



Dr. Anthony Povillitis, Director
Box 1416
Bozeman, MT 59771
www.lifenetnature.org

October 11, 2007

U.S Fish and Wildlife Service (FWS)
Gray Wolf Recovery Coordinator
Helena, Montana
EA-WolfRuleChange@fws.gov
WolfRuleChange@fws.gov

Reference: RIN number 1018-AV39

Subject: Draft Environmental Assessment (DEA) and proposed revision of 10(j) rule for Idaho and Yellowstone Gray Wolves

Dear FWS:

In commenting on your proposal to remove the gray wolf in the Northern Rocky Mountains from the U.S. endangered species list (May 8, 2007, see copy below), I explained that the existing wolf population is subject to fragmentation and that delisting it without actions to ensure population connectivity would be contrary to the goal of species recovery. I cited published evidence that the risk of fragmentation is especially high between the Greater Yellowstone Area and central Idaho. Indeed, only a few wolves reside within a broad 90-mile area linking these core population areas (see Sime et al. 2007), while the persistence of other packs along the periphery of the core areas seems in jeopardy (e.g., the Wedge pack, apparently eliminated by recent lethal control actions).

As indicated in the DEA, the proposed change to the 10(j) rule would give Idaho, Montana, and Wyoming authority to reduce the current wolf population to 20 breeding pairs (around 200 individuals total) per state if judged necessary to meet game management objectives. However, the DEA does not examine the potential effect of such reductions on population connectivity. Please do so in a final or supplemental Environmental Assessment. Given that Idaho would be permitted to kill about half its wolves (presently at about 40 breeding pairs) – and is under substantial political pressure to eliminate wolves – I suggest that you carefully evaluate the effects that the proposal

may have on population connectivity, considering, for example, any reliable data on wolf movement between central Idaho and Yellowstone under conditions of varying wolf population size.

To be frank, it is disturbing that connectivity conservation for gray wolf was not addressed in the DEA, given the comments and concerns you received about related shortcomings in your recent delisting proposal. Perhaps you simply assume that because gray wolves are highly mobile and reproductively resilient that population connectivity should not be a problem. Nevertheless, you need to provide some hard analysis given mounting concerns (see, for example, Oakleaf, et al. 2006 and Vongholdt et al. 2007).

Maintaining connectivity for a small, dispersed population of wolves subject to substantial ongoing human-caused mortality in the northern Rockies would be extremely problematic. Much of the difficulty stems from the fact that FWS originally set the overall numerical recovery goal for the population far too low, namely at only 10 breeding pairs or about 100 wolves total for each of the three states. As wolf numbers, now estimated at about 1500, increase toward viable population levels, FWS rushes to turn wolf management over to states by simultaneously proposing removal of the gray wolf population from the federal endangered species list and greater state authority to kill wolves while the species remains officially threatened (presumably to allow such action in the event that transfer of wolf management authority through wolf delisting is tied up in the courts). In the interest of conservation, I strongly recommend that FWS pause to “take stock” before pushing this agenda further, and evaluate the scientific validity of its recovery goal given that prevailing scientific opinion and analyses indicate that conservation population target levels should typically run into the thousands (see, for example, Sanderson et al. 2006).

The DEA implies that, since overall ungulate populations are at or near historic levels, the states would under the proposal restrict the killing of wolves to a “few” areas where game herds are declining or are at low levels. If that is the intent, why not limit 10(j) authorization to those areas and circumstances instead of authorizing what could potentially become large wolf reductions statewide (down to as few as 20 breeding pairs per state)? It seems that under your proposal, Idaho, for example, could legally reduce wolves to that minimum number simply by raising state management objectives for ungulates to higher levels (e.g. to “habitat carrying capacity,” intolerant of any wolf regulation of the herds).

The DEA states that FWS would make the “final determination” as to whether an “unacceptable impact has occurred,” apparently on a case-by-case basis, before allowing a state to proceed with wolf removal. Kindly estimate the cost to federal taxpayers of wolf removal (it could be substantial given that you commit to evaluate each project plan, management objectives for game units, accompanying biological data, peer-reviews, public comments, etc.), and indicate any other work that you might have to forego related to wolf or other wildlife recovery. Please provide this information in the “socioeconomic impacts” section of the final EA, along with cost estimates and sources of revenue for state wolf control actions for game management. I urge that FWS devote its precious

public funding for wolf conservation in the northern Rockies to the unaddressed recovery issues of population and habitat connectivity (see, for example, my specific recommendations of May 8), and not to wolf control (for game management) proposed under the 10(j) rule revision.

As a wildlife biologist, I am familiar with “old school” game management and many of its past ecological and economic blunders. I find it remarkable that FWS is endorsing under this proposal the culling of gray wolf, a keystone species, in order to prop up numbers of already abundant ungulates, even in cases when poor habitat quality or excessive human hunting are limiting game populations. While the DEA acknowledges that high elk numbers can have ecological impacts, it fails to provide an adequate review and assessment of the theoretical and circumstantial evidence, and recent research results, showing the important ecological role of wolves in regulating ungulate numbers and in benefiting natural ecosystems and biodiversity. Citing in the DEA a few select references and concluding that “cascading ecological effects from the presence or absence of wolves is subject to debate” hardly does justice in terms of addressing this important issue. In a final EA, please provide the reader with a reasonably complete overview of the substantial scientific literature on this matter. Wolves and other wild carnivores can benefit ecosystems by controlling the number and distribution of wild grazers/browsers, such as elk, thereby promoting healthy plant communities, river channels, and a diversity of songbirds and other native wildlife (see, for example, Beschta and Ripple 2006; Fortin et al. 2005; Ripple and Beschta 2006). Also, kindly explain why FWS would allow killing of wolves to inflate ungulate numbers while at the same time concluding that “further monitoring and research is needed to determine if such effects [of wolves on ecosystems] would occur and to what degree” (DEA p. 26). Why not support the research and wait for results *before* endorsing what may well be very misguided wildlife management?

On a related matter, the proposed 10(j) revision would allow dog owners to kill wolves on public lands if they can provide evidence that the wolves “wounded, harassed, molested (sic), or killed” their dogs. Under this rule, would a person whose dogs chase wolves and consequently provoke the wolves to turn on them be authorized to legally kill the wolves? What responsibility do dog owners have to control their animals and avoid such circumstances? The concern from a wolf conservation standpoint is that the proposal to allow liberal killing of wolves to favor domestic dogs or stock could result in the loss of wolves in habitat linkage areas of primary importance to population connectivity.

Procedurally, I find it troubling that the 10(j) revision was proposed (July 6, 2007) well before the DEA’s release to the public (September 11, 2007). Why not first provide a draft analysis for public review, consider objectively the results, and then make a final decision as to whether any revision to 10(j) is warranted? With all due respect, your approach suggests that a decision in this case was made well in advance, and that public review is a mere formality required under law.

Thank you for considering my comments. Please address my questions and concerns in a response directly to me and/or in your federal register notice explaining a final decision on this matter.

Sincerely,

Tony Povilitis, Ph.D.

References:

Beschta, R.L. and W.J. Ripple. 2006. River channel dynamics following extirpation of wolves in northwestern Yellowstone National Park, USA. *Earth Surface Processes and Landforms* 31: 1525-1539.

Fortin, D., H.L. Beyer, M.S. Boyce and others. 2005. Wolves influence elk movements: behavior shapes a trophic cascade in Yellowstone National Park. *Ecology* 86:1320-1330.

Oakleaf, J.K., D.L. Murray, J.R. Oakleaf, E.E. Bangs, C.M. Mack, D.W. Smith, J.A. Fontaine, M.D. Jimenez, T.J. Meier, and C.C. Niemeyer. 2006. Habitat selection by recolonizing wolves in the northwestern United States. *Journal of Wildlife Management* 70:554-563.

Ripple, W.J. and R.L. Beschta. 2006. Linking wolves to willows via risk-sensitive foraging by ungulates in the northern Yellowstone ecosystem. *Forest Ecology and Management* 230: 96-106.

Sanderson, E.W. 2006. How many animals do we want to save? The many ways of setting population target levels for conservation. *BioScience* 56:911-922.

Sime, C.A., et al. 2007. Montana gray wolf conservation and management 2006 annual report. Montana Fish Wildlife & Parks. Helena.

Vongholdt et al. 2007. The genealogy and genetic viability of reintroduced Yellowstone grey wolves. *Molecular Ecology*. In press.

My letter of May 8, 2007:

U.S Fish and Wildlife Service (FWS)
Gray Wolf Recovery Coordinator
Helena, Montana
WesternGrayWolf@fws.gov

Reference: RIN number 1018-AU53

Subject: Delisting Proposal and Conservation of the Gray Wolf in the Northern Rocky Mountains

Dear FWS:

Please consider my comments on your proposal to remove the gray wolf in the Northern Rocky Mountains (NRM) from the Federal List of Endangered and Threatened Wildlife under the U.S. Endangered Species Act (Federal Register, February 8, 2007 [FR]). Comments focus on two factors to be considered by FWS for listing or delisting a species under the Endangered Species Act: 1. Present or threatened destruction, modification, or curtailment of wolf habitat or range, and 2. Adequacy or inadequacy of existing regulatory mechanisms. They also include suggestions for conserving connectivity between wolf subpopulations in the NRM.

Threatened Habitat Connectivity

The three NRM areas identified by FWS as distinct recovery areas are northwestern Montana (NMT), central Idaho (CID), and the Greater Yellowstone Area (GYA). The delisting proposal is premised on sustained conservation of a metapopulation of gray wolves in the NRM, with these three areas providing primary wolf habitat and with outlying areas providing habitat sufficient to allow safe passage of wolves between them (FR p. 6107).

The FWS used two models, Oakleaf et al. (2006) and Carrol et al. (2006), to evaluate suitable habitat for gray wolf within and between these areas (FR p. 6118). The Oakleaf et al. model found that at the present time wolf populations in NMT and CID recovery areas appear to be linked by continuous tracts of quality habitat. In contrast, the linkage between GYA and other recovery areas appears to be poor with “relatively narrow and largely discontinuous corridors of appropriate habitat” (p. 560). Oakleaf et al. concluded, “for the northern Rocky Mountain wolf population to effectively function as a metapopulation, it will be desirable to prioritize the protection and perhaps restoration of dispersal linkages between the GYA and other recovery areas” (p. 561).

The model used by Carrol et al., although broadly covering the entire geographic range of wolves in the western United States, also stated the importance of habitat areas or linkages for maintaining population connectivity between the three NRM gray wolf populations (p.35). It indicated declining habitat suitability between all three NRM wolf populations under a scenario of increased road development on both private and unprotected public lands (p. 32). Carrol et al. noted that connectivity depends on both the strength of the source population and the permeability of the intervening landscape. Carrol (2006), in a separate paper discussing the model as applied more specifically to the NRM, described a reduction in carrying capacity for large carnivores due to landscape changes over the next two decades (p. 377):

landscape change trends move the US Northern Rockies landscape towards a condition where the wolf subpopulations [like the grizzly bear]

would also become increasingly isolated. This is due not only to increasing barriers to movement (e.g., highways), but also to degradation of source habitat and consequent reduction in the number of dispersers...Range contraction (decrease in probability of occupancy) occurs throughout the landscape matrix for wolf.

The FWS recognizes the importance of habitat connectivity for gray wolves between NMT, CID, and GYA (FR p. 6121). But contrary to concerns about habitat connectivity raised by the Carrol and Oakleaf models, the Service states that there appears to be enough habitat connectivity to ensure exchange of sufficient numbers of dispersing wolves to maintain the NRM wolf population, citing as evidence ironically the Oakleaf et al. and Carrol et al. (2006) papers, and personal communications with two other biologists. (Unfortunately, the published articles appear misrepresented by FWS in the delisting proposal: Oakleaf et al., as mentioned, expressed concern about poor linkage between GYA and other recovery areas, while Carrol et al. show significantly diminished connectivity after 20 years with increased human population and road development [Figure 6, p. 32]). While FWS notes “that current habitat conditions allow dispersing wolves to occasionally travel from one recovery area to another” (based on documentation of some wolf movement between Idaho and Montana, and into the GYA), it does not consider loss of habitat connectivity in coming years, apart from assuring that the wolf management plan for Montana “commits to maintaining natural connectivity ...by promoting land uses such as traditional ranching, that enhance wildlife habitat and conservation” (FR p. 6121), and commits to encourage connectivity among wolf populations to maintain the overall [wolf] metapopulation structure (FR p. 6127).

Elsewhere, FWS states, without explanation, “we do not predict that changes in...suitable habitat nor land-uses in the foreseeable future in all or a significant portion of the range in the NRM DPS [distinct population segment] will threaten wolf recovery” (FR p. 6118). The lack of analysis to support this prediction, in terms of habitat connectivity, is a significant shortcoming of the delisting proposal given the Service’s obligation under the Endangered Species Act to evaluate the “present or threatened destruction, modification, or curtailment” of wolf habitat or range (FR p. 6117).

It may be that FWS implicitly relies on state wolf conservation plans or unspecified plans or efforts, including those by other government agencies, private landowners, land trusts, conservation organizations, and others to secure habitat connectivity for wildlife within the tri-state area. If so, FWS should evaluate these collective efforts prior to a decision on delisting the gray wolf. This evaluation should examine the status of specific land areas essential for population connectivity in terms of existing management plans, road densities, projected development, existence of easements or other land conservation mechanisms, projected growth, local land use regulations, conservation priorities, and other relevant factors.

Beyond the tri-state area, the delisting proposal does not address the conservation of habitat connectivity for wolves between the NRM and other wolf population areas in the lower 48 states. Yet Oakleaf et al. (2006, p. 559) identified dispersal habitat in western

Idaho that could allow wolf movement into Oregon and Washington, and a dispersal corridor from GYA southward to the southern Rocky Mountains. Carrol et al. (2006, p. 35) suggested, “management decisions such as delisting proposals that affect a particular DPS should also take into account the broader rangewide context for recovery.” They also point to important landscape linkages for wolves south and west from the NRM.

Related Regulatory Issues

The FWS delisting proposal requires that state wolf management plans maintain at least 10 breeding pairs and 100 wolves by managing for a safety margin of 15 breeding pairs in each state (FR p. 6120). Unfortunately, neither the proposal nor the state plans address regulatory mechanisms for conserving connective habitat essential for achieving the recovery goal of a viable gray wolf metapopulation in the NRM (FR p. 6107). This omission is of particular concern given the Service’s approval of state wolf management at a substantially diminished population from current levels, and the delisting proposal’s failure to evaluate how a reduction in wolf numbers (and dispersing wolves) and likely changes in wolf behavior (i.e., greater wariness resulting from increased lethal control and hunting) would affect wolf movement between NMT, CID, and GYA, that is to say, functional as well as structural connectivity (Wiens 2006).

The Idaho Plan (Idaho Legislative Wolf Oversight Committee 2002) does not address habitat conservation. The Montana Plan (FR p. 6127, Appendix 1 on cited website) suggests that state habitat programs “along with the amount of land held in public ownership, provides long-term habitat availability for wolves” (p. 25) but offers no analysis as to the regulatory mechanisms involved. At the same time, the plan raises unresolved issues about road density and its affect on wolves, and cites a paper by Forbes and Boyd (1997) that concludes: “A greater threat [to NRM wolf populations than isolation by distance] is the possibility of chronically low [wolf] numbers or minimal dispersal due to human-caused mortality. Broad landscape connections where wolves are not persecuted outside designated recovery areas are needed, and these can be enhanced through effective legal protection and public education” (p. 1231). While the Montana Plan states that wolves will be permitted to move through areas unsuitable for long-term occupancy as long as they do not threaten public safety (p. 27), it does not identify which areas are important or specify how wolves would be protected as they more through them. In its delisting decision, FWS should examine whether *existing* regulatory mechanisms can assure wolf movement between recovery areas, given anticipated changes in both structural and function aspects of habitat connectivity for gray wolf in the NRM.

Beyond the NRM, delisting under the current proposal is likely to preclude functional connectivity for gray wolves to the Northwest and to the Southern Rockies. Prior to delisting the NRM gray wolf, FWS should require that state and federal agency wildlife management plans protect and enhance both habitat and wolf movement between regions. The lack of appropriate regulatory planning jeopardizes wolf dispersal between wolf regions in the U.S. and risks eventual isolation of the NRM wolf population depending on land use trends and wolf management in Canada. On the latter point, FWS should

evaluate connectivity over the next 30-years (the “foreseeable future”) between NRM and wolf populations in Canada. An insular NRM wolf population managed at the low range of 300-450 would not meet population viability standards.

Conserving Connectivity Between Subpopulations

Based on the above analysis, I suggest that a connectivity conservation program for the gray wolf be developed and implemented prior to delisting the NRM population, emphasizing habitats linking GYA and other wolf subpopulations. The following measures are recommended:

1. Determine corridor habitat for wolf movement between subpopulations.
2. Attain, through public agency regulations, high standards for land management for ensuring habitat suitability (FR p. 6113, 6117) and security for gray wolves within corridor habitat.
3. Prohibit the harassment, removal, or killing of wolves on public lands within corridor areas, excepting cases of incorrigible individuals attacking livestock on nearby private lands.
4. Offer assistance to private landowners in corridor areas to deter wolf depredations on domestic animals using advanced animal husbandry techniques and non-lethal means for controlling wolves.
5. Work with transportation authorities to minimize road-related mortality of wolves and wild ungulates in habitat corridors.
6. Assist local governments, private land trusts, other organizations, and private landowners in efforts to conserve open space and wildlife habitat.
7. Carefully monitor the level of wolf movement between NRM subpopulations, and adjust your connectivity conservation program accordingly.

Conclusion

Evidence indicates that the NRM gray wolf population is threatened by habitat fragmentation separating GYA from other wolf areas, and that reduced habitat suitability in the future threatens connectivity between all three primary wolf areas. At the same time, habitat connectivity between the NRM and other regions that may support gray wolves is at risk. The delisting proposal fails to address the threat of wolf population fragmentation stemming from a combination of human population growth, land development, transportation corridors, changes in road densities and traffic, and increased wolf mortality and reduced dispersal resulting from proposed state wolf management plans and other factors.

In short, I suggest actions to ensure habitat connectivity between primary wolf areas prior to delisting the NRM wolf. FWS has responsibility under the Endangered Species Act to act cautiously when threats to the habitat of a listed species are evident, or when conflicting information demands further evaluation.

Thank you for this opportunity to comment.

Sincerely,

Tony Povilitis

Dr. Anthony Povilitis
P.O. Box 1416
Bozeman, MT 59771

References:

Carrol, C. 2006. Linking connectivity to viability: insights from spatially explicit population models of large carnivores. Pp. 369-389 in *Connectivity Conservation*. K. R. Crooks and M. Sanjayan, eds. Cambridge University Press.

Carrol, C., M.K. Phillips, C.A. Lopez-Gonzales, and N.H. Schumaker. 2006. Defining recovery goals and strategies for endangered species using spatially-explicit population models: the wolf as a case study. *Bioscience* 56:25-37.

Forbes, S. H. and D. K. Boyd. 1997. Genetic structure and migration in native and reintroduced Rocky Mountain wolf populations. *Conservation Biology* 11: 1226-1234.

Idaho Legislative Wolf Oversight Committee 2002. Idaho Wolf conservation and management plan. March 2002.

Oakleaf, J.K., D.L. Murray, J.R. Oakleaf, E.E. Bangs, C.M. Mack, D.W. Smith, J.A. Fontaine, M.D. Jimenez, T.J. Meier, and C.C. Niemeyer. 2006. Habitat selection by recolonizing wolves in the northwestern United States. *Journal of Wildlife Management* 70:554-563.

Wiens, J. A. 2006. Introduction: connectivity research – what are the issues? Pp. 23-27 in *Connectivity Conservation*. K. R. Crooks and M. Sanjayan, eds. Cambridge University Press.