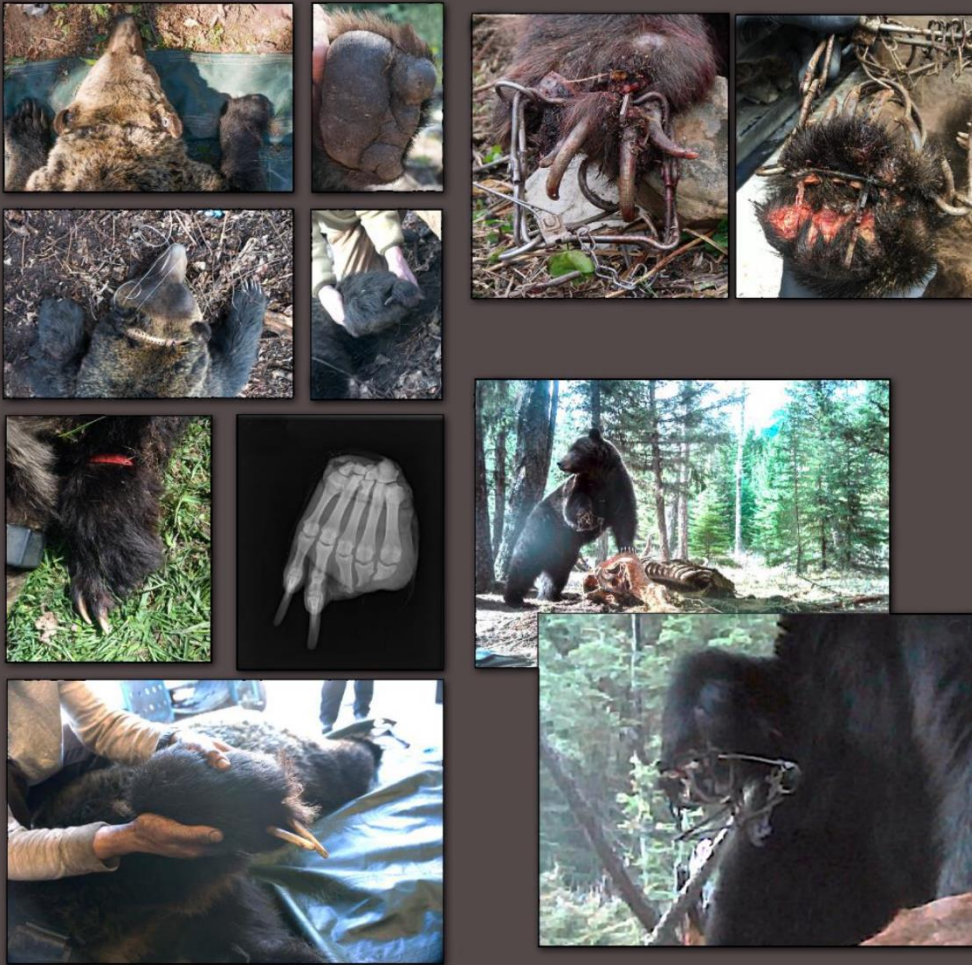


Declaration

Montana Wolf Trapping Season

FLATHEAD-LOLO-BITTERROOT CITIZEN TASK FORCE and
WILDEARTH GUARDIANS,
vs.
STATE OF MONTANA

David J. Mattson, Ph.D.



2023

**The Grizzly Bear
Recovery Project**

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
MISSOULA DIVISION

FLATHEAD-LOLO-BITTERROOT
CITIZEN TASK FORCE and WILDEARTH
GUARDIANS,

Plaintiffs,

vs.

STATE OF MONTANA,

Defendant.

**DECLARATION OF
DAVID J. MATTSON**

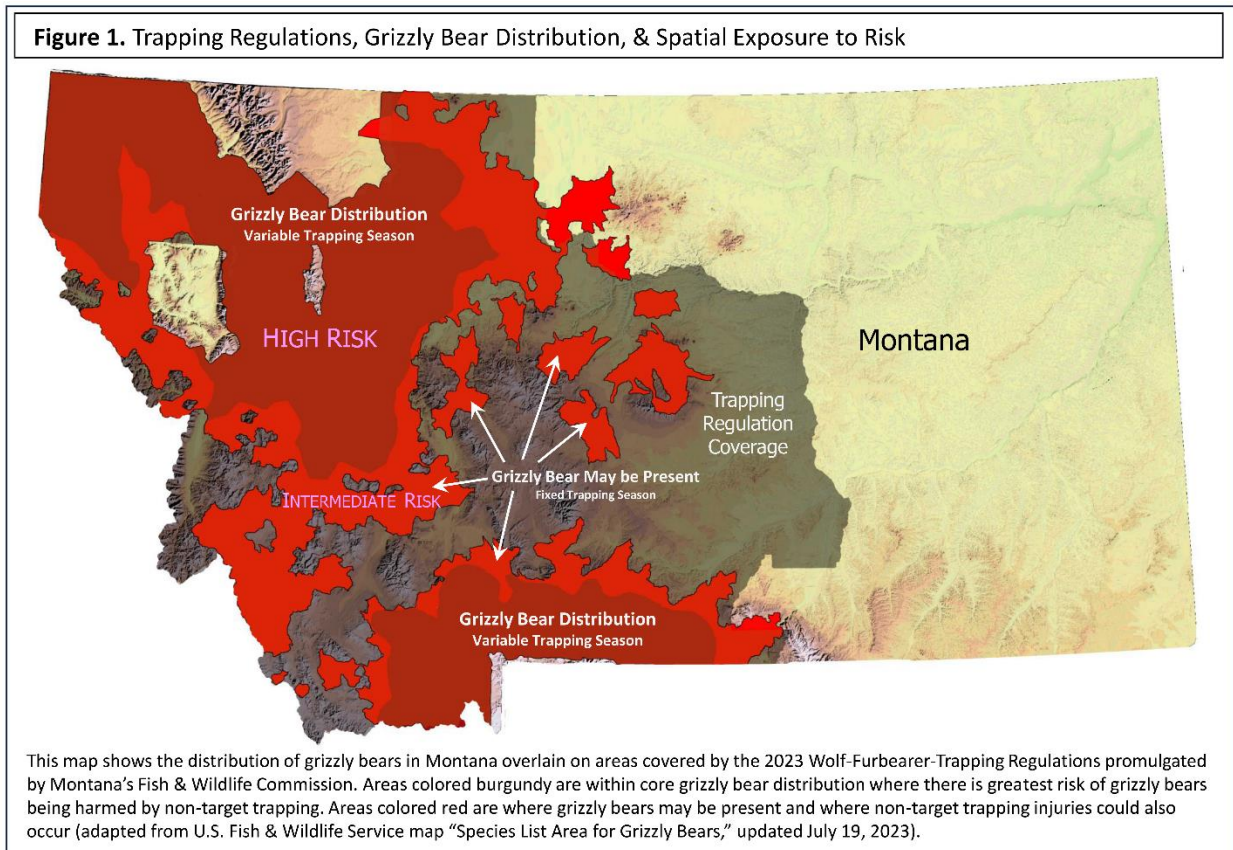
Pursuant to 28 U.S.C. § 1746, I, David J. Mattson, declare as follows:

1. I am more than 18 years of age and competent to make this Declaration.
2. I am a scientist and retired wildlife management professional with extensive experience in grizzly bear research and conservation spanning four plus decades.
3. My educational attainments include a B.S. in Forest Resource Management, an M.S. in Plant Ecology, and a Ph.D. in Wildlife Resource Management.

4. My professional positions prior to retirement from the U.S. Geological Survey (USGS) in 2013 included Research Wildlife Biologist, Leader of the Colorado Plateau Research Station, and Acting Center Director for the Southwest Biological Science Center, all with the USGS; Western Field Director of the Massachusetts Institute of Technology-USGS Science Impact Collaborative; Visiting Scholar at the Massachusetts Institute of Technology; and Lecturer and Visiting Senior Scientist at the Yale School of Forestry & Environmental Studies.
5. I have been consulted by brown/grizzly bear managers and researchers worldwide, including from Russia, Japan, France, Spain, Greece, Italy, and, most notably, Canada. I have also given numerous public presentations on grizzly bear ecology and conservation, including talks at the Smithsonian (Washington, D.C.) and American Museum of Natural History (New York, New York).
6. I led field investigations for the Interagency Grizzly Bear Study in the Yellowstone Ecosystem during 1983-1993, prior to which I was research technician with this project for three years. During this work, I closely observed and interacted with grizzly bears on numerous occasions. I also developed and led six projects that investigated mountain lion ecology in the Southwest during 1999-2013.
7. I currently lead the Grizzly Bear Recovery Project, which is an organization devoted to producing materials that educate the public and synthesize research relevant to conservation of grizzly bears in North America.
8. I have authored more than 130 scientific articles and reports based on my professional research, many of which address the ecology and behavior of grizzly bears.
9. The current distribution of grizzly bears in Montana overlaps almost entirely with areas covered by regulations that Montana's Fish and Wildlife Commission promulgated to govern trapping of furbearers and wolves during August 2023 (Figure 1).
10. Much of this overlap corresponds with core distributions of grizzly bears where the beginning of wolf and furbearer trapping can vary from the first Monday after Thanksgiving to December 31st. However, nearly as much area is encompassed by places where the U.S. Fish & Wildlife Service has

determined that “grizzly bears may be present.” In these areas the trapping season is fixed to start the first Monday after Thanksgiving – approximately November 27th.

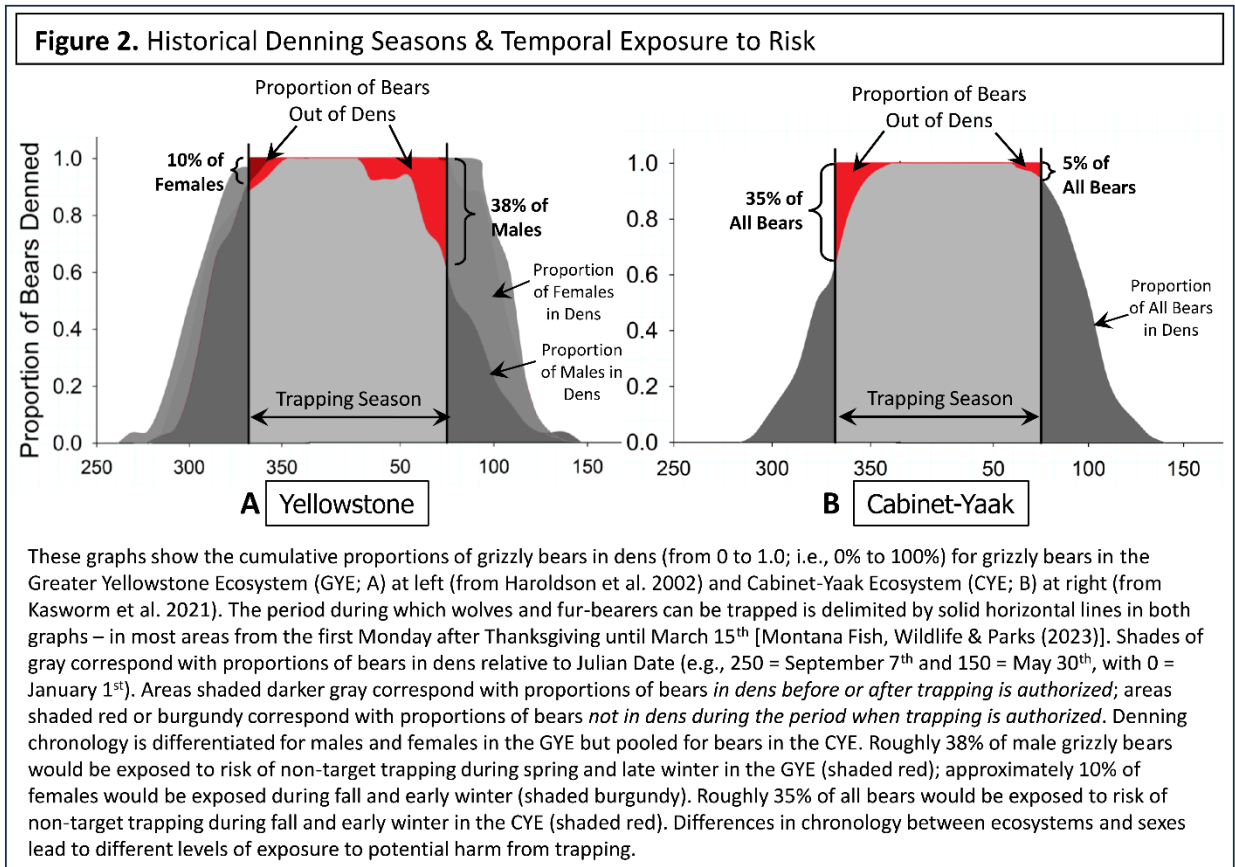
11. Barring early achievement of harvest quotas for wolves, trapping for wolves is set to end throughout western Montana on March 15th.



12. Depending on the ecosystem, nearly 40% of grizzly bears in Montana have historically been active outside their dens either after November 27th or before March 15th, with seasonal duration of activity typically greater for male bears (Figure 2; e.g., Haroldson et al. [2002], Kasworm et al. [2021]).
13. The temporal overlap between when grizzly bears are active in the Northern Rockies and current seasons for trapping wolves and furbearers has already increased and will likely continue to increase because of the direct and indirect effects of climate change.
14. There have been numerous anecdotal accounts of winter-active bears in the Northern Rockies, plausibly attributable to both a warming climate and

winter availability of meat from wolf kills, late-season kills of ungulates by hunters, and mild winter temperatures (e.g., Zuckerman 2015, Kearse 2019, Heinz 2022, Sherer 2021, Murdock 2023).

15. Grizzly bears in the Northern Rockies will almost certainly enter dens later and exit dens earlier as annual temperatures continue to warm and vegetal foods become available earlier and later in the year. There is ample evidence worldwide that brown and grizzly bears at lower latitudes spend less time in dens compared to bears in colder climates, with winter activity further promoted by year-round availability of anthropogenic foods and clement winter temperatures (Pigeon et al. 2016, Krofel et al. 2017, Delgado et al. 2018, Johnson et al. 2018, Fowler et al. 2019, Bojarska et al. 2019, González-Bernardo et al. 2020).



16. The considerable current as well as prospective future spatial and temporal overlap of trapping for furbearers and wolves in Montana with places and times that grizzly bears are also active results in widespread exposure of

bears to risks posed by non-target injuries from snares and body-hold traps set to capture other species.

17. This exposure and resulting risks to grizzly bears is magnified by well-documented interactions between wolves and bears that increase the likelihood that grizzly bears will be active in areas frequented by wolves and thus inadvertently targeted by wolf trappers.
18. Wherever ungulates such as elk, deer, and moose are available, wolves and brown/grizzly bears gravitate towards this source of high-quality meat, with grizzly bears often appropriating fresh kills from wolf packs (Hornbeck & Horejsi 1986, Servheen & Knight 1993, Smith et al. 2003, Gunther & Smith 2004, Tallian et al. 2017, Milleret et al. 2018, Ordiz et al. 2020).
19. Although grizzly bears are omnivores, meat comprises a substantial portion of bear diets in the Northern Rockies, with greatest amounts eaten by bears in the GYE and along the East Front of the Northern Continental Divide Ecosystem (NCDE) as well as by male bears in all ecosystems (Kendall 1986, Aune & Kasworm 1989, Mattson et al. 1991, McLellan & Hovey 1995, Mattson 1997, McLellan 2011, Kasworm et al. 2021).
20. Peak consumption of meat by grizzly bears occurs during spring and fall when other foods are scarce. Most consumption is by scavenging carcasses of animals that died from natural and anthropogenic causes (Mattson 1997), including unclaimed remains of animals killed by hunters during September-November and remains of kills made by wolves potentially year-around (e.g., Smith et al. 2023, Kearse 2019, Sherer 2021, Heinz 2022).
21. These dietary patterns predictably lead grizzly bears to associate meat with wolves and humans, especially during periods that potentially overlap with deployment of bait at traps set to capture wolves and furbearers (see Points 18 and 19 above).
22. Grizzly bears have an acute sense of smell, comparable to that of canids such as wolves and smaller carnivores targeted by bait-assisted trapping (Gittleman 1991; Green et al. 2012; Van Valkenburgh et al. 2011, 2014; Bird et al. 2014). Grizzly bears can consequently detect carrion from great distances, including meat used as bait, and can be readily attracted by lures such as fish oil, beaver castor, and rotted blood (Lamb et al. 2016).

23. Because meat and other animal-related scents are so alluring to bears, researchers commonly use these attractants to bait bears into culvert traps and snares – much like those used by trappers to target wolves and furbearers. Black bear hunters also legally use non-game meat and animal scents to lure bears into situations where they can be more readily killed (e.g., Idaho Fish & Game 2022, Wyoming Game & Fish Commission 2023). Grizzly bears are occasionally unintended victims.
24. Wherever baits are available, grizzly bears will predictably be attracted by and motivated to obtain them. This includes using their paws, snouts, and considerable height when erect to exploit lures and edible baits sequestered in small enclosures (or “cubbies”) or elevated in a tree (e.g., Lamb et al. 2022).
25. In my professional opinion, because grizzly bears can seasonally range over areas as large as 40-80 square miles, odds that bears will detect even low densities of bait are high, especially where they are shadowing targeted species such as wolves (see Points 17-21 above) and oriented to consuming meat (see Points 19-20 above).
26. These high odds are manifest in documented instances where grizzly bears have been accidentally captured and sometimes severely injured by baited traps that were set to target wolves and furbearers (Figure 3; McKim 2017, Lamb et al. 2022). These injuries predictably included severe damage to paws and amputation of toes.
27. Grizzly bears are amongst the most dexterous of all large carnivores (Iwaniuk et al. 1999, 2000). Grizzly bears consequently use their flexuous front limbs and paws as an integral part of most foraging behaviors, including for catching larger mammals, excavating roots and rodents, exploiting insects, and manipulating limbs of shrubs to eat berries (e.g., French & French 1990; Welch et al. 1997; Mattson 1997b, Mattson 2004).
28. In my professional opinion, any loss of function in paws or limbs caused by trapping injuries has potentially severe consequences for affected bears, including abbreviated lives and increased suffering. I have also personally documented instances where severe injuries such as spiral fractures to front

limb bones resulting from attempts to escape snares have been fatal to the involved animals.



29. In addition to physical injury, trapped bears also predictably experience additional harm in the form of stress and exertion associated with attempts to escape. This kind of harm has been well-documented (Cattett et al. 2003, 2008a; Powell 2005), with occasionally fatal consequences (Cattett et al. 2008b). Stress and exertion predictably mount the longer a bear is restrained, which has resulted in common use of radio-transmitters by bear researchers to signal when a snare has been sprung (e.g., Benevides et al. 2008), as well as recommendations that trapped bears be chemically immobilized and released within 1-2 hours of capture (Kaczensky et al. 2002).

30. In my professional opinion, trap-related stress and injury is guaranteed to be even greater for grizzly bears subject to non-target captures compared to those captured during research efforts. Under state regulations, trappers are only required to check wolf traps once every 48 hours (Montana Fish, Wildlife & Parks 2023). Even when a trapper detects a captured grizzly bear, he or she is unlikely to be carrying much less trained in the use of immobilization drugs and equipment. Recreational trappers will consequently need to communicate with a government agent proficient in immobilizing grizzly bears, at which point additional time will predictably transpire before the agent arrives, immobilizes the bear, and releases it.
31. The fact that Montana Fish, Wildlife & Parks had no reports of grizzly bears caught in traps in the NCDE area during 2022-2023 does not lessen the likelihood of future captures or related harm to affected bears.
32. In addition to the harm caused to inadvertently trapped grizzly bears, effects of non-target captures, demographically and to recovery of this species in the contiguous United States, will be proportionately greater in areas outside of the NCDE and GYE Recovery Zones, with repercussions for natural recovery of grizzly bears in the Bitterroot Ecosystem (BE).
33. Currently, grizzly bears outside of established Recovery Zones can only be sustained with immigration of bears from areas where females survive long enough to produce a figurative surplus of emigrants (Merrill & Mattson 2003, Johnson et al. 2004, Haroldson et al. 2006, Schwartz et al. 2006, Schwartz et al. 2010). In my professional opinion, this source-sink population dynamic has likely produced many of the gains in population distribution that promise connectivity among the NCDE, GYE, and CYE, as well as natural colonization of the BE.
34. All the areas recently colonized by grizzly bears outside of Recovery Zones are covered by 2023 regulations governing trapping of wolves and furbearers in Montana (see Points 22-30 above and Figure 1).
35. In my professional opinion, it is highly likely that grizzly bears naturally migrating into the BE and between the NCDE, GYE, and CYE will be attracted to and caught in traps and snares set by recreational trappers.
36. In my professional opinion, this will negatively affect local grizzly bear populations in areas between established grizzly bear Recovery Zones in

Montana, with resulting adverse effects on prospects for connectivity among existing populations and recovery of grizzly bears in the Contiguous United States.

37. Based on my training and experience, the current wolf and furbearer trapping regulations approved by the Montana Fish and Wildlife Commission on August 17, 2023, will result in increased incidences of accidental capture and harm to grizzly bears because these regulations increase the likelihood of traps being set in areas occupied by non-denning grizzly bears.

I declare under penalty of perjury that the foregoing is true and correct.

Dated this 22nd day of September, 2023.

A handwritten signature in black ink that reads "David J. Mattson". The signature is written in a cursive style with a large, stylized initial "D".

David J. Mattson

Attachment 1.

References for DECLARATION OF DAVID J. MATTSON

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