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Comments: Recovery Planning and Implementation

Section 4(f) of the ESA requires the development of recovery plans for listed species, unless such a plan would not promote the conservation of a particular species. Also pursuant to section 4(f) of the ESA, a recovery plan must, to the maximum extent practicable, include:

1. A description of site-specific management actions as may be necessary to achieve the plan's goals for the conservation and survival of the species;
2. Objective, measurable criteria that, when met, would support a determination under section 4(a)(1) that the species should be removed from the List of Endangered and Threatened Species; and
3. Estimates of the time and costs required to carry out those measures needed to achieve the plan's goal and to achieve intermediate steps toward that goal.

In 2016, the Service revised its approach to recovery planning, and is now using a process termed recovery planning and implementation (RPI) (see <https://www.fws.gov/endangered/esa-library/pdf/RPI.pdf>). The RPI approach is intended to reduce the time needed to develop and implement recovery plans, increase recovery plan relevance over a longer timeframe, and add flexibility to recovery plans so that they can be adjusted to new information or circumstances. Under RPI, a recovery plan addresses the statutorily required elements under section 4(f) of the ESA, including site-specific management actions, objective and measurable recovery criteria, and the estimated time and cost to recovery. The RPI recovery plan is supported by two supplementary documents that are incorporated into the recovery plan by reference: A species status assessment or biological report, which describes the best available scientific information related to the biological needs of the species and assessment of threats; and a recovery implementation strategy, which details the particular near-term activities needed to implement the recovery actions identified in the recovery plan. Under this approach, we can more nimbly incorporate new information on species biology or details of recovery implementation by updating these supplementary documents without concurrent revision of the entire recovery plan, unless changes to statutorily required elements are necessary.

#### Background of Recovery Planning for the Mexican Wolf

The original recovery plan for the Mexican wolf was finalized in 1982 (Service 1982). We revised the 1982 recovery plan in 2017 using the RPI process (82 FR 57288; December 4, 2017). The Mexican Wolf Recovery Plan, First Revision (2017 recovery plan), contains statutorily required elements, including measurable criteria, site-specific management actions, and estimates of time and costs, along with a concise introduction and our strategy for how we plan to recover the Mexican wolf. It specifies the establishment and maintenance of a demographically and genetically robust population of wolves in the United States, and a second population in Mexico. In the United States, Mexican wolves inhabit the Mexican Wolf Experimental Population Area (MWEPA) in Arizona and New Mexico (80 FR 2512; January 16, 2015). We began reintroducing Mexican wolves from captivity into the MWEPA in 1998 and continue to focus recovery efforts in the United States on this population.

On October 14, 2021, the District Court of Arizona remanded the 2017 recovery plan back to the Service to include site-specific management actions to address the threat of human-caused mortality, including illegal killing (No: 4:18-CV-00047-TUC-JGZ (Lead); No: 4:18-CV-00048-TUC-JGZ (Member)). The court order specified that the Service must produce a draft recovery plan for public comment within 6 months and a final plan no later than 6 months after the draft recovery plan. The draft revised recovery plan maintains the recovery strategy, criteria, and actions from the 2017 recovery plan and includes new recovery actions to alleviate the threat of human-

caused mortality, including illegal killing. These new actions, as well as their time and cost estimates, are incorporated into the draft revised recovery plan implementation schedule. We provide the rationale for each action in a new section of the draft revised recovery plan ("Recovery Actions Added to the Implementation Schedule to Address Human-Caused Mortality").

It is our intention that the actions we have added to the draft revised recovery plan will help alleviate the threat of excessive human-caused mortality, including illegal killing. We will adapt our implementation of recovery actions over time to address sources of human-caused mortality, as we assess population performance, the contribution of specific sources to overall mortality levels, the availability of resources needed for implementation of specific actions, and other considerations.

Currently, at least 74 percent of documented Mexican wolf mortalities in the MWEPA between 1998 and 2020 are attributed to human causes. Illegal killing has been the largest source of human-caused mortality in the MWEPA between 1998 and 2020 (119 of 216 total documented mortalities), followed by vehicle collision (27 mortalities) and other human-caused mortalities (14 mortalities) (Service files). Some of the mortalities that we attribute to "unknown" causes (24 mortalities) may also be human caused. Since the completion of the 2017 recovery plan, human-caused mortality in the MWEPA has been variable, with totals of 7, 15, 12, and 25 Mexican wolf mortalities each year, respectively, during the period 2017-2020 (Service files). In Mexico, mortalities of 7, 4, 1, 2, and 4 were documented respectively during the consecutive years 2017-2021; these included mortalities from poison (7 mortalities), unknown causes (6 mortalities), vehicular collision (3 mortalities), trapping (1 mortality), and firearm (1 mortality) (Universidad Autónoma de Querétaro/Comisión Nacional de Áreas pers. comm.).

As we described in our January 16, 2015, final rule to list the Mexican wolf as an endangered subspecies (80 FR 2488), different wolf populations can sustain themselves under varying levels of human-caused mortality (80 FR 2488, p. 2501). Based on population viability modeling conducted for the 2017 recovery plan, we expect the Mexican wolf population to grow or remain stable if the mean adult mortality rate is less than 25 percent, combined with mean subadult mortality rates less than 33 percent and mean pup mortality less than 13 percent (Service 2017, p. 21). Therefore, while some human-caused mortality can be sustained during the recovery effort, mean mortality rates from all sources of mortality (natural and human-caused) need to remain below threshold levels in order for the Mexican wolf to achieve demographic recovery criteria.

Further, we recognize that multiple sources of mortality occurring in combination have a greater potential to affect the Mexican wolf than some single sources (80 FR 2488, p. 2508). Therefore, while one source of human-caused mortality, such as vehicular collision, may not occur at a level that hinders the recovery of the Mexican wolf independent of other sources of mortality, it may contribute to an overall level of mortality that is too high for the population performance necessary to achieve recovery. Because of this, recovery actions to address a specific source of human-caused mortality may contribute to the recovery effort even if that source is not independently hindering population growth.

#### Species Background and Current Status

The Mexican wolf is listed as an endangered subspecies throughout its range, without critical habitat, due to the individual and cumulative effects of excessive human-caused mortality, including illegal killing; genetic issues, including inbreeding, loss of heterozygosity, and loss of adaptive potential; and demographic stochasticity (decreases in survival or reproduction) associated with small population size (80 FR 2488, January 16, 2015). For detailed listing history, biological background, and additional information on recovery and reintroduction efforts, including previous Federal actions for the Mexican wolf subspecies and experimental population, see our final rule to list the Mexican wolf as an endangered subspecies on January 16, 2015 (80 FR 2488); our notice of availability of the 2017 recovery plan on December 4, 2017 (82 FR 57288); and our proposed rule to revise the nonessential experimental population of the Mexican wolf on October 29, 2021 (86 FR 59953).

The Service and our regional and binational partners continue to implement the recovery strategy and actions in the 2017 recovery plan to address threats to the Mexican wolf and achieve recovery in the United States and Mexico. Although the Mexican wolf remains critically endangered, population growth in the wild in recent years has improved the status of the species and the outlook for recovery. We and our partners are employing adaptive management to utilize new field techniques in the United States such as diversionary food caching to prevent depredations and cross-fostering to support the genetic needs of the expanding population in the MWEPA in Arizona and New Mexico (Service 2019). In addition, the captive population, numbering 55 facilities housing 369 wolves as of June 30, 2020, remains robust and capable of supporting the reintroduction and recovery efforts in both countries, while also enabling scientists to engage in reproductive and genetic research that may contribute to the ongoing genetic management of the captive and wild populations (Scott et al. 2020, entire).

Progress toward the demographic and genetic recovery criteria in the 2017 recovery plan is documented annually. Due to disparate timing and methods of data collection between the United States and Mexico, available information as of January 19, 2022, varies between the two countries. The minimum population count for the MWEPA at the end of 2020 was 186 wolves, with 7 released wolves (wolves born in captivity) surviving to breeding age in the spring of 2020. The MWEPA 2021 minimum population count and a report on the number of released wolves surviving to breeding age as of the spring of 2021 will be available in February and March 2022, respectively. In Mexico, the population was estimated at approximately 40 wolves at the end of 2021, with 4 released wolves surviving to breeding age as of the end of 2021 (Service files; UAQ/CONANP pers. comm.). In 2023, the Service will conduct an evaluation of progress toward recovery, using data from both countries' programs through 2022, as specified in the 2017 recovery plan (see Service 2017, p. 26).

#### Request for Public Comments

Section 4(f) of the ESA requires us to provide public notice and an opportunity for public review and comment during recovery plan development. It is also our policy to request peer review of draft recovery plans (59 FR 34270, July 1, 1994). We will summarize and respond to the comments the public and peer reviewers provide and make our responses available to the public. Substantive comments may or may not result in changes to the recovery plan. Comments regarding recovery plan implementation will be forwarded as appropriate to Federal or other entities for consideration as the Service implements recovery actions. Pursuant to the court order, the Service must produce a final revised recovery plan by October 14, 2022.

We invite written comments on the draft revised recovery plan. In particular, we are interested in comments or additional information pertaining to the new recovery actions in the implementation schedule of the draft revised recovery plan, including:

1. Will these new actions reduce the threat of excessive human-caused mortality?
2. Do these actions support achieving the recovery criteria for the Mexican wolf?
3. Is there additional information pertaining to the time and cost estimates for the new actions we have recommended?
4. Are there additional actions that could reduce the threat of excessive human-caused mortality? Please provide a description of the action, your rationale, and any supporting data or literature.

We will accept comments about the Mexican wolf at any time, but due to the court-ordered deadline on this action, only comments received during the comment period that are germane to the remand will be taken into account as we develop the final revised recovery plan. We do not intend to revise any part of the recovery plan other than the recovery actions. Prior to final approval of the plan, we will consider all comments we receive by the date specified in DATES .

#### Public Availability of Comments

All comments received, including names and addresses, will become part of the administrative record and will be available to the public. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment-including your personal identifying information-will be publicly available. While you may request in your comment that we withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.