



American Society of Mammalogists



Society for Conservation Biology

Public Comments Processing
Attn: Docket No. FWS–R6–ES–2016–0042
U.S. Fish and Wildlife Service, MS: BPHC
5275 Leesburg Pike
Falls Church, VA 22041-3803

10 May 2016

RE: Proposed rule to delist the Greater Yellowstone Ecosystem Grizzly Bear population

To Whom It May Concern:

The American Society of Mammalogists (ASM)¹ and the Society for Conservation Biology North America Section (SCBNA)² herein provide comments on the U.S. Fish and Wildlife Service’s proposed rule to delist the Greater Yellowstone Ecosystem grizzly bear population, 81 Fed. Reg. 13174 (March 11, 2016). ASM and SCBNA have concluded that USFWS’s proposal to delist the grizzly bear in the Greater Yellowstone Ecosystem (GYE) is premature and risks the long-term recovery of the species across suitable habitats within its historic range in the mountainous West of the Lower 48 contiguous states, where it currently numbers fewer than 1800 individuals.

Section 4(b)(5)(C) of the Endangered Species Act (ESA; 16 U.S.C. § 1533(b)(5)(C)) instructs the US Fish and Wildlife Service (USFWS) to notify professional societies as appropriate when it proposes to list and delist species under the ESA. Because a recovery plan delineates those steps necessary to achieve delisting criteria, it is required that the USFWS consider the expertise of professional scientific societies at the recovery planning stage as well as the ultimate stage of delisting a species under the Act. Both ASM and SCB have participated in the public comment process many times, especially involving proposed rules to list and delist species of large carnivores under the ESA (16 U.S.C. § 1531 et seq.). Specifically, regarding grizzly bears (*Ursus arctos horribilis*), ASM membership approved a resolution in 2001 urging USFWS to reintroduce grizzly bears to the Selway-Bitterroot (SB) wilderness area (ASM 2001). SCBNA submitted a public comment in February 2006 on the USFWS proposed rule to delist the Greater Yellowstone Ecosystem (GYE) grizzly bear population.

Therefore, in accordance with the role given to professional scientific societies by the Endangered Species Act, we submit this joint letter representing the views of our two societies as part of the public comment period for the proposed rule delisting the GYE grizzly bear (Docket No. FWS–R6–ES–2016–0042).

¹ASM was established in 1919 for the purpose of promoting interest in the scientific study of wild mammals, and providing information for public policy, resource management, conservation, and education. ASM has members in all 50 states and 60 foreign countries.

²The Society for Conservation Biology North America (SCBNA) is an international professional organization whose mission is to advance the science and practice of conserving the Earth's biological diversity, support dissemination of conservation science, and increase application of science to management and policy.

It is our view that over the past several years, USFWS has established a pattern of recommending delisting of geographic subsets of large carnivore species (e.g., gray wolves, *Canis lupus*), rather than continuing federal protection of these animals region-wide or range-wide until the species has re-established its natural geographic distribution through population expansion and dispersal. The current proposed rule is yet another example of this piecemeal approach, in which a fragment of a species' current range is declared "recovered" before the species is recovered at the larger, regional scale. This approach abrogates the Service's responsibility under the ESA to achieve long-term recovery of a species and ignores significant portions of the range of the grizzly bear in the West that offer suitable yet still unoccupied habitat. Premature delisting based on recovery in fragments of the range can be expected to hinder recovery of the species throughout the larger contiguous range, given that human-caused mortality of grizzly bears in Idaho, Montana, and Wyoming is almost certain to increase substantially following delisting, with resultant effects on population connectivity and distribution.

In our professional judgment, both the best available science regarding carnivore recovery and the plain language of the ESA obligate USFWS to manage the metapopulation of grizzlies in the lower 48 states, not just each subpopulation ("DPS") individually. USFWS should manage not only for persistence of the GYE population, but also for restoration of the species. For the foreseeable future, this includes managing a metapopulation with net positive annual growth, so as to allow natural recolonization of extensive apparently suitable habitat beyond the currently occupied range. The justification for delisting the DPS, which states "the current slowing or reversal of annual growth means GYE bears have reached carrying capacity," affirms an abandonment of grizzly bear restoration beyond the currently occupied range (given the predicted post-delisting effects of increased human-caused mortality on grizzly bears dispersing beyond the national parks).

The GYE population is the most isolated of the 5 extant populations of grizzly bears in the western US. Only 1 of the other 4 populations (the Northern Continental Divide Ecosystem, or NCDE, population) is large enough to be considered secure on its own in the short-term. In contrast, adequate dispersal between GYE and other subpopulations to the north and west is necessary to sustain the genetic viability of the GYE population over the long-term.

Given the great importance—as USFWS acknowledges—of establishing dispersal corridors linking GYE to the other subpopulations, we are particularly puzzled that USFWS is advocating delisting this relatively isolated population of fewer than 700 animals, while refusing to reintroduce grizzly bears into the Selway-Bitterroot (SB) region, a goal outlined in its 2001 Final EIS (see ASM 2001).

For the current metapopulation (5 subpopulations), a total census (N_c) of no more than 1800 animals (450 to 990 effective population size, given the range of N_e/N_c estimates cited in the rule) is at least 5-11 times too few individuals to assure long-term persistence, according to widely accepted standards in population genetics (Frankham et al. 2013). Yet, on p. 153 of the proposed delisting rule, USFWS states "The current effective population is more than four times the minimum effective population size suggested in the literature (Miller and Waits 2003, p. 4338)." This is a fundamental misreading of that publication and ignores the consensus among conservation geneticists that, in fact, a minimum of 500-5,000 N_e is required for *long-term* avoidance of inbreeding depression. Miller and Waits (2003) never state that minimum N_e *should be* 100; rather, they speculate—in a section discussing *short-term* avoidance of inbreeding—that the *current* N_e "is likely to be near or > 100" and they go on to acknowledge that $N_e = 500-5,000$ is the accepted threshold (p. 4338, para. 5). USFWS gives the impression that $N_e = 100$ is the new standard for long-term population viability, which is inaccurate. Further, USFWS selects the highest of several estimates of N_e from the Kamath et al. (2015) study to

arrive at the most optimistic projection possible for the current GYE grizzly population ($N_e = 469$); more conservative estimates from the same study would include $N_e = 213$ and 280 , respectively, which would mean the current GYE population is only half the minimum effective size necessary for long-term persistence. Kamath et al. (2015) also emphasize that the GYE population does not currently reach the long-term persistence threshold but state that N_e “*may eventually approach* the long-term viable population criterion ($N_e > 500$) defined by Franklin (1980).” They go on to state that “the historically small N_e , relatively low diversity and isolation over many generations suggest the grizzly population could benefit from increased fitness following the restoration of gene flow ..., particularly given the unpredictability of future climate and habitat changes.” This statement implies the necessity for restoration of the Selway-Bitterroot population and protection of dispersal corridors between it and the GYE and with the other extant populations as the best way to facilitate that gene flow. The ESA’s mandate for recovery of wild, self-sustaining populations requires that, even for a conservation-reliant species such as the grizzly bear, connectivity via natural dispersal should be facilitated in preference to artificial methods such as transfer of bears between core populations (Carroll et al. 2014, Rohlf et al. 2014).

Beyond the failure of USFWS to re-establish the SB population and thus enhance gene flow throughout the metapopulation, another serious threat to persistence of both the GYE population and the western metapopulation is increased post-delisting mortality of dispersing animals. The post-delisting management described in this proposed rule consists of non-enforceable promises and predicted actions by the US Forest Service and the three states comprising the GYE area, despite the fact that at least 2 of these states have clearly demonstrated non-precautionary management of large carnivores, as exemplified by unsustainable harvest levels of the NRM gray wolf (Creel and Rotella 2010; Ausband et al. 2015). The proposed rule’s plan to close hunting seasons when total mortality reaches threshold levels are hopelessly optimistic, given that up to half of individual grizzly bear mortalities are never discovered (in non-telemetered bears; McLellan et al. 1999). Further, the Conservation Strategy and associated state management plans described in the rule are in draft form and may change; the final Strategy and state plans are set to be issued contemporaneously with the final rule and the public will not have the opportunity to review and critique them prior to grizzly bear delisting.

Further, it is not logical to conclude, as this rule does, that because NCDE grizzlies make virtually no use of whitebark pine (*Pinus albicaulis*), that GYE grizzly bears will not be affected if whitebark pine is extirpated in the GYE region. It is simply not possible to predict that a distinct, isolated population living in a different ecosystem containing different food resources and threats will not be affected by future declines in the whitebark pine mast food source or by other, currently unanticipated factors (e.g., consequences of anthropogenic climate change, ACC). This flawed reasoning also fails to account for the cumulative effects of ongoing, simultaneous declines in several food sources for GYE bears such as native cutthroat trout, army cutworm moths, and winter-killed ungulates. The uncertainty arising from these changes combined with the recent slowing or declining of GYE population growth argues that this is not the time to remove protections and expose this critical population to increased—and to an extent uncontrollable and unquantifiable—levels of human-caused mortality.

The proposed rule also ignores the current social science literature on public attitudes toward the conservation of large carnivores (similar to the recently published rules delisting gray wolves; see Bruskotter and Wilson [2014]; Bruskotter et al. [2015]; Treves et al. [2015]). The unsupported claim in the proposed rule that virtually anywhere grizzly bear populations are not currently present constitute areas where habitat is deemed unsuitable only because the presence of bears is not “socially acceptable” is not a science-based conclusion. USFWS has an obligation to mitigate threats to recovery

of listed species. The studies cited above detail how USFWS has used assumed public intolerance of large carnivores as a rationale for lowering recovery objectives below what is biologically necessary for long-term persistence of carnivore species.

In summary, we find that the proposal to delist the GYE grizzly bear is flawed by misinterpretation of the population genetics literature and by overly optimistic and unfounded predictions about the population's resiliency to *i)* known resource threats, *ii)* unknown ACC effects, and *iii)* unknown but likely substantial human-caused mortality. We further conclude that this proposal is premature in at least two respects: *i)* it is not possible to determine if there will be "adequate regulatory mechanisms" in place post-delisting because the relevant states have not yet published their final management plans; and *ii)* USFWS has not honored its long-standing commitment to re-establish a grizzly bear population in the SB, which is the most crucial step for ensuring long-term persistence and health of the metapopulation by providing connectivity between GYE, NCDE and other isolated populations. Long-term recovery of the species in the lower 48 states, as envisioned by the authors of the ESA, would require this step to be completed before delisting the GYE population. Conversely, premature delisting of the GYE population will limit the potential for future success in restoring grizzly bears to the SB due to the anticipated reduction in animals inhabiting peripheral habitats to the west of the GYE that form the most likely corridor for dispersal and genetic interchange between the GYE and any restored SB grizzly bear population.

Sincerely,



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