

April 25, 2018

The Honorable Matt Mead
Governor for the State of Wyoming
Governor's Office
Capitol Building Room 124
200 West 24th Street
Cheyenne WY 82002-0010

Re: Stay Wyoming's unscientific, drastic grizzly bear hunt for an outside peer-review process

Dear Governor Mead:

We, the seventy-three (73) undersigned biologists and scholars, appreciate the opportunity to provide scientific input on Wyoming's planned grizzly bear sport hunt, which is necessarily addressed in context of Wyoming's broader plans for managing grizzly bear mortality in the Greater Yellowstone Ecosystem (GYE). As preamble, we also appreciate Wyoming's efforts during the last 40 plus years to help bring Yellowstone's grizzly bear population back from the brink of extirpation. However, Wyoming's current plans for managing mortality of GYE grizzly bears suffer from numerous deficiencies, both scientifically and in service of precautionary conservation, we therefore ask you to stay the hunt until Wyoming's proposed sport hunt of grizzly bears receives external peer review and subsequent adjudication by independent scientists.

In brief, Wyoming is purposefully planning to reduce bear numbers within the core Demographic Monitoring Area (DMA), as well as functionally extirpate grizzly bears ranging outside that invisible boundary. These objectives are not prudent given rapidly changing environmental conditions within the GYE and foreseeable amplification of these dynamics during future decades. On top of these threats, Wyoming and Idaho have both signaled their readiness to permit dangerously high levels of trophy hunting even in the face of overwhelming public opposition. Reducing and geographically truncating the GYE grizzly bear population would foreclose opportunities for bears in this ecosystem to occupy ample suitable habitat that is contiguous with or nearby the DMA and, with that, debar achievement of population viability and related resilience to rapid environmental change.

The particulars of our concerns are as follow:

- The methods currently used by Wyoming, Montana and Idaho to calculate total and discretionary allowable mortality, which encompass deaths allocated to sport-hunting, are explicitly premised on the goal of reducing grizzly bear numbers within the DMA. This is not prudent or ecologically justified for reasons that we articulate below.
- Plans to severely reduce grizzly bears outside the DMA are egregiously indefensible. Given a likely population of 80-100 bears outside the DMA, but within Wyoming, a sport hunt of 12 bears—in addition to other foreseeable mortality—is likely to be 500-1000% of sustainable levels. This is tantamount to planned extirpation.

- Even without planned reductions, the current GYE population of roughly 700 grizzly bears is far too small to be viable in the face of foreseeable environmental changes and genetic losses. Recent research suggests that viable populations of animals such as grizzly bears need to be 2,000-10,000 animals. Wyoming's current plans would limit connectivity with other grizzly bear populations and colonization of suitable habitats, thereby preventing the achievement of meaningful viability and, in fact, perversely drive population numbers in the opposite direction.
- Several researchers have independently documented ample suitably remote and productive habitat contiguous with or within colonizing distance of current grizzly bear distribution. Wyoming's plan to reduce grizzly bear numbers inside the DMA and essentially extirpate bears outside prevents expansion into suitable habitat and genetic exchange with other populations by targeting vital dispersers, thereby degrading population viability, especially of the currently isolated GYE population.
- Although there is disagreement over whether recent environmental changes (e.g., loss of historically important whitebark pine and cutthroat trout and loss of snow depth for denning cover) have harmed GYE grizzly bears, no disagreement exists that this change has been dramatic and will continue, if not amplify, during coming decades. Under such conditions, it is not defensible to eliminate bears that would otherwise contribute to enhanced population resilience and viability.
- Deliberate perpetration of human-caused mortality is not needed to control the GYE grizzly bear population. Recent research from the GYE, and indeed worldwide, suggests that grizzly bears and other large-bodied carnivores are self-regulating, with self-regulating dynamics strengthening nearer carrying capacity. If so, the grizzly bear population will naturally oscillate around carrying capacity, even as this capacity changes, and without the need for overt human intervention, particularly in the form of sport hunting.
- The methods used by Wyoming to calculate allowable mortality—including the toll allocated to sport hunting—assume that males can be sustainably killed at twice the rate as females even though males and females are born in equal numbers. This assumption is patently illogical and leads to unsustainable killing of males. Further skewing the sex ratio will drive the effective population size (N_e) lower than the census population, which makes genetic isolation and potential future inbreeding depression more of a problem for the GYE population. The consequences of this logical failure are exacerbated by the fact that the male population segment is not annually monitored and is instead accounted for by complex and assumption-ridden estimates of male survival rates using 6-10 years-worth of retrospective data. This methodology is tantamount to relying on an out-of-focus rearview mirror to manage future male mortality.
- Finally, Wyoming has not accounted for the indirect and almost wholly negative effects that will amplify direct numeric consequences of sport hunting and other human-caused mortality. A large body of research has shown that hunting—along with other mortality

biased against adult male bears—leads to increased rates of infanticide and, with that, unanticipated damping of population growth rates. Moreover, adult-biased, human-caused mortality is evolutionarily novel for grizzly bears, and will select for traits that propel the GYE population in unpredictable and probably maladaptive directions.

- To trophy hunt such a vulnerable population is ethically irresponsible, unwarranted, and not in the public's interest. National and state surveys have consistently shown that the majority of respondents do not support trophy hunting. Moreover, wildlife viewers have outnumbered hunters by 6-7-fold for at least the last 15 years, as evidenced by the millions of tourists who come to view GYE grizzly bears and wolves. According to the National Park Service, in 2016, Grand Teton and Yellowstone National Parks generated \$1.5 billion in revenues that benefited local economies, including supporting almost 18,000 jobs related to park visitation. None of these economic benefits derive from providing a handful of hunters the opportunity to kill grizzly bears—an activity guaranteed to be economically inconsequential.

Again, we appreciate this opportunity to provide input on Wyoming's plans for managing the GYE grizzly bear population, including its recent plans for sport hunting. Please contact Dr. David Mattson if you have any questions or would like additional input.

Sincerely,

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