May 5, 2016

Sally Jewell, Secretary U.S. Department of the Interior
Daniel Ashe, Director, U.S. Fish and Wildlife Service
Public Comments Processing
Division of Policy, Performance, and Management Programs
U.S. Fish and Wildlife Service
MS: BPHC
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Re: FWS-R6-ES-2016-0042; Greater Yellowstone Ecosystem Grizzly Bears

Dear Secretary Jewell and Director Ashe:

We, the undersigned scientific experts, are writing to express our strong opposition to the proposal by the U.S. Fish and Wildlife Service (FWS) to remove the grizzly bears (*Ursus arctos horribilis*) living in the Greater Yellowstone Ecosystem (GYE) from protection as a threatened species under the Endangered Species Act (ESA),[1] leading to Northern Rockies states' commencement of an unsustainable trophy-hunting[2] season on GYE grizzly bears, which continue to be imperiled by resource declines, including habitat and dietary staple losses.

GYE grizzly bears are not recovered. Before 1800, approximately 50,000 grizzly bears roamed the lower 48 states between Canada and Mexico.[3] After European settlement, humans heavily persecuted grizzly bears to near eradication.[4] Today, wild grizzly bears number fewer than 1,700 individuals in the lower 48 states[5] - while FWS claims that there are 700 grizzly bears in the GYE,[6] this is a contested figure.[7] Grizzly bears have not recovered across a significant portion of their range, and thus they are not recovered and should not be delisted.

Trophy hunting grizzly bears would further jeopardize their persistence. Pursuant to a tri-state memo, Northern Rockies states have allocated bears for the purposes of "discretionary mortality available for regulated harvest" within the Demographic Monitoring Area (DMA)[8] as follows: Wyoming would authorize hunting for 58% of the bear quota, Montana 34% and Idaho 8%.[9] The number of grizzly bears states will permit for trophy hunting is unknown. While Wyoming has issued a draft grizzly bear management plan, it would inadequately protect GYE grizzly bears in the absence of a federal ESA listing because it gives broad discretion to the Wyoming Game Commission to set the manner of take (e.g., baiting, hounding, trapping, stalking), bag limits, seasons, sex ratios and age limits for grizzly bear hunting.[10] How Idaho or Montana will permit grizzly bear hunting is also currently unknown. Under this veil of uncertainty, the FWS is rushing to close the public comment period (ignoring reasonable requests for a deadline extension justified by the voluminous documents released by FWS) in order to rapidly delist grizzly bears for what appear to be more political than scientific reasons. Such action conflicts with the ESA requirement to make listing decisions solely on the basis of the best scientific evidence available and to seek meaningful public comment on listing decisions.

Grizzly bears face multiple threats to persistence including the loss of their primary food resources. Currently, whitebark pine seeds, native cutthroat trout, huckleberries, army cutworm moths, elk and bison are either declining and/or are expected to decline in the foreseeable future as a result of habitat loss, climate change, drought, invasive species and other anthropogenic causes. Traditionally, whitebark pine seeds have provided a core dietary staple for grizzly bears. Yet, the whitebark pine, a species the FWS agrees warrants federal protection, is in decline because of a variety of problems.[11] Another key source of

sustenance, the cutthroat trout, has stopped spawning in all tributaries of Yellowstone Lake.[12] Army cutworm moths, a staple for grizzly bears since the late 1990's, could likely disappear because they nectar on tundra flowers, which are highly vulnerable to global warming. Added to these threats to the sustainability of the GYE grizzly bear population, Yellowstone's Jackson and Northern Range elk herds and its Central Range bison herd are all in decline.[13] Because of warming summer temperatures and drought severity since 2005,[14] berries have become largely unavailable to grizzly bears. These food failures—whitebark pine, cutthroat trout, huckleberries—have caused grizzly bears to switch to a more meat-based diet, including domestic livestock. As a result, bears have been in conflict with humans, leading to record numbers of lethal actions taken against them.[15] This additive mortality harms their persistence.[16] Furthermore, biologists have noted that grizzly bear cub production has declined[17]—perhaps because of more predation on cubs by wolves and other bears as a result of their new dependence upon a meat-based diet, which puts them into greater proximity with other predators, resulting in deadly strife on grizzly bear cubs.

The loss of flora and fauna upon which grizzly bears depend in Yellowstone and Grand Teton national parks, in part, explains why grizzly bears are dispersing in greater numbers from park lands to national forests lands, which are grazed by public lands permittees, to search for food. Because of ubiquitous livestock outside of park lands, record numbers of grizzly bears have had lethal encounters.[18]

Worse, if grizzly bears are delisted, the GYE bears who already live or disperse outside of the DMA's artificial boundary will not be counted toward states' population objectives and will likely be subject to persecution. Yet, these dispersing individuals are vital for providing connections between other populations, maintaining *genetic diversity* and preventing *genetic drift* and *inbreeding depression*.[19]

While the conclusions of certain studies upon which the FWS relies suggest that grizzly bears have reached their carrying capacity, there is ample support for an alternative theory that bears have lost their historic dietary staples and are now turning to both native and domestic ungulates, putting them in closer proximity to humans, wolves and/or other bears.[20] While this shift is occurring it is impossible to predict whether and when the GYE grizzly bear population might reach "carrying capacity". FWS is not scientifically justified in concluding with certainty that the GYE population has reached long-term stability and is therefore secure for the foreseeable future. There is far too much uncertainty reflected in the current science to justify such a conclusion; rather, the best available science and the precautionary principle demands continued federal monitoring of this vulnerable population, which will only happen with continued ESA protection.

The public highly values grizzly bears. In 2015, Yellowstone received 4.1 million visits and Grand Teton had 4.6 million contributing $890 million to Wyoming's gateway communities, and $1.1 billion to Wyoming's overall economy. These figures greatly outweigh revenues generated by either Wyoming's livestock or hunting industries.[21] Grizzly bears, in the human economy, are worth far more alive than dead.

For all of these reasons, we urge you not to remove grizzly bears from protections under the ESA. Now is the time to redouble grizzly bear conservation efforts, not decrease them.

Signed:

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References:

[1] 81 Fed. Sup. 1374 (3/11/16): https://www.gpo.gov/fdsys/pkg/FR-2016-03-11/pdf/2016-05167.pdf
[2] *Trophy hunting* is the practice of killing or pursuing with the intent to kill a grizzly bear (or other wild animal) where the primary motivation is to obtain the animal for display, in whole or in part, or for bragging rights. The Associated Press obtained and released a leaked (12-4-2015) "Memorandum of Agreement Regarding the Management and Allocation of Discretionary Mortality of Grizzly Bears in the Greater Yellowstone Area.
[3] http://www.fws.gov/mountain-prairie/es/grizzlyBear.php
[4] Schwartz, C. C., S. D. Miller, M. A. Haroldson. 2003. Grizzly Bear (Ursus arctos) in Wild Mammals of North America: Biology, Management, and Conservation. Johns Hopkins University Press, Baltimore, Maryland.
[5] http://www.fws.gov/mountain-prairie/es/grizzlyBear.php
[6] http://www.nps.gov/yell/learn/nature/gbearinfo.htm
[7] Doak, D.F. and K. Cutler. 2014. Re-Evaluating Evidence for Past Population Trends and Predicted Dynamics of Yellowstone Grizzly Bears. Conservation Letters 7(3)313-322. David Mattson, "Http://Www.Grizzlytimes.Org/#!Honest-Science/C1ch8".
[8] The DMA is the geographic area where state wildlife agencies will monitor the grizzly bear population. The FWS's Rule also calls it the Primary Conservation Area.
[9] Virgil Moore, M. Jeff Hagener, and Scott Talbott, "Final Draft 12-4-2015: Memorandum of Agreement Regarding the Management and Allocation of Discretionary Mortality of Grizzly Bears in the Greater Yellowstone Area," *AP Story at: http://bigstory.ap.org/article/a4738ff1a2c14920b0c45063302d5c4e/apnewsbreak-states-divvy-yellowstone-area-grizzly-hunt*, (2016).
[10] Wyoming's House Joint Resolution on gray wolves and grizzly bears characterizes both with unbridled animosity: gisweb.state.wy.us/2016/bills/HJ0004.pdf. Wyoming Game and Fish Department, "Draft Wyoming Grizzly Bear Management Plan," *https://wgfd.wyo.gov/WGFD/media/content/Wildlife/Hot%20Topics/FINAL-DRAFT-GB-Mgmt-Plan-3-15-16.pdf*, (2016).
[11] The FWS writes: "Threats to the whitebark pine include habitat loss and mortality from white pine blister rust, mountain pine beetle, catastrophic fire and fire suppression, environmental effects resulting from climate change, and the inadequacy of existing regulatory mechanisms." http://www.fws.gov/mountain-prairie/species/plants/whitebarkpine/
[12] http://www.fws.gov/mountain-prairie/species/fish/yct/yctstatusreviewreport.pdf

[13] D. D. Bjornlie et al., "Whitebark Pine, Population Density, and Home-Range Size of Grizzly Bears in the Greater Yellowstone Ecosystem," *Plos One* 9, no. 2 (2014); C. M. Costello et al., "Influence of Whitebark Pine Decline on Fall Habitat Use and Movements of Grizzly Bears in the Greater Yellowstone Ecosystem," *Ecology and Evolution* 4, no. 10 (2014); F. T. van Manen et al., "Density Dependence, Whitebark Pine, and Vital Rates of Grizzly Bears," *Journal of Wildlife Management* 80, no. 2 (2016).

[14] Bjornlie et al., "Whitebark Pine, Population Density, and Home-Range Size of Grizzly Bears in the Greater Yellowstone Ecosystem; Costello et al., "Influence of Whitebark Pine Decline on Fall Habitat Use and Movements of Grizzly Bears in the Greater Yellowstone Ecosystem; van Manen et al., "Density Dependence, Whitebark Pine, and Vital Rates of Grizzly Bears."

[15] Figure 8 of Wyoming's plan shows that since 1990 an increasing trajectory in both self defense and management removals of grizzly bears. Wyoming Game and Fish Department, "Draft Wyoming Grizzly Bear Management Plan."

[16] Because of human-bear conflicts over domestic livestock and hunter-killed ungulates, significantly more bears have been killed since 2005 compared to the period 1990-2004. See: IGBST's grizzly bear mortality data base: http://www.nrmsc.usgs.gov/science/igbst/mort.

[17] van Manen et al., "Density Dependence, Whitebark Pine, and Vital Rates of Grizzly Bears."

[18] See: IGBST's grizzly bear mortality data base: http://www.nrmsc.usgs.gov/science/igbst/mort.

[19] *Genetic diversity* increases a species' chances of long-term survival because negative traits (such as inbreeding) become widespread within a population when that population is left to reproduce only with its own members. *Genetic drift* refers to a populations' loss of genes, making a population less vital, more disease prone, and unable to overcome natural disasters. L. S. Mills and F. W. Allendorf, "The One-Migrant-Per-Generation Rule in Conservation and Management," *Conservation Biology* 10, no. 6 (1996).

[20] Doak, D.F. and K. Cutler. 2014. Re-Evaluating Evidence for Past Population Trends and Predicted Dynamics of Yellowstone Grizzly Bears. Conservation Letters 7(3)313-322. David Mattson, "Http://Www.Grizzlytimes.Org/#!Honest-Science/C1ch8".

[21] http://nature.nps.gov/socialscience/nps-state.cfm?state=Wyoming