

PEER REVIEWS RECEIVED ON DOCKET FWS-R2-ES-2013-0056
Proposed Revision to the Nonessential Population of the Mexican Wolf
U.S. Fish and Wildlife Service
June 2013-September 2013

PEER REVIEW #1

I appreciate the opportunity to review this rule and assist with the recovery of the gray wolf in the SW US. I never supported the subspecies determination of the Mexican wolf since historically there were contiguous wolf packs from central Mexico to the Arctic Ocean and from the Atlantic to Pacific Oceans. I do recognize that the few remnants of wolves from the southern extant of historic wolf range in N. America are now the rarest and most unique form of gray wolf in N. America, but feel a subspecies listing invokes legal requirements related to historic range that will preclude recovery in the SW U.S. But, I also respect the Service's authority and expertise to use all information available in their listing decisions and that the Service determined subspecies listing was warranted. I strongly support the restoration of the gray wolf to parts of the SW US. In my review of this draft Experimental Population Rule (Ex Pop. or 10j), I have tended to point out issues that caught my attention as needing clarification rather than focusing on a generally worthy and comprehensive attempt to assist wolf recovery and address public concerns about damage. I hope that does not make me appear too critical of the overall effort. I believe changes need to be made to improve management and better assist with wolf recovery and this rule moves in that direction.

My first comment relates to the timing of the various regulatory actions being undertaken. There should be an explanation how they are related to one another and the proposed experimental population rule. It should also be made clear in what order they need to be finalized. Logically the order should be- Nat'l Strategy and subspecies listing, Recovery Planning, EIS, and then 10j rule. Without a clear idea of what wolf recovery in the SW US is determined to be, it becomes difficult to judge why any of these actions are warranted. I believe a 10j rule is generally used to contribute toward achieving a comprehensive species recovery program. There needs to be some justification presented why 100 wolves was once, and is still, determined to be biologically warranted or why that number, rather than 50 or 200 is not the goal for wolf restoration in historic range of the purported subspecies in AZ and NM. There needs to be some link to how 100 wolves will help achieve recovery for the subspecies as defined under the ESA. The 100 wolf goal also results in questions like what happens if wolves successfully establish 'naturally' themselves within the Ex Pop area but outside the Blue Range. Do they get counted toward the 100 in the Blue Range? If the goal is just for the Blue Range, then why are wolves allowed to disperse outside of it and go anywhere in the Ex Pop. area? Just pointing out that the goal might need to be better clarified and explained as how it fits into the overall recovery objectives.

The US Fish and Wildlife Service (Service) draft National Wolf Status Rule, when finalized, will certainly be litigated over various differing biological opinions and limitless legal technicalities. It seems novel to begin a 10j experimental population rule process dependent on purported historic range without that determination being finalized. I believe wolf recovery in the wild solely within the theoretical US portion of the historic range of the purported Mexican wolf subspecies is unlikely. Even if 'recovery' was recommended to be the bare minimum (at least 300 wolves and 30 breeding pairs for three successive years in a three part metapopulation with either human assisted or natural exchange between the subpopulations) as was established in the northern Rocky Mountains, sufficient habitat is lacking in the purported 10j area in the US. Unless probable suitable wolf habitat in S. CO and S. UT is utilized recovery in the wild in the US is not possible. A Mexican Wolf recovery objective that might be achievable might entail more captive wolves and fewer wild wolves in the U.S. That option might be explored in the SW to define a recovery goal with lower numbers of wolves in the wild and managed exchange with a captive population to identify a recover goal that could be achieved in purported subspecies historic range in the US. Describing what subspecies recovery is, would resolve some of my concerns over the consequences flowing from subspecies historic range issues. I believe that the current biological conditions in purported historic range of the subspecies in the SW U.S, will inhibit recovery of

solely wild wolves under the ESA, unless extensive progress is somehow possible in Mexico and those subpopulations could contribute to recovery as defined by the ESA.

I am curious about intentions to conduct 10j rulemaking before an EIS is prepared. What federal action will the EIS be evaluating? I do not fully understand why an EIS (or even EA?) is necessary given one was already prepared for the initial reintroduction effort. I respect that the USFWS must make that internal determination given the facts and its interpretation of its legal requirements, but the draft 10j rule should explain this in detail. If an EIS is necessary, 10j rulemaking should logically follow after it is completed. The 10j rule could not be finalized until the EIS process is completed, and then the 10j rule is reopened for public comment, which could take years. The situation on the ground might have changed, therefore all this seems a little out of order, but I do not believe this is a deal breaker, just something to better explain.

It also seems to me that the final status review and recovery planning should be decided before an EIS is prepared. After recovery planning defines the goals and objectives, the EIS should be completed. Then the 10j experimental population rule should be finalized. Reviewers of any proposed rule could benefit from a detailed analysis as that required by an EIS process. Perhaps the Service is envisioning that they could all be prepared in draft and then they could be finalized in quick succession to accelerate recovery actions. I would support that approach because if each was considered following finalization of the former, I easily envision another 5-10 of bureaucracy before positive management changes could be implemented. One could also envision some questioning, why, if the 10j population is nonessential, do all the regulatory processes need to be accelerated? Again, this all just needs to be better explained.

I reviewed the 2012 progress report in an attempt to learn more about the biological status of the population. I was struck by its conclusions. There were 75 wolves in the wild (highest number ever, so maybe current management is working?) in 14 packs and only 4 breeding pairs (one of which was only 'operational'). There appears to be a huge recruitment issue that needs direct research to investigate and help solve. Mortality was only 16%/yr which is surprisingly low for almost all wolf populations that I know of. Home ranges were ~125 sq mile, and the wolves ate mostly elk (prey species not found within the purported historic range of Mexican wolves). The table of wolf mortality 1998-2012, showed virtually no wolves died from any trap related injuries that needed to be solved by the detailed rule proposals regarding trapping techniques. So I would eliminate all that language, since it doesn't follow the data. It appears from the data there is a huge recruitment problem, there is not a wolf mortality problem. If this is really true and not just a detection problem, then the over-emphasis and attention directed at reducing mortality in this draft rule seems misplaced. The thing that could help me most as a reviewer would be comprehensive scientific publication of the data collected since wolves have been reintroduced into the SW. At this point what I perceive is that the 10j management recommendations do not follow what the field data suggest.

I feel that a thorough comprehensive peer-reviewed publication (which a good EIS analysis might serve as) on the biology of Mexican wolf restoration is long over-do. It was difficult to find the data and what it really might mean to wolf restoration efforts and to then understand how this proposal would resolve them to benefit recovery. I was intrigued by the apparently large amount of resources and staff (that I feel have done an outstanding job given the biological realities) involved in the program. But it seemed to me that a lot of that energy was being spent on endless federal bureaucratic issues, litigation response and settlements, rather than on scientific inquiry, analysis, publication, and subsequent modification of field management. The bureaucratic efforts were well documented, but the effectiveness of management and wolf science & biology- not so much.

I quickly reviewed each of the suggested modifications but they seemed a little confusing. I think the USFWS needs to be much clearer and bolder on exactly what it is proposing and why. I can't stand the "We are thinking about, but not proposing approach", but that could just be my flawed personality. There were so many tweaks and suggestions, I kind a got lost & confused at times on what was exactly being proposed and how it would help achieve reaching the 100 wolf goal. The Service needs to stand up and be clear about what it believes (or does not know or needs to find out about) is needed to achieve its legal responsibilities under the ESA.

1. Expand the area for initial releases. The proposal correctly recognizes the small primary recovery area and requirement to bring back wolves not causing problems found outside the primary recovery area was not an effective tool to promote wolf restoration. But the data also suggests wolf status continues to improve, which begs the question, then why change it? It makes me think things aren't quite as rosy as they are portrayed in this proposed rule. The current proposal only expands areas under the concept of the primary and secondary areas. It just makes each area larger and just changes their titles, therefore they have the same biologically-based problems. I believe a much more effective policy would establish an expanded Ex Pop area (all of AZ and NM or at a minimum all theoretical historic range in those two states) and allow all management actions (including releases) and occupancy of resident wolf packs throughout the entire Ex Pop. area. In addition, your legal staff has to weigh in on whether a wolf leaving the ex pop area is bound by those 10j provisions. If delisted according to the draft Final National Strategy, then the ex pop border is no problem. But if the reclassification rule doesn't hold, then you could possibly end up with endangered wolves in N. AZ and NM and possibly elsewhere. Trying to do the recovery area by small chunks (National Forest borders, public lands, etc.) only seems to invite the kinds of problems that have supposedly inhibited recovery under the original 10j rule. I recommend creating the most expanded Ex Pop area possible and allow any and all agency management actions within it to achieved the recovery (or 100 wolf) goal. There are no wolves outside the current 10j area so any expansion of the 10j area could not possible intrude on habitat occupied by endangered wolf packs.

2. Allow wolves to occupy all Ex Pop area. Great idea! Wolves are not a problem, wolves depredating on livestock and pets are a problem, so just deal with problems. I believe that the 100 wolf goal, highly fragmented habitat, and a high level of agency control for livestock depredation will cause wolf pack distribution to scattered and overall density low. That reduced wolf density and distribution will greatly limit the potential impact on wild ungulate herds. Therefore, I believe it is highly unlikely wild ungulate populations will be significantly impact by wolf predation. The issue of controlling listed wolves for ungulate management concerns is very difficult and I have no easy solutions to solve that perception or issue. Any possible decline in ungulate populations would be slow and so the rolling average approach would likely preclude that threshold from ever being triggered. Perhaps, a large 10j area (all AZ and NM?), with the northern part being designated as a no wolf zone outside of historic range, might be a solution to those concerns. I do not believe the types of significant impacts to some wild ungulate herds that contiguous wolf packs at biological saturation density can cause is likely within the SW US. Therefore, I believe that management of wolves listed under the ESA or under a 10j rule, to resolve such theoretical conflicts with big game hunters or state ungulate management objectives is highly unlikely.

3. Remove TX portion. I think that is good idea, but really doesn't mean much to leave it in either. But I believe that cleaning up an Ex Pop. rule when given an opportunity is always a good idea.

4. Remove White Sands. I support this too but better handled by allowing any and all management actions within the entire 10j border. By making all AZ and NM ex pop you would resolve all those issues and could decide later as data and circumstances dictate. You can just decide not to put wolves there if they won't survive. But like #3 cleaning the rule up doesn't hurt anything either.

5. Mgt on private land. Proposal suggests that any landowner can request translocation (page 35722 [5]) (removal?) and the Service will attempt to do that. It is not clear that this is what Service is really proposing and there are lots of unclear words, about pop status, genetics, threats, trend, etc. I believe this concept would be a huge mistake and will lead to the very problems that have occurred, to the detriment of wolf recovery, with the agency removal of non-problem wolves outside the primary recovery area. If wolves cause a problem then deal with them, if not leave them alone and let them assist with achieving population objectives. That type of provision invites conflict, public demands that can't be satisfied, bad public relations, and waste of agency resources. The rule should be crystal clear and then it is easy to implement and for the public to understand and trust the Service. For example, what wolf/wolves get removed? and when? For example if a loner is on private land 10% of the time, will the Service try to remove it? What if 9 out of 10 landowners are OK but one wants the wolves removed? What if 9 want it removed but the only with 90% of the pack territory wants them left alone and will not give access to carry out removal? How much time and area do they (loners or packs?) have to spend on private land before Service tries to search them out and remove them? I think this is expensive, damaging, and unworkable part of the proposal if that is truly the intent. That issue needs clarification.

6. Tribal land. Tribes or independent gov'ts and we should do what they want, so on those lands such a cooperative approach appears warranted. But the Tribes should carry out all those mgt actions and demonstrate progress to receive continued federal recovery funding. Federal government funding should be available to assist Tribal efforts.

7. Sec 6 for state agency participation. Of course, the States should be invited as active partners, or to actually lead recovery efforts. I believe the states have a much better chance of succeeding in difficult local political & biologically issues like wolf recovery in the SW US than the Federal government does. I think the states are the best possible solution to wolf recovery in the SW, but CO and UT need to be part of that discussion if possible, but subspecies listing may preclude those discussions. I would even consider inviting the states to take over all management responsibility and wolf recovery funding, with the only Service requirement to report back in 10 or 20 years about any progress in wolf restoration in the SW US.

8. Individual take of Mexican wolves. I think there should be such provisions for private take of problem wolves. Especially since data suggest mortality is not the most important conservation/recovery issue. But it needs to be crystal clear on what you mean about allowable take. The 6 bp or 100 wolves, trend, genetics, formal notice, appear to make it unclear what a landowner/producer can and can't do on their private land or state or federal grazing allotment. If any landowner can simply request wolves be removed, absent damage then there is no need for allowing any private take, since the Service would be obligated to reduce them before any damage occurs or immediately after even a perception of damage. A cynical person could interpret all the various conditions as an excuse for the Service to not issue take permits. Landowners and the states have to trust that the USFWS will abide by the rule language and that it can survive litigation. Since it appears that mortality is not a significant biological issue affecting recovery, the Service appears to have extra flexibility to address public concerns about damage by liberalizing take by private citizens.

9. Take by federal & state agencies. Again great idea, but there are so many qualifiers that it isn't clear what will or won't be allowed. It needs to be as clear as possible. Data indicate wolf mortality isn't the primary conservation issue.

10. Landowner take allowed by going from a 6 BP to 100 wolves (within the entire 10j area or just Blue Range portion?) threshold. I have no problem from modifying the population standard but it appears to be more conservative, when a more liberal approach to allowing wolf take, might be warranted. But it is

very odd and needs close scrutiny to see how you can have 100 wolves and not 6 breeding pairs. Biologically that just doesn't make sense, given measured mortality rates and the proportion of pups in the population. The population data need to be summarized and analyzed so the overall scientific status and history of the population can be better understood. There appears to be a huge recruitment problem (which is typically food or disease related). I do think the conditions for increased landowner take need to be clear and without any possible confusion or misinterpretation. Mortality does not appear to be the biological problem so perhaps there is an overemphasis on reducing an already low rate of human-caused wolf mortality by this proposal.

11. Modify methods of take. Given the data on causes of wolf mortality, I think the whole discussion about trapping methods unnecessary and confusing. It seems this proposal might be interpreted as ban snaring and/or a lot of coyote trapping in occupied territory, setting up even more local public resistant to any wolf population expansion. Wolf mortality data (1998-present) indicate that trapping not a significant mortality issue (as only one might have been killed in past 14 years)? Perhaps a more detailed discussion might help me understand why it is even a concern.

12. One time review after 5 years? No problem with this, but since Service is doing annual reports and anyone at anytime can propose a status review- proposing only once in 5 years seems moot. Why not just say Service will do a formal review 5 years after 10j rule is finalized and then let that best and most current scientific analysis decide what next step and timeframe is appropriate?

13. State lands equal to federal lands. I do not support this part of the proposal. I think if your state partners were fully on board it would be a non-issue. Also there is no data showing how state lands have affected recovery. Maybe this is just trying to give otherwise cooperative states some local political cover... The old "The feds made me do it?", which I understand might be helpful to your cooperators at times. But, I doubt the Service could say (or would want to) what state lands might be treated as, given different regulations might cover various state land management (maximize revenue, recreation, funding, checkerboard, etc.). The wolf data presented don't show why this might be necessary. If the entire 10j area is a wolf recovery area then there is no need for this provision, wolves are generally not sensitive to land management practices, unless those practices result in direct take. Perhaps a more detailed discussion of how state lands have been involved in recovery (or have inhibited it) might be informative?

14-20. I do not support this type of approach to solicit public comment. I think the Service should propose what it feels is needed to achieve the agency mission and be upfront about it. Don't 'suggest' that folks consider things that may or may not be in the final rule, it makes it appear the Service doesn't know what to do. Without the EIS being finalized the 10j rule has to be re-proposed anyway. The Service should be up front about what it believes is warranted, if it isn't needed or it can't be explained well, then the Service should not propose doing it. Not sure how court might view that if you adopt something that wasn't actually proposed. Plus, finalizing something that was never really proposed might make the public feel that the Service was being sly or just confused over what is actually needed to meet its legal mandates. That doesn't help built trust.

14- Moving ex pop boundary Yes, it needs to be done. It can not only provide more flexibility for recovery and management options, but it also protects state and individual rights. Liberal management and no land use restrictions within a 10j area designation have survived court challenges. Increased management flexibility over a larger area is better for wolves and the people that live near them. Wyoming asked for all their state to be in any Ex Pop. area, even when wolves would occupy a small proportion of WY and WY strongly opposed any wolf restoration, because it gave the State and its citizens more legal protection when wolves dispersed very long distances (possibly outside the 10j area).

15-17. Yes, expand the BRWRA area (to the entire 10j) to all those forest districts, but do not have those little tiny lines drawn around each forest border. Wolves are guaranteed to disperse outside them. Each forest is too small to be significant by itself, so go big (the ex pop area is the entire ex pop area and all recovery actions are allowed within every part of it) or you will end up with endless unmanageable tiny boundary issues that erode public trust and sap agencies resources. Do not repeat the mistakes on a larger scale that were supposedly made it necessary to propose these changes in the initial Mexican wolf 10j rule. The original Blue Range Recovery Area appears nearly full of resident packs so additional habitat needs to become available if progress toward the population objective is to continue.

18. Depredation changed to depredation incident. This change appears to make control more conservative. It is unclear, why this is an issue but I have no problem with making that change. Depredation removals seem low overall. Seems like too small a tweak to even bother with but again a deeper discussion of why this is an important issue could help me understand it better. I would strive to make the rule as short, clear, and concise as possible so I would not include with this type of minor stuff. As a friend once told me, "You don't become a millionaire bending down to pick up pennies."

19. Pet owner take. I think this should be allowed. Not an issue because morality doesn't seem to be the main driver inhibiting biological recovery. But ditch all the iffy conditions and just clearly say what is or what isn't going to be allowed. It is not going to be significant issue either way, as very few wolves will ever be taken, but might give pet owners some recourse and peace of mind.

20. Take permits on private and tribal lands. I think these types of permits can be very helpful in resolving local tolerance and the occasional problem, but the Service needs to be crystal clear about what is or isn't allowed and when & how such permits will be available. Sometimes all the various what-if conditions just confuses the local public or makes them mistrustful and that usually also just makes them angry and hostile.

In summary, I feel the proposal is a substantial positive effort that is sorely needed to assist with wolf recovery in the SW US. I feel it could be improved by- 1. Scientifically publicizing all the wolf population data gathered to date. 2. Conduct and publish research on the lack of recruitment. Focus less on reducing adult wolf mortality and more on increasing recruitment. 3. Better define how this rule fits into the overall subspecies recovery planning, National Recovery proposal, and an EIS. 4. Expand the 10j area to include at a minimum all purported historic range of the subspecies, and make all of it the recovery area. Allow all management activities, including releases, throughout all of it. Stop all agency management removals for non-problem wolves. 5. Shorten and clarify the 10j rule by eliminating small tweaks that appear unlikely to significantly affect wolf population status or resolve damage issues. 6. Improve the clarity of the rule by proposing exactly what the Service thinks is necessary to achieve its wolf population objectives, including exactly what type of take is allow and when. 7. Eliminate any suggestion that private landowners can simply request non-problem wolves be removed.

I think the recovery of gray wolves in the SW US is about the toughest conservation issue on all possible levels that one could possibly face. I wish the Service and its cooperators the best of luck. I think it will take many decades to resolve but this is a good start to that discussion and process. Thank you for the opportunity to provide my thoughts, I hope they can be useful. If you have any questions regarding my comments please do not hesitate to contact me for clarification.

PEER REVIEW #2

I am pleased to offer comments related to the **Proposed Revision to the Nonessential Experimental Population of the Mexican Wolf**. As requested in your letter of 9 July 2013, I will provide general comments on the entire document and the specific comments on the rule. The comments will be referenced with page/section/paragraph where appropriate as requested and sent to you.

General comments:

The reasons for the new rule are clear and straightforward, and the proposed actions are clear. Overall, the document is well prepared and addresses all relevant issues associated with the revision, which is basically a revised boundary for the nonessential experimental population of Mexican wolves. One of the justifications used is that removal of wolves from areas outside the Blue Range Wolf Recovery Area (BRWRA) has hindered recovery. It would be informative for the USFWS to include the number of wolves that left the BRWRA and had to be removed from the population so the readers had a better concept of this problem from which to make informed decisions. Also, throughout the document references are made about management plans to be made (e.g., 35733/Mexican Wolf Experimental Population Findings/5th on page) without other information. Thus, it is not possible to determine the validity of the management plans. I would also like to learn more about what constitutes success of the new proposed rules. The information provided (35731/*Identification and Monitoring*/2) is vague and does not give the reader any real measures of success or failure metrics'. Finally, I appreciate the new discussions of allowable take due to predation on livestock and pets, but can anticipate some resistance from owners of animals that are attacked or killed. Especially, from pet owners because they may not be able to provide evidence that the attack or mortality was from a wolf.

Response to specific questions:

Specific information on the amount and distribution of Mexican wolf habitat within the proposed nonessential population area.—I did not see any discussion of the specific amount of habitat for wolves in the document. The distribution is a great improvement over previous plans.

Overall suitability of the proposed 10(j) rule for the conservation, recovery, and management of the Mexican wolf, including our objective to establish a viable, self-sustaining population—The document discusses the importance of allowing wolves to disperse outside of BRWRA and indicates that lacking dispersal is hindering recovery. Thus, the proposed rule would be beneficial for wolf recovery. However, I would like to see more documentation of the number of wolves that have dispersed from BRWRA.

Suitability of expanding the area for direct initial release of captive-raised Mexican wolves to include the entire BRWRA.

Suitability of allowing Mexican wolves to disperse naturally into the Mexican Wolf Experimental Population Area (MWEPA) from the BRWRA.

Suitability of moving the southern boundary of the MWEPA from Interstate Highway 10 to the United States – Mexico international border.

Suitability of expanding the BRWRA to include all or portions of the Sitgreaves and Tonto National Forests in Arizona, and Cibola National Forest in New Mexico—Each of these expansions would be beneficial to wolf recovery as long as they were supported by effective management plans from all parties involved. Management plans were not specified in the document.

Suitability of revising the conditions that determine when we would issue a permit to allow livestock owners or their agents to take Mexican wolves in the act of killing, wounding, or biting livestock on public lands allotted for grazing from “6 breeding pairs” to “100 Mexican wolves” to be consistent with our population objective to establish a population of at least 100 wolves—I have no issues with this proposed change but suspect that it will not be supported by the livestock industry.

Suitability of our definition of due care related to trapping a Mexican wolf—The definition is clear and makes sense.

Information on the effects of reintroducing Mexican wolves on public and private land management, economic activities such as agriculture, forestry, recreation, mining, oil and gas development, and residential development—This was not addressed in the document. Page 35736 discussed the law but concluded that there was not enough information to provide information on these items and would defer making conclusions until the EIS was completed.

The document was clearly a legal position that covered required areas, but in so doing created unnecessary redundancy in describing the changes made. Please contact me if you have questions about my responses or if you need additional information.

PEER REVIEW #3

This responds to your July 9, 2013 request for a peer review of *Proposed Revision to the Nonessential Experimental Population of the Mexican Wolf* (78 FR 35719, June 13, 2013).

My only suggestions about proposals 1-13 (p. 35733-35735) is that proposal 4 (p. 35734) should document how the USFWS determined the prey density in the White Sands area is too low, e.g., by citing a published study, a report, or other evidence. Otherwise I believe all these proposed changes should function as intended in the second full paragraph on column 3, p. 35733.

An important caveat to proposal 2, however, is that the USFWS should remain aware that allowing wolves to naturally disperse to anywhere in the MWEPA, while helping further recovery of the population, will probably also result in additional wolf-human conflicts that will require intervention, possibly more than in the past.

The 7 “Additional Revisions to the Previous Nonessential Experimental Population Rule Under Consideration” (p. 35735) all seem reasonable and should further the recovery of the Mexican wolf.

Regarding your request for my scientific review of specific components of the rule, I offer the following:

1. I am not personally familiar enough with the entire proposed non-essential population area to provide specific information about the amount and distribution of Mexican wolf habitat there. From what I do know, it is clear that what suitable habitat does exist is scattered and disjunct and of highly variable quality in terms of minimal conflict with humans. However in total, especially considering government lands, mountainous areas, and roadless regions, there should be more than a sufficient amount of area for Mexican wolf recovery.

Nevertheless, full recovery in this area will probably continue to take considerable time as a wolf meta-population establishes in suitable areas while individuals in unsuitable areas (those of higher human conflict) are removed deliberately, illegally, or incidentally. The goal of 100 wolves, however, could be reached there in a few more years.

2. The proposed changes in the 10 (j) rule including expanding the release area, allowing natural dispersal into the entire MWEPA (subject to intervention where necessary), expanding the area, changing the conditions for issuing private-take permits, and your prescribed care related to trapping wolves, all seem quite reasonable and should help further recovery,
3. The effect of Mexican wolf reintroduction on various human activities will be much as it has been during the past recovery efforts except that as the release and dispersal areas are expanded, wolf recovery will affect more human activities over a much wider area. This problem will foster much more controversy. On the other hand, biologically, as wolf numbers exceed 100, and an increasingly higher proportion of them are wild-born, the value of each wolf to the total population diminishes. Thus wolf control can be liberalized, conflicts can be solved more easily, and what is now a sacrosanct population will become more normalized in the public perception except for those people with more extreme pro- or anti-wolf views.

I did find the presentation of the material in this document to be quite confusing except for the straightforward listing of the basic proposal on p. 35733-35735. Some suggestions that might help clarify the presentation follow:

1. Figure 2 is labeled “Mexican Wolf Nonessential Experimental Population Area” but is referred to in the text as “Mexican Wolf Experimental Population Area” (MWEPA), which is also what the legend says.
2. Also on Fig. 2, it would be helpful if the boundary between Mexico and Texas was included.
3. On p. 35729, col. 2, the second full par., mentions reviews of selection criteria for released wolves. From the positioning of this paragraph it is not clear whether it is one of the proposals following under the Col. 1 title “Additional Revisions to the Previous Experimental Population Area Under Consideration.” If it does fall under that title (rather than being parallel with it, then the section it is within, “Reintroduction Procedures” should somehow have a different heading format, something like “(a)Reintroduction Procedures.” Also if the paragraph does fall under “Additional revisions . . .,” then it should be listed in the listing that starts on p. 35723, col. 3, paragraph 3. If it does not fall under “additional Revision . . .” then where does it fit?

I do believe that someone familiar with the totality of the proposal but not associated with writing it should examine the presentation with the purpose of clarifying the presentation, probably by outlining all the headings and subheadings and better organizing their hierarchies.

I hope this is helpful.

PEER REVIEW #4

I have reviewed the “Proposed Revision to the Nonessential Experimental Populations of the Mexican Wolf (78 FR 35719), June 13, 2013” in the Federal Register, which, coupled with more than 50 years experience working with Arizona’s ecosystems and its wildlife, gives me a good understanding of the Mexican wolf situation in Arizona. The biological facts, as I understand them are:

The Mexican wolf is a distinct subspecies of wolf that evolved with the diminutive Coues white-tailed deer as its primary prey base. As such, this race of wolf was centered in Mexico’s Sierra Madre and extended northward to Arizona and New Mexico’s “sky-islands” south of the Gila River. North of the Gila River, the subspecies came into contact with other wolf taxa adapted to feeding on a more catholic prey base. The number of wolves in southern Arizona and New Mexico during pre-settlement times was relatively small—probably ca. 100 animals. Genetic diversity was maintained by the interchange of wolves drifting northward from Mexico, but also by animals coming in from the north and east.

During my time as a wildlife manager I was intimately involved in a number of wildlife transplants and other restoration measures—some successful, others not. The three elements required for success were:

1. *A vacant habitat niche of suitable size in either the animal’s historic range or in similar habitats that were historically unoccupied by the species.*
2. *Suitable stock for transplant.*
3. *An area dedicated to the animal’s restoration and an attitude among landowners and land-users that supported the restoration of the animal involved.*

When these three elements were present, successful restorations could be accomplished with relatively small numbers of animals over relatively short periods of time. Unfortunately, the Mexican wolf recovery program is faced with shortcomings in all three categories, hence the difficulties heretofore encountered. These difficulties include:

1. *The chosen restoration site (BRWRA) is at the northern periphery of the animal’s range and now principally occupied by a prey species (elk) for which the Mexican wolf is not adapted.*
2. *The only Mexican wolf stock available to transplant are captive-raised animals descended from a small genetic founder base.*
3. *The chosen restoration site is characterized by a rural land-use culture consisting of ranchers and townspeople, who resent the presence of wolves—an animal removed by their forefathers.*

Recognizing the difficulties imposed by the above limitations, and the problems heretofore experienced, I offer the following comments regarding the biological and management aspects of the *Proposed Revision of the Nonessential Experimental Population of the Mexican Wolf*, and whether the Rule changes alleviate or aggravate restoration attempts.

1. *Numbers of animals:* The target number of 100 Mexican wolves is both a desirable and a realistic goal from an ecological perspective. This number probably approximates the number of Mexican wolves historically present in the proposed recovery area and would not present an unsustainable drain on the ungulate prey base. A goal of several hundred wolves as has been proposed by some

would extract an unacceptable levy on elk and deer tags and increase the potential for livestock losses.

2. *Expansion of Blue Range Wolf Recovery Area:* Although chosen for romantic reasons and peripheral to the animal's natural range, the BRWRA has provided most of the basis for understanding Mexican wolf recovery to date. Given past experience, it makes sense to implement the revised Rule and expand the BRWRA to include all of the Apache, Gila, and Cibola national forests below the Mogollon Rim including the Gila and Aldo Leopold wilderness areas. These areas remain relatively intact as potential Mexican wolf habitat and are not yet occupied by other wolf taxa.
3. *Expansion of Geographic Boundaries of the BRWRA:* It also makes sense to support the expansion of the BRWRA to include the 3 ranger districts in the Tonto National Forest and the Magdalena District in the Cibola National Forest. These areas are more within the historical range of the Mexican wolf than the BRWRA and support good populations of deer and javelina. Introducing wolves within these areas makes biological sense. However, the retention and expansion of the BRWRA above the Mogollon Rim is more problematical due to increased potential for social conflict due to wolf depredations. The inherent conflict attendant with the San Carlos Tribe being opposed to wolf restoration also needs to be addressed and reversed as the reservation is historic wolf habitat and its livestock management practices act as a magnet for far-ranging wolf packs.
4. *Expansion of Geographic Boundaries for the Nonessential Experimental Population:* Expanding the recovery area westward to Interstate 17 to include the Sitgreaves National Forest and other lands above the Mogollon Rim is inappropriate due to these areas being marginal historic Mexican wolf habitat and having elk as a primary prey base. All of the lands west of Interstate 17 should be considered outside the range of Mexican wolf recovery efforts. These lands, including the South Kaibab and Prescott national forests are outside the historic range of Mexican wolves, and the management costs associated with keeping wolves in numbers commensurate with the prey base could be excessive as could be the number of livestock losses. Controlling depredating wolves in the Prescott area and westward would result in serious outlays of time and energy.
5. *Expansion of Geographic Boundaries for the Mexican Wolf Explored in the Rule:* The suggestion to extend the boundaries of the Mexican Wolf Experimental Population Area southward to the Mexican border was made to accommodate the possibility of wolves released in Mexico crossing into the U.S. Although the inclusion of those portions of Arizona west of Interstate 17 and 10, and east of Interstate 25 in New Mexico, are outside the natural range of the Mexican wolf subspecies, there is good reason to extend the boundary of the revised BRWRA southward to the Mexican border. Including the "sky island" region between Arizona State Highway 286 and Interstate 25 in New Mexico would include much of the Mexican wolf's ancestral range and include Buenos Aires National Wildlife Refuge and the adjacent Coronado National Forest—former wolf strongholds and areas dedicated to the recovery of endangered species.

Expanding the BRWRA to include a BANWRRA would be a desirable option as it would include a potential release area of 183 square miles free of livestock grazing and possessing a large deer and javelina prey base. Although too small to wholly contain a wolf population, the introduction of wolves to this federal refugium would enable animals to radiate out into historic habitats on the Coronado National Forest as well as on to angelands in Arizona and Mexico. While the loss of wolves would be high, that is also the case with the present BRWRA. Such losses must be viewed as acceptable due to the animal's natural history and potentially high recruitment rate. Holding

the FWS responsible for an endangered species the agency's predecessor helped eliminate would also not only be biologically desirable, it might prove politically advantageous to the recovery program.

1. *5 Definitions et al.* No biological or management problems in the definitions were readily apparent that were not present in the previous Rule. Nor are there any apparent problems with the proposed changes in procedures attendant with the proposed Rule change. It should be remembered that given the biological handicaps attendant with Mexican wolf recovery, none of the procedures outlined in the Rule may be successful, and the restoration of this taxon to the wild may not be practical. The Rule should therefore have a date when restoration efforts are evaluated and continue or cease depending on the costs involved.