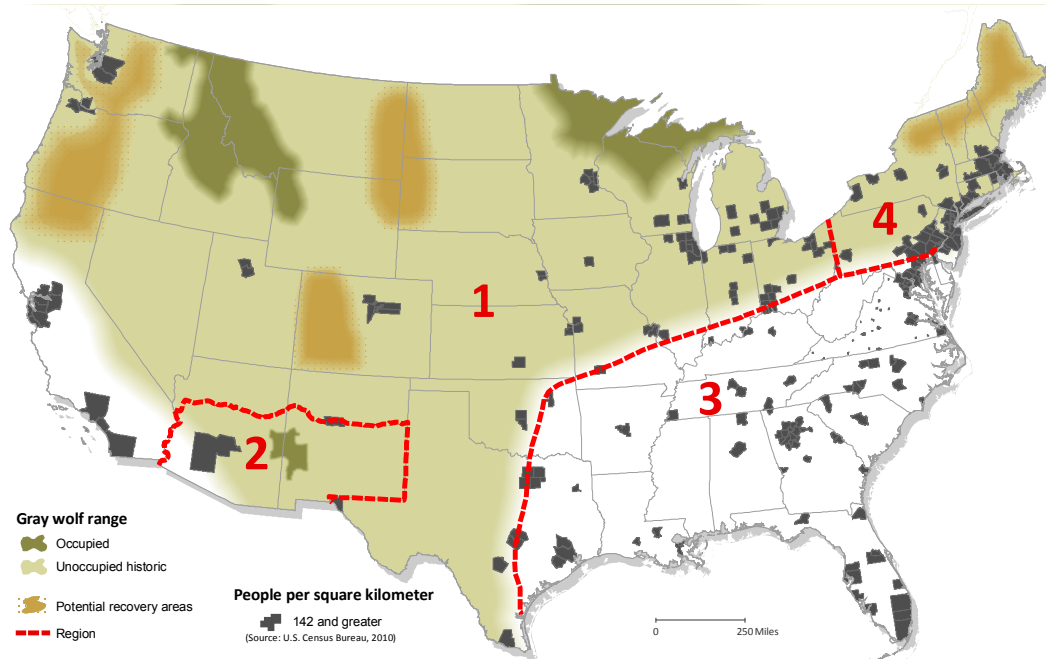


FRAMEWORK FOR ENVISIONING GRAY WOLF RECOVERY **THAT IS BOTH FEASIBLE AND ADHERES TO THE U. S. ENDANGERED SPECIES ACT.**

In separate decisions, two federal judges recently ordered gray wolves to be relisted under the U.S. Endangered Species Act (ESA) in Wyoming and the Great Lakes region. Critics argue that the second decision, in particular, is deeply misguided because it is tantamount to insisting that recovery requires wolves to live virtually everywhere – urban and suburban areas included. That criticism represents a deep misunderstanding of the law as it applies to the gray wolf.

These two decisions and a spate of others highlight difficulties the U.S. Fish and Wildlife Service (FWS) has had in developing a plan that recovers the gray wolf in a manner consistent with a requirement of the ESA known by the shorthand, “significant portion of range.” This difficulty may be best overcome by the agency developing a national wolf recovery plan. Developing a national plan may also forestalling legislative efforts to marginalize the ESA by affect wolf recovery in a piecemeal manner. Here is a simple framework for envisioning such a plan.

Landscape of Wolf Recovery



FEASIBILITY

Wolves are one of the most adaptable mammals on the planet and can live where there is adequate food and where regulatory mechanisms limit the rate at which humans kill wolves. Patterns of coexistence between wolves and humans suggest that wolves can live where human population density is less than 142 people/km² (see the map and references in endnote 1 on p. 3).

Concern for human safety need not be an obstacle to recovery. Wolves will always be less dangerous to humans than any number of other animal species that

Americans encounter on a daily basis, including white-tailed deer, hogs, bees, and domestic dogs, to mention just a few.

Livestock losses are an obstacle to recovery and such losses would increase with the implementation of a national recovery plan. Nevertheless, from an industry perspective the economic losses attributable to wolves would be genuinely trivial. In rare circumstances an individual livestock owner will suffer from wolves killing their livestock. Assisting those livestock owners is appropriate and readily accomplished.

Until nationwide recovery is achieved, wolves in Wyoming and the Great Lakes should be listed as threatened and managed per an accommodating section 4(d) rule. This would allow state agencies to use lethal control of wolves to resolve wolf-livestock conflicts.

A small, but vocal and influential, group will insist that wolf recovery meeting the standards of federal law will not be tolerated. Such insistences are likely inaccurate. For example, opponents to wolf recovery had claimed that intolerance would prevent wolves from repopulating places where they now live. More importantly, if intolerance is a genuine threat to recovery, then according to federal law such threats must be mitigated before the wolf can be delisted.

THE ENDANGERED SPECIES ACT

Federal law states that a species is endangered if “at risk of extinction throughout all or a significant portion of its range.” A species is recovered when it no longer fits that definition and is unlikely to fit that definition in the foreseeable future. Scholarship and case law indicate, in plainer language and in general, that a species is recovered when it securely occupies much or most² of its former range.³

Under recovery, some portions of wolves’ former range would not be occupied (e.g., Nevada). Those portions would, for ecological reasons, support only low densities of wolves and are less significant to wolf recovery.⁴ Still other portions of the wolf’s former range would not be occupied under recovery (e.g., northern portion of Michigan’s lower peninsula), even though such areas represent high quality wolf habitat (if threats against wolves were removed). It is, however, allowable for gray wolves to be absent from such regions because the law does not require a species to occupy all of its former range. On the whole, the recovery map included here may represent the *smallest* range that wolves would have to securely occupy to be considered recovered according to the law. This map is included here to illustrate the scope of consideration that would be required to finalize a national wolf recovery plan that was consistent with the ESA and related case law.

TAXONOMY AND GEOGRAPHY

Any national wolf recovery plan would need to consider regions 1 and 4 of the attached map, where the species once lived. Region 2 (southwestern U.S.) is important as well and currently inhabited by fewer than 100 Mexican wolves, an important subspecies of the gray wolf. Region 3 (southeastern U.S.) is associated with a different kind of wolf, the red wolf.

An adequate national recovery plan would consider the need for reintroductions to establish wolves in potential recovery areas. Natural recolonization may be sufficient in some cases.

The taxonomic status of wolves in region 4 is uncertain and will remain so for the foreseeable future. Wolves in region 4 may be sufficiently similar to wolves in region 3, or to wolves in region 1, or may be distinct from both kinds of wolf. That uncertainty is not a reason for inaction. Instead, that uncertainty calls for application of the precautionary principle. In this case, recovery has to meet the standards of the law under any of those three taxonomic possibilities. As such, it is difficult to envision wolf recovery without wolves in the northeast.

REVIEW

Proper review of any national wolf recovery plan would involve posing two questions to two groups of experts. First, scientists with appropriate expertise should be asked,

What recovery areas could wolves inhabit, provided that the threats to wolves (mainly human-caused mortality) are properly mitigated?

Second, those with appropriate knowledge of the ESA should be asked,

Would wolves securely occupying those recovery areas represent the minimum requirement for recovery according to the ESA?

Alternative visions of recovery would need to be judged by these two questions.⁵

Wolves and the U.S. Endangered Species Act are and will continue to be rich parts of our American heritage. It is vitally important to promote a constructive conversation about what gray wolf recovery should look like. The framework here is offered as a critical step toward that end.

ENDNOTES

¹ Bruskotter et al. 2013 (*Conserv. Letters* 7, 401-407); see also Chapron et al. 2014 (*Science* 346, 1517-1519).

² Whether recovery involves occupying “much” or “most” of its former range may depend on context that varies from species to species. For example, if a portion of a species’ former range had supported only low densities of that species (prior to the onset of threats that caused the species to become endangered), then that portion of range might be less significant than other portions. Such a circumstance might, for some species, allow for recovery to involve occupying much (rather than most) of the former range. See Carroll et al. (2010) for an important exception.

³ The phrase “former range” means range that was occupied before it was adversely impacted by the threats that caused the species to be listed. See, e.g., Vucetich et al. 2006 (*Conserv. Biol.* 20, 1383-1390); Greenwald 2009 (*Conserv. Biol.* 23, 1374-1377); Carroll et al. 2010 (*Conserv. Biol.* 24, 395-403).

⁴ See endnote 2.

⁵ This vision of recovery focuses on satisfying the concept known as “significant portion of range,” the details of which are the subject of references in endnote 3. In addition to that concept, recovery also involves other important criteria, such as the removal of threats that caused a species to become endangered and the establishment of adequate regulatory mechanisms that would prevent subsequent relisting.