity to steer the Mexican wolf program away from failure and toward recovery.

Sincerely,

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