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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R6–ES–2017–0089; FXES11130900000C6-178-FF09E42000]

**Endangered and Threatened Wildlife and Plants; Review of 2017 Final Rule,
Greater Yellowstone Ecosystem Grizzly Bears**

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Regulatory review; determination.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce our determination that our 2017 final rule to designate the population of grizzly bears in the Greater Yellowstone Ecosystem (GYE) as a distinct population segment and remove that population from the Endangered Species Act’s List of Endangered and Threatened Wildlife does not require modification. After considering the best scientific and commercial data available and public comments on this issue received during a regulatory review, we affirm our decision that the GYE population of grizzly bears is recovered and should remain delisted under the Act. Accordingly, the Service does not plan to initiate further regulatory action for the GYE grizzly bear population.

DATES: This determination is made [INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

ADDRESSES: Supplementary documents to this determination, including public comments received, can be viewed online at <http://www.regulations.gov> in Docket No. FWS–R6–ES–2017–0089.

FOR FURTHER INFORMATION CONTACT: Hilary Cooley, Grizzly Bear Recovery Coordinator, U.S. Fish and Wildlife Service, University Hall, Room 309, Missoula, MT 59812; by telephone (406) 243–4903. Persons who use a telecommunications device for the deaf may call the Federal Relay Service at (800) 877–8339.

SUPPLEMENTARY INFORMATION:

We, the U.S. Fish and Wildlife Service (Service), are issuing this document as a followup to a prior *Federal Register* document regarding Greater Yellowstone Ecosystem (GYE) grizzly bears published on December 7, 2017 (82 FR 57698). In that *Federal Register* document, we asked for public comments on the impact of a court ruling on our final rule (82 FR 30502, June 30, 2017) designating the GYE population of grizzly bears as a distinct population segment (DPS) and removing that population from the protections of the Endangered Species Act (Act; 16 U.S.C. 1531 et seq.). Hereafter referred to as the “Final Rule,” the June 2017 rule removed the GYE population of grizzly bears from the List of Endangered and Threatened Wildlife (List) in title 50 of the Code of Federal Regulations (50 CFR 17.11(h)).

The referenced court opinion from the United States Circuit Court of Appeals for the D.C. Circuit, *Humane Society of the U.S. v. Zinke*, 865 F.3d 585 (D.C. Cir. 2017), addressed the analysis undertaken to designate a DPS from a previously listed entity and remove that DPS from the List (i.e., “delist” it). We believe that the 2017 decision to remove the GYE population of grizzly bears from the List complies with the Act, but we decided to consider issues relating to the remainder of the grizzly bear population in the lower 48 States in light of the *Humane Society* opinion. After considering the best

scientific and commercial data available regarding the grizzly bear population in the lower 48 States, the species' historical range, and public comments received, the Service has determined that the Final Rule delisting the GYE DPS does not require modification and that the remainder of the population will remain protected under the Act as a threatened species unless we take further regulatory action. We affirm our decision that the GYE population of grizzly bears is recovered and should remain delisted under the Act.

Background

In 1975, the Service listed the grizzly bear (*Ursus arctos horribilis*) in the lower 48 United States as a threatened species under the Act (40 FR 31734, July 28, 1975). In designating the GYE population of grizzly bears as a DPS in 2017 and removing the population from the List, the Service did not reopen the 1975 listing rule through the Final Rule. Rather, the Service identified the GYE grizzly bears as a DPS, concluded that the GYE population was stable, threats were sufficiently ameliorated, and a post-delisting monitoring and management framework had been developed and incorporated into regulatory mechanisms or other operative documents. The best scientific and commercial data available, including our detailed evaluation of information related to the population's trend and structure, indicated that the GYE grizzly bear DPS had recovered and threats had been reduced such that it no longer met the definition of a threatened or endangered species under the Act. The Final Rule became effective on July 31, 2017, and remains in effect, as does the 1975 listing that applies to the lower 48 States population except for the GYE DPS.

On August 1, 2017, the Court of Appeals for the District of Columbia Circuit issued a ruling, *Humane Society of the United States, et al. v. Zinke*, 865 F.3d 585 (D.C. Cir. 2017), that affirmed in part the prior judgment of the district court vacating the 2011 delisting rule (76 FR 81666, December 28, 2011) for wolves in the Western Great Lakes (WGL). The 2011 rule designated the gray wolf population in Minnesota, Wisconsin, and Michigan, as well as portions of six surrounding States, as the WGL DPS, determined that the WGL DPS was recovered, and delisted the WGL as a DPS. The D.C. Circuit ruled that, while the Service had the authority to designate a DPS and delist it in the same rule, the Service violated the Act by designating and delisting the WGL wolf DPS without evaluating the implications for the remainder of the listed entity of wolves after delisting the DPS. The court also ruled that the Service failed to analyze the effect of lost historical range on the WGL wolf DPS. In light of this ruling, we asked for public input to aid our consideration of whether the GYE delisting determination should be revisited and what, if any, further analysis was necessary regarding the remaining grizzly bear populations and lost historical range.

Regulatory Approach in the Final Rule

The Service's determination to designate the GYE population as a DPS and delist it, while deciding not to revisit the 1975 listing and leaving it in place for the remainder of the population, was consistent with the Act, with Service policies, and with the Department's longstanding legal interpretation. In section 4(a) of the Act, the Service is authorized to identify and evaluate "any species." (16 U.S.C. 1533(a)(1)). This includes any DPS of any species of vertebrate fish or wildlife. (16 U.S.C. 1532(16)). The Service determines a species' status, i.e., whether it is threatened or endangered, after considering

the five factors listed in section 4(a)(1) of the Act. (16 U.S.C. 1533(a)(1)(A)–(E)). The Act imposes a mandatory duty on the Secretary to notify the public of these determinations by maintaining a list. Specifically, section 4(c)(1) of the Act requires the Secretary to “publish in the Federal Register a list of all species determined by him or the Secretary of Commerce to be endangered species and a list of all species determined by him or the Secretary of Commerce to be threatened species.” (16 U.S.C. 1533(c)(1)). The Act requires the Secretary, “from time to time,” to revise the lists “to reflect recent determinations, designations, and revisions” (16 U.S.C. 1533(c)(1)).

This framework is addressed in detail in a Memorandum Opinion from the Department of the Interior’s Office of the Solicitor (M–37018, U.S. Fish and Wildlife Service Authority under Section 4(c)(1) of the Endangered Species Act to Revise Lists of Endangered and Threatened Species to “Reflect Recent Determinations,” December 12, 2008 (M-Opinion)). The M-Opinion explained that, when the Service lists an entire species, the Service may be effectively listing several smaller separately listable entities because, as set forth in Service regulations, listing a particular taxon includes all lower taxonomic units. (M-Opinion, p. 7; *see also* 50 CFR 17.11(g)). The M-Opinion states that “when identifying and removing a DPS from a broader species listing, . . . [the Service] is separately recognizing an already-listed entity for the first time because it now has a different conservation status than the whole.” *Id.* As explained above, once that DPS is identified as being separate from the listed whole, the Act requires the Service to update the List. *Id.* at p. 3. The *Humane Society* court considered the M-Opinion and upheld the Solicitor’s interpretation of the Act: “We hold that the Service permissibly concluded that the Endangered Species Act allows the identification of a distinct

population segment within an already-listed species, and further allows the assignment of a different conservation status to that segment if the statutory criteria for uplisting, downlisting, or delisting are met.” *Humane Society*, 865 F.3d at 600.

Some commenters on the December 7, 2017, *Federal Register* document argued that section 4(c)’s requirements to maintain the lists of endangered and threatened species, and to review those lists periodically, prohibit the Service from focusing a regulatory action on a DPS (one part of a broader entity). We reject this view as inconsistent with the Act. As explained above, and in the referenced M-Opinion, section 4(c)(1) of the Act imposes a mandatory duty on the Secretary of the Interior to publish and maintain the lists of all of the species that either the Secretary of the Interior or the Secretary of Commerce has determined to be endangered species or threatened species under section 4(a)(1). The regulations (50 CFR 17.11(a)) contemplate that a single taxonomic species, or components thereof, can be the subject of multiple listing actions under section 4(a)(1) and, therefore, can have more than one entry on the lists. Thus, section 4(c)(1), consistent with section 4(a)(1) and 50 CFR 17.11(a), allows the Secretary of the Interior, through the Service, to document the legal effect of multiple listing entries for a taxonomic species, for instance by including multiple entries for a taxonomic species or by revising a list to reflect that a recent determination superseded all or part of a previous listing action.

Nothing in section 4(c)(2) is to the contrary. It requires the “Secretary” to periodically review the species on the List. Thus, at least every 5 years, the lists must be reviewed to determine if a species over which the Secretary has authority should be removed, downlisted from endangered to threatened, or uplisted from threatened to

endangered. (16 U.S.C. 1533(c)(2)). This requirement incorporates the listing determination provisions at sections 4(a) and 4(b), and is separate from the requirement to revise the lists in section 4(c)(1). The requirement in section 4(c)(2) that both Secretaries review the species on the lists at least once every 5 years does not limit or add to the section 4(c)(1) requirement for the Secretary of the Interior to revise the lists to reflect recent determinations made by either Secretary. Nothing in the Act requires the Service to undertake a 5-year review of a listed species contemporaneously with taking an action on a lower taxonomic unit within the species. Simply put, sections 4(a)(1) and 4(c)(2) of the Act respectively require both Secretaries to make and periodically review listing determinations with respect to species, subspecies, and DPSs, while section 4(c)(1) creates a separate and independent regulatory obligation for the Secretary of the Interior to revise the lists to reflect listing determinations.

Targeted rulemaking on a DPS, without also reopening prior listing rules or expanding our inquiry to other species, furthers the purposes and objectives of the Act. The approach allows the Service the flexibility to either uplist or downlist a DPS of an already-listed entity without diverting agency resources to determining the overall status of the broader entity. In addition, targeted rulemaking furthers Congress's intent to focus the Act's protections and Service resources on those species that truly qualify as threatened or endangered or that require another change in regulatory status. Focusing on recovered DPSs serves other policy objectives. The principal goal of the Act is to return listed species to a point at which protection under the Act is no longer required. Once a species is recovered, its management should be returned to the States. Our approach furthers that objective. It also creates incentives for Federal–State cooperative efforts to

achieve recovery. This approach also avoids needless expenditure of scarce Federal funds on populations that are no longer threatened or endangered.

Following the framework in section 4 of the Act, the Service can determine the status of a DPS consistent with the Service's DPS policy. (61 FR 4722 (February 7, 1996)). We can proceed in different ways when addressing a DPS. For example, we can revisit the listing of a taxonomic species and designate multiple DPSs of that species or we can keep the listing of the taxonomic species in place and reclassify one or more of its DPSs. The latter course is permissible, as a DPS designation identifies a population *within* a taxonomic species or subspecies. (16 U.S.C. 1532(16); defining a DPS as a "segment of" a species). Under the Act, designating a DPS does not automatically split or carve up a taxonomic entity, but merely recognizes that a DPS is a population within a taxonomic entity. Thus, focused regulatory action on listing or delisting a DPS is appropriate under the Act and consistent with the Act's purposes of providing the Service with discretion to order priorities and take regulatory action that best serves the policies and purposes of the Act.

In the GYE DPS rulemaking action, the Service designated a valid species, the GYE DPS, that is a segment of the 1975 listed entity, and then applied the five factors to the DPS. The Service determined that the species did not qualify as threatened or endangered. Once the determination regarding the GYE grizzly bear DPS was made, the Secretary had made a decision for purposes of the listing requirements in section 4(c) and he was *required* to modify the list to reflect his new determination. There is no corresponding requirement to modify the original listed entity or to separately assess its status.

By taking regulatory action on the DPS itself and not revisiting the 1975 rulemaking, we did not reopen the lower-48-States listing, which does not now include the GYE DPS. All of the grizzly bears in the lower 48 States remain listed as threatened, except where superseded by the GYE DPS delisting. (82 FR 30503, 30546, 30552, 30623, 30624, 30628, June 30, 2017). We concluded that “it is not an efficient use of our limited resources to initiate a rulemaking process to revise the lower-48-States listing. Such a rulemaking would provide no more information about our intentions for grizzly bear recovery than the parameters and documents already guiding our existing grizzly bear recovery program.” (82 FR 30623, June 30, 2017).

The regulatory action in the Final Rule is consistent with our recovery strategy for all grizzly bears in the coterminous lower 48 States. The Final Rule discusses the recovery strategy for lower-48-States grizzly bears, including the Recovery Plan, which provided management goals for six different grizzly bear populations identified by ecosystems. The Recovery Plan identifies unique demographic recovery criteria for each ecosystem population, and states that it is the Service’s goal to delist individual populations as they recover. Thus, the Service’s action in delisting the GYE DPS is consistent with the Recovery Plan. The GYE population is the first of the six populations to recover. We note, however, that the population in the Northern Continental Divide Ecosystem may be eligible for delisting in the near future. The Service’s data indicates that this population has likely met recovery goals. Other populations may be uplisted, downlisted, or delisted based on their overall health and numbers.

In summary, the Service has appropriately considered the impact of the GYE delisting on the lower-48-States population of grizzly bears. The Final Rule properly

implemented the recovery strategy by employing discrete rulemaking with respect to the GYE population of grizzly bears. The Service has the discretion under the Act to engage in targeted rulemaking for a DPS—a species as defined under the Act—and to determine its status based on the five factors set forth in section 4(a)(1). While the Service must revise its lists of endangered and threatened species from time to time to reflect new determinations, section 4(c)(2) imposes no corollary obligation to revisit past rules affecting that species at the same time. The Service can designate a DPS from a prior listing and take action on that DPS without reopening the prior listing. Therefore, we disagree with *Humane Society* to the extent it can be read to impose an obligation with respect to the broader listing when designating a DPS from that listing. However, as explained below, we decided to further consider the impact of the GYE DPS delisting on the lower-48-States grizzly bear population and whether further regulatory action is required for the GYE DPS delisting.

Response to Comments

The Service received more than 3,600 comments on the adequacy of the Final Rule in light of *Humane Society*. A number of comments were outside the scope of our request for public comments. Responsive comments ranged from contentions that the Final Rule is adequate in light of *Humane Society* and further evaluation is not needed to assertions that *Humane Society* renders the Final Rule invalid. Issues and new information raised during the public comment period were incorporated into the analysis presented in this document and were analyzed in more detail in a supporting document. For detailed summaries of and responses to public comments, see the Supporting Documents in Docket No. FWS–R6–ES–2017–0089 at <http://www.regulations.gov>.

Assessment

Commenters responding to the December 7, 2017, *Federal Register* document expressed concern about the protections and status of grizzly bears located outside of the GYE DPS boundaries. We did address these concerns in our Final Rule, explaining that grizzly bears outside the DPS boundaries remain fully protected as a threatened species under the Act, that our recovery strategy will continue to focus on ecosystem-wide recovery zones, and that the DPS delisting does not affect the status or likely recovery of other grizzly bear recovery zone populations (through connectivity, exchange, etc.). However, in view of the *Humane Society* decision and the public comments received, we address these issues in greater detail below, including the status of the GYE DPS, the status of the lower-48-States entity, the impact of the GYE delisting on the lower-48-States entity, the impact of the lower-48-States entity on the GYE DPS, and the impact of lost historical range.

Status of the GYE DPS

In our Final Rule, we found that the GYE grizzly bear population is discrete from other grizzly bear populations and significant to the remainder of the taxon (i.e., *Ursus arctos horribilis*). Therefore, it is a listable entity under the Act and under our DPS Policy (61 FR 4722, February 7, 1996). The Service concluded that the GYE grizzly bear population has recovered to the point at which protection under the Act is no longer required. The best scientific and commercial data available indicate that the GYE grizzly bear DPS is not endangered or threatened throughout all or a significant portion of its range. We are aware of no information that would warrant revisiting this determination.

Status of the Lower-48-States Entity

The 1975 final rule listed grizzly bears in the lower 48 States as threatened (40 FR 31734, July 28, 1975). In the Final Rule, we noted that the grizzly bears occurring outside of the boundary of the GYE DPS in the lower 48 States remain threatened and therefore protected by the Act (82 FR 30503, 30546, 30552, 30623, 30624, 30628, June 30, 2017). The Service has the discretion to revisit this determination at a later time, although it is not required now as explained above, and we may do so as we consider other populations within the lower-48-States entity.

Impact of GYE Delisting on the Lower-48-States Entity

As explained above, the Final Rule did not reopen the 1975 listing rule, although it no longer covers the GYE DPS. The 1975 listing remains valid. Although the ESA does not require an analysis of the Final Rule's impact on the 1975 listing, we conduct that analysis here in response to public comments. It is possible that delisting a DPS of an already-listed species could have negative effects on the status of the remaining species. For example, removing the Act's protections from one population could impede recovery of other still-listed populations (82 FR 30556–30557, June 30, 2017). For grizzly bear, delisting the GYE DPS could have implications for the remaining populations that have not yet achieved recovery. One possible implication could be that delisted grizzly bears inside the GYE DPS may be subject to increased mortality, which could reduce grizzly bear dispersal into other recovery zones. A map of grizzly bear recovery areas is available at <https://www.fws.gov/mountain-prairie/es/species/mammals/grizzly/GBdistributions.jpg>. While natural connectivity between recovery zones is not a recovery criterion for any of the recovery zones, it is one of our long-term objectives (USFWS 1993, p. 24, entire) as it would likely speed the

achievement of recovery goals and increase genetic variability, and any increase in mortality inside the GYE DPS could limit such benefits.

The Bitterroot Ecosystem (BE) could be impacted most by changes in dispersal from the GYE DPS because it is within potential dispersal distance (120 km (75mi)) from the GYE DPS (Blanchard and Knight 1991, pp. 54–55; Proctor et al. 2004, p. 1113), as well as the Northern Continental Divide Ecosystem (NCDE) (35 km (21 mi); Costello 2018, *in litt.*). Although the BE is unoccupied and isolated from other populations, there is a potential that dispersal from the GYE DPS could lead to the development of a grizzly population in the BE. Federal and State management agencies that make up the Interagency Grizzly Bear Study Team accounted for potential connectivity to the BE by extending a portion of the Demographic Monitoring Area (DMA) boundary to the western edge of the GYE DPS boundary to include suitable grizzly bear habitat in the Centennial Mountains (82 FR 30504, June 30, 2017). The Centennial Mountains lie inside both the GYE DPS and DMA and provide an east-west corridor of suitable habitat from the GYE to the BE ecosystem. The extended DMA is still a significant distance from the BE, but the mortality limits are in effect inside the DMA, ensuring that mortalities will be limited in this area of potential connectivity between the two ecosystems if dispersal were to occur. However, despite protections of the Act, we have no evidence of grizzly bears successfully dispersing from the GYE into the BE. Therefore, we conclude that any effect on dispersal in this area due to the Final Rule would likely be minimal. It is more likely that the BE will be recolonized by the NCDE population, as the distance between the two ecosystems is shorter and there is more suitable habitat in the interstitial area.

Connectivity between the GYE DPS and the NCDE has the greatest potential due to proximity (110 km (68 mi)) of currently occupied range in both ecosystems (Peck *et al.* 2017, p. 2). The Tobacco Root mountain range may be a particularly important dispersal pathway between these two ecosystems (Peck *et al.* 2017, p. 15). The Tobacco Roots fall in the northwest corner of the GYE DPS, outside the DMA and associated mortality limits. Delisting of the GYE population may reduce the potential for GYE grizzly bears to disperse through the Tobacco Roots (or other pathways) to the NCDE, or for NCDE grizzly bears to disperse into the GYE due to potential increased mortality inside the GYE DPS. However, genetic isolation is not a concern for the NCDE or the GYE. Due to its relatively large population size, high level of heterozygosity, and continued connection with Canada, the NCDE does not need immigrants from the GYE to reach recovery (Kendall *et al.* 2009, pp. 8, 12; Costello *et al.* 2016, p. 2). To date, we have no evidence of grizzly bears successfully dispersing from the GYE into the NCDE or any other recovery zone, despite protections of the Act. Genetic analysis confirms that the GYE DPS remains isolated, with no evidence of recent immigrants from other populations (Haroldson *et al.* 2010, p. 8; Proctor *et al.* 2012, pp. 16–17). Furthermore, no recent observations of grizzly bears in the Tobacco Roots have been confirmed either through non-invasive surveys (Lukins *et al.* 2004, p. 171) or surveillance of observation reports (K. Frey 2017, *pers. comm.*).

The Selkirk Ecosystem and Cabinet-Yaak Ecosystem are currently occupied and connected to grizzly bear populations in Canada. They, along with the North Cascades Ecosystem, are also beyond any known expected dispersal distance from the GYE.

Therefore, any potential increased mortality in the GYE would not impact these populations.

Mortality limits for independent females and males and dependent young in the GYE DMA, adopted into regulation by each State, are in place and will reduce potential for impacts to dispersal. Regulatory mechanisms are in place and adequately address threats in a manner necessary to maintain a recovered population into the foreseeable future (82 FR 30528–30535, June 30, 2017). The mortality limits were calculated as those needed to maintain the population at a stable level, and take into account all sources (human-caused, natural, unknown) of mortality. They are calculated as annual mortality rates on a sliding scale depending on the annual population size estimate. Idaho, Montana, and Wyoming have committed to these mortality limits in the 2016 Conservation Strategy (YES 2016) and in a Memorandum of Agreement (MOA; Wyoming Game and Fish Commission *et al.* 2016, entire) and are set forth in State regulations. The agreed-upon mortality limits will maintain the population within the DMA around the long-term average population size for 2002–2014 of 674 grizzly bears, consistent with the revised demographic recovery criteria (USFWS 2017, entire) and the MOA (Wyoming Game and Fish Commission *et al.* 2016, entire). Montana’s State management plan includes a long-term goal of allowing grizzly bear populations in southwestern and western Montana to reconnect through the maintenance of non-conflict grizzly bears in areas between the ecosystems. The State of Montana has indicated that, while discretionary mortality may occur, the State will manage discretionary mortality to retain the opportunity for natural movements of grizzly bears between ecosystems (MFWP 2013, p. 9; 82 FR 30556, June 30, 2017).

Mortality limits do not exist for areas outside the DMA within the GYE DPS; however, we do not expect grizzly bears to establish self-sustaining populations there due to a lack of suitable habitat, land ownership patterns, and the lack of traditional, natural grizzly bear foods. Instead, grizzly bears in these peripheral areas will likely always rely on the GYE grizzly bear population inside the DMA as a source population (82 FR 30510–30511, June 30, 2017). The current distribution of grizzly bears within the GYE DPS includes areas outside of the DMA, and, as such, grizzly bears in these areas may be exposed to higher mortality. However, grizzly bears throughout the GYE DPS are classified as a game species by all three affected States and the Eastern Shoshone and Northern Arapaho Tribes of the Wind River Reservation, and, as such, cannot be taken without authorization by State or Tribal wildlife agencies (82 FR 30530, June 30, 2017; W.S. 23-1-101(a)(xii)(A); W.S. 23-3-102(a); MCA 87-2-101(4); MCA 87-1-301; MCA 87-1-304; MCA 87-5-302; IC 36-2-1; IDAPA 13.01.06.100.01(e); IC 36-1101(a); Idaho’s Yellowstone Grizzly Bear Delisting Advisory Team 2002, pp. 18–21; MFWP 2013, p. 6; Eastern Shoshone and Northern Arapahoe Tribes 2009, p. 9; WGFD 2016, p. 9; YES 2016a, pp. 104–116).

The primary potential impact of delisting the GYE DPS on the status of the listed species is the potential to limit dispersal from the GYE into other unrecovered ecosystems due to increased mortality within the DPS. However, we do not expect mortalities to increase significantly because the vast majority of suitable habitat inside the GYE DPS is within the DMA where bears are subject to mortality limits. Grizzly bears remain protected by the Act outside the DPS. Additionally, food storage orders on public lands provide measures to limit mortality and promote natural connectivity through a

reduction in conflict situations. (82 FR 30536, 30580, June 30, 2017). Despite these protections, successful dispersal events remain rare and play a very minor role in population dynamics because of the large amounts of unsuitable habitat between ecosystems. The probability of successful dispersal is low despite recent expansion of the GYE and NCDE populations (Peck *et al.* 2017, p. 15); accordingly, we have no recent evidence of successful dispersal from the GYE into any other ecosystem. However, populations in both ecosystems are currently expanding into new areas, and the GYE is expanding beyond the DMA. If populations continue to expand, decreasing the distance between populations, the likelihood of successful immigration will increase (Peck *et al.* 2017, p. 15). In short, we find that impacts of delisting the GYE DPS on the lower-48-States entity are minimal, do not significantly impact the lower-48-States entity, and do not affect the recovery of the GYE grizzly bears. This analysis does not warrant any revision or amendment of the Final Rule.

Finally, we believe there is sufficient evidence that the currently listed species (grizzly bears in the lower 48 States) contains more than one DPS. For example, preliminary data indicates the NCDE population is a DPS; the Service intends to evaluate that population to determine if it qualifies for DPS designation and, if so, consider its status. The Act's protections will continue outside the DPS boundaries until subsequent regulatory action is taken on the 1975 listing rule or specific DPSs within the boundaries of the entity listed in 1975. We believe this is the most precautionary and protective approach to grizzly bear recovery.

Impact of the Lower-48-States Entity on the GYE DPS

The lower-48-States entity that remains listed may have implications for the delisted GYE DPS. Throughout the range of the grizzly bear in the lower 48 States, human-caused mortality is limited and habitat is managed to promote recovery, which may increase the potential for the remaining grizzly bear population to act as a source population for the delisted GYE DPS. The lower 48 States contain several populations that are increasing in number and distribution, and may, at some point, provide dispersers into the GYE DPS. Although connectivity is not necessary for the current genetic health of the GYE grizzly bear population, it would deliver several benefits to the GYE, including increases in genetic diversity and increased long-term viability of the population (82 FR 30535–30536, 30544, 30581, 30610–30611, June 30, 2017). However, while successful dispersal is possible, the likelihood is low due to large areas of unsuitable habitat between populations. Currently, the effective population size and heterozygosity levels in the GYE are adequate to maintain genetic health of the GYE population for at least the next several decades (Miller and Waits 2003, p. 4338; Kamath *et al.* 2015, entire). The States have committed to a variety of measures to maintain genetic diversity. Wyoming has acknowledged that translocation of bears may take place in the future if necessary (WGFD 2016, p. 13). As described above, Montana has committed to managing discretionary mortality to retain the opportunity for grizzly bears to migrate between ecosystems. (MFWP 2013, p. 9; 82 FR 30556, June 30, 2017). Therefore, while the protected status of the lower-48-States grizzly bear population theoretically could engender several beneficial effects on the GYE DPS, those benefits will likely be minimal in the near term.

Impact of Lost Historical Range

When reviewing the current status of a species, we can also evaluate the effects of lost historical range on the species. As noted above, the Final Rule did not revisit the 1975 rule or perform a status review of grizzly bears in the lower 48 States. Therefore, the Final Rule was not required to assess the loss of historical range on the lower-48-States entity. However, in response to public comments suggesting that a historical range analysis for the lower-48-States population is required, we elaborate on the analysis of historical range and the status of the lower-48-States entity as previously addressed in the Final Rule.

Ursus arctos horribilis is a widely recognized subspecies of grizzly bear that historically existed throughout much of continental North America, including most of western North America from the Arctic Ocean to central Mexico (Hall 1984, pp. 4–9; Trevino and Jonkel 1986, p. 12). The continental range of the grizzly bear began receding with the arrival of Europeans to North America, with rapid extinction of populations from most of Mexico and from the central and southwestern United States and California (Craighead and Mitchell 1982, p. 516). Current populations continue to thrive in the largely unsettled areas of Alaska and northwestern Canada, while populations within the contiguous 48 States are much more fragmented.

Grizzly bears in the lower 48 States experienced immense losses of range primarily due to human persecution and reduction of suitable habitat (82 FR 30508, June 30, 2017). Prior to the arrival of Europeans, the grizzly bear occurred throughout much of the western half of the contiguous United States, central Mexico, western Canada, and most of Alaska (Roosevelt 1907, pp. 27–28; Wright 1909, pp. vii, 3, 185–186; Merriam 1922, p. 1; Storer and Tevis 1955, p. 18; Rausch 1963, p. 35; Herrero 1972, pp. 224–227;

Schwartz et al. 2003, pp. 557–558). Pre-settlement population levels for the western contiguous United States are believed to have been in the range of 50,000–100,000 animals (Servheen 1989, pp. 1–2; Servheen 1999, pp. 50–51; USFWS 1993, p. 9). In the 1800s, with European settlement of the American West and government-funded bounty programs aimed at eradication, grizzly bears were shot, poisoned, and trapped wherever they were found (Roosevelt 1907, pp. 27–28; Wright 1909, p. vii; Storer and Tevis 1955, pp. 26–27; Leopold 1967, p. 30; Koford 1969, p. 95; Craighead and Mitchell 1982, p. 516; Servheen 1999, pp. 50–51). Many historical habitats were converted into agricultural land (Woods *et al.* 1999, entire), and traditional food sources such as bison and elk were reduced, eliminated, or replaced with domestic livestock, such as cattle, sheep, chickens, goats, pigs, and agricultural products from bee hives and crops.

The resulting declines in range and population were dramatic. We have estimated that the range and numbers of grizzly bears were reduced to less than 2 percent of their former range in the lower 48 States and numbers by the 1930s, approximately 125 years after first contact with European settlers (USFWS 1993, p. 9; Servheen 1999, p. 51). Of 37 grizzly bear populations present in 1922 within the lower 48 States, 31 were extirpated by the time of listing in 1975, and the estimated population in the lower 48 States was 700–800 animals (Servheen 1999, p. 51).

For the Final Rule and this review, we considered historical range of grizzly bears circa 1850. We determined that this timeframe is appropriate for measuring grizzly bear range because it is a period for which published faunal records document grizzly bear range, descriptions of grizzly bear occurrence, and/or local extirpation events (Mattson and Merrill 2002, p. 1125). It precedes the major distribution changes in response to

excessive human-caused mortality and habitat loss (Servheen 1999, p. 51). We define the physical boundaries of the relevant historical range as the lower 48 States, primarily west of the Mississippi River. Approximately 50,000–100,000 grizzly bears were historically distributed in one large contiguous area throughout portions of at least 17 western States (i.e., Washington, Oregon, California, Idaho, Montana, Wyoming, Nevada, Colorado, Utah, New Mexico, Arizona, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas (Servheen 1989, pp. 1–2; Servheen 1999, pp. 50–51; USFWS 1993, p. 9)).

Significant loss of historical range has resulted in fewer individuals distributed in several small, fragmented, and isolated populations. Today, grizzly bears in the lower 48 States primarily exist in 4 populations spanning portions of 4 States. Total numbers are estimated at 1,810 individuals (700 in the GYE DPS and 1,110 additional grizzly bears in the lower-48-States entity). Grizzly bear range in the lower 48 States collapsed into small, fragmented, and isolated populations by the mid-1900s (Mattson and Merrill 2002, p. 1134). These alterations have increased the vulnerability of lower-48-States grizzly bears to a wide variety of threats that would not be at issue without such massive range reduction. Several of these threats were identified in the 1975 original listing (40 FR 31734, July 28, 1975), including range loss and isolation, the construction of roads and trails into formerly secure areas, human persecution, and increasing numbers of livestock on national forests.

We considered these threats thoroughly in the Final Rule (82 FR 30520–30535, June 30, 2017), along with other vulnerabilities caused by loss of historical range, such as changes in available food sources, carrying capacity, changes in metapopulation structure, and reductions in genetic diversity and gene flow (see discussion below).

Aside from informing the current status of and threats to the GYE DPS, the lost historic range within the United States is informative only for future rulemakings or regulatory actions in the lower 48 States, as the Service did not undertake regulatory action for grizzly bears outside the GYE DPS boundaries.

Impact of Lost Historical Range on the GYE DPS

Humane Society held that the WGL wolf delisting did not adequately consider the impact of lost historical range on the current threats facing the WGL wolf DPS, including reduced genetic variability and vulnerability to catastrophic events. The Final Rule for the GYE DPS thoroughly addressed the current threats to the grizzly bear in light of the lost historical range. We further explain the analysis in the Final Rule in response to public comments.

Grizzly bears historically occurred throughout the area of the GYE DPS (Stebler 1972, pp. 297–298), but they were less common in prairie habitats (Rollins 1935, p. 191; Wade 1947, p. 444). Today many of these habitats are no longer biologically suitable for grizzly bears (82 FR 30510–12, 30551, 30558, June 30, 2017). Grizzly bear presence in these drier, grassland habitats was associated with rivers and streams where grizzly bears used bison carcasses as a major food source (Burroughs 1961, pp. 57–60; Herrero 1972, pp. 224–227; Stebler 1972, pp. 297–298; Mattson and Merrill 2002, pp. 1128–1129). Most of the shortgrass prairie on the east side of the Rocky Mountains has been converted into agricultural land (Woods et al. 1999, entire), and high densities of traditional food sources are no longer available due to land conversion and human occupancy of urban and rural lands (82 FR 30510, 30551, 30558, June 30, 2017). Traditional food sources such as bison and elk have been reduced and replaced with

domestic livestock such as cattle, sheep, chickens, goats, pigs, and bee hives, which can become anthropogenic sources of prey for grizzly bears (82 FR 30510, 30551, 30558, 30624, June 30, 2017).

Range reduction within the GYE DPS boundary has resulted in potential threats specific to isolated and small populations, including genetic health, changes in food resources, climate change, and catastrophic events (82 FR 30533–44, June 30, 2017). Small and isolated populations are susceptible to declines in genetic diversity, which can result in population-limiting effects such as inbreeding, genetic abnormalities, birth defects, low reproductive and survival rates, and susceptibility to extinction (Frankham 2005, entire). However, current levels of genetic diversity in the GYE DPS are capable of supporting healthy reproductive and survival rates, as evidenced by normal litter size, no evidence of disease, high survivorship, an equal sex ratio, normal body size and physical characteristics, and a relatively constant population size within the GYE (van Manen 2016, *in litt.*). We concluded that genetic diversity does not constitute a threat to the GYE DPS (82 FR 30535–36, 30609–11, June 30, 2017).

Changes in availability of highly energetic food resources as a result of lost historical range, such as whitebark pine, army cutworm moths, ungulates, and cutthroat trout could influence grizzly bear reproduction, survival, or mortality risk (Mealey 1975, pp. 84–86; Pritchard and Robbins 1990, p. 1647; Craighead et al. 1995, pp. 247–252). Grizzly bears are dietary generalists, consuming more than 266 distinct plant and animal species, and are resilient to changes in food resources (Servheen and Cross 2010, p. 4; Gunther et al. 2014, p. 1). Additionally, whitebark pine loss has not caused a negative population trend or declines in vital rates (IGBST 2012, p. 34; van Manen 2016a, *in litt.*),

and there is no known relationship between mortality risk or reproduction and any other food (Schwartz et al. 2010, p. 662). We concluded in the Final Rule that changes in food resources do not constitute a threat to the GYE DPS (82 FR 30536–40, June 30, 2017).

Climate change may result in a number of changes to grizzly bear habitat, denning times, shifts in the abundance and distribution of natural food sources, and changes in fire regimes. Changes in denning times may increase the potential for conflicts with humans; however, regulatory mechanisms are in place to limit human-caused mortality (see discussion above under *Impact of GYE Delisting on the Lower-48-States Entity*). Grizzly bears have shown resiliency to changes in vegetation resulting from fires (Blanchard and Knight 1996, p. 121), and diets are flexible enough to absorb shifts in food distributions and abundance (Servheen and Cross 2010, p. 4; IGBST 2013, p. 35). We concluded in the Final Rule that climate change is unlikely to pose a threat to the GYE DPS (82 FR 30540–42, June 30, 2017).

The GYE DPS is vulnerable to various catastrophic and stochastic events, such as fire, volcanic activity, earthquakes, and disease. Most of these types of events are unpredictable and unlikely to occur within the foreseeable future, would likely cause only localized and temporary impacts that would not threaten the GYE DPS (82 FR 30542, June 30, 2017), or have never been documented to affect mortality in grizzly bears (disease: IGBST 2005, pp. 34–35; Craighead et al. 1988, pp. 24–84) (82 FR 30533–30534, June 30, 2017).

While range reduction has reduced both numbers of bears and amount of available habitat, the GYE currently supports a population of grizzly bears that meets our definition of recovered, and does not meet our definition of an endangered or threatened species (82

FR 30514, June 30, 2017). Further, we found that potential threats resulting from lost historical range are manageable through conflict prevention, management of discretionary mortality, and the large amount of suitable, secure habitat within the GYE and are not a threat to the GYE grizzly bear DPS now or likely to become a threat in the foreseeable future (82 FR 30544, June 30, 2017). Our regulatory review therefore confirmed that the Service appropriately analyzed the historic range and current status/threats to the GYE DPS, as required under the Act.

Conclusion

After considering the GYE Final Rule in light of the *Humane Society* opinion, along with the best available scientific information, we affirm the determinations of our Final Rule: The GYE grizzly bear population is discrete from other grizzly bear populations and significant to the remainder of the taxon (*i.e.*, *Ursus arctos horribilis*) and, therefore, a listable entity under the Act in accordance with our DPS Policy; the GYE population has recovered to the point at which protection under the Act is no longer required; and the best scientific and commercial data available indicate that the GYE grizzly bear DPS is not endangered or threatened throughout all or a significant portion of its range. Finally, we determined in the Final Rule, and affirm here, that we will not revisit the 1975 final rule, and grizzly bears, outside the GYE DPS, in the lower 48 States remain listed as threatened. Accordingly, the Service does not plan to initiate further regulatory action for the GYE grizzly bear population, or for the lower 48 States population at this time.

References Cited

A complete list of all reference cited herein is available at

<https://www.regulations.gov> in Docket No. FWS–R6–ES–2017–0089, or upon request from the Grizzly Bear Recovery Office (see **FOR FURTHER INFORMATION CONTACT**).

Authority

This document is published under the authority of the Endangered Species Act, as amended (16 U.S.C. 1531 *et seq.*).

Dated: _____April 24, 2018_____.

James W. Kurth

Deputy Director, U.S. Fish and Wildlife Service,

Exercising the Authority of the Director, U.S. Fish and Wildlife Service.

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