

March 6, 2023

National Park Service, Regional Director
Alaska Regional Office
240 West 5th Ave,
Anchorage, AK 99501
Also submitted online: [http://www/regulations.gov](http://www.regulations.gov).

RE: Docket: Alaska: Hunting and Trapping in National Preserves, RIN 1024-SR70, joint comments from scientists and managers

Sir or Madam:

The 71 persons undersigned are wildlife scientists and managers working in natural resource management. We endorse adoption of the above-referenced proposed rule regarding wildlife management on National Preserves in Alaska that are managed under the authority and responsibility of the National Park Service (NPS). The proposed rule is largely a reversion to an earlier-adopted 2015 rule which was replaced by an ill-advised rule adopted in 2020 that was opposed by 99% of the comments received (according to the NPS).

Most of Alaska outside of National Park areas is now managed under state regulations in ways that are designed to implement Alaska's 1994 Intensive Management (IM) law (Alaska Statutes §16.02.255). This law requires that the Alaska Board of Game (BOG) give a priority to maximizing the numbers of wild ungulates (moose, caribou, and Sitka black-tailed deer) killed by hunters in cases where demand for such harvests exceed supply. Under the IM law, >90% of the state has been identified as "important for human consumption of ungulates" (Ripple et al. 2019). The IM law in this huge area has been implemented almost exclusively by efforts to reduce numbers of one or more of 3 predator species (brown bears, black bears, wolves); in many areas predator reduction regulations predate the 1994 IM law (Miller et al. 2017, Ripple et al. 2019).

Because of the geographically widespread and aggressive nature of Alaska's hunting and trapping regulations designed to reduce predators, the importance of National Park Service areas as refugia where relatively natural ecological processes and balances both occur and endure is especially vital. Maintenance of these refugia and processes is, in fact, integral to the primary purpose of the national park system including national preserves. The National Park Service (NPS) Organic Act and subsequent policies and amendments includes the statutory directive "...to leave [park resources and values] *unimpaired for the enjoyment of future generations*" (emphasis added). The NPS policy guidelines explicitly state "*The [National Park] Service does not engage in activities to reduce the numbers of native species for the purpose of increasing the numbers of harvested species (i.e. predator control) ...*" ([9] 2006 NPS Management Policies 4.4.3). The NPS prohibition on predator control clearly is inconsistent in both intent and practice with Alaska's IM law. Although we endorse the new proposed rule, we recommend that NPS strengthen it to more clearly establish that the NPS need not defer to State of Alaska hunting and trapping regulations of any kind in cases where the NPS finds such deference to be inconsistent with their mandates under its Organic Act and subsequent policies and guidelines.

This is particularly important for wolves and brown bears which are greatly depleted and listed under the Endangered Species Act elsewhere in the United States. Federally administered national conservation areas in Alaska where these large carnivores still remain relatively abundant in relatively intact ecosystems have a special responsibility to maintain these conditions in the national interest.

The current proposed rule has an appropriate focus on methods and means of take (such as baiting) but essentially no specific mention of other types of regulations adopted by the Alaska Board of Game that are designed to reduce predator:prey ratios in the hope this will increase ungulate harvests. These (non-methods and means) regulations include season and bag limit increases, incentives based on allowing sale of wildlife parts, waiver of fee requirements, relaxation of meat salvage requirements, etc. For brown bears in Alaska these types of regulation changes (not officially defined by Alaska policy as being “predator control”) almost certainly increase predator kill numbers more than some of the method of take regulations listed in Table 1 of the NPS rule (“Prohibited Acts”).

The State of Alaska is disingenuous about the amount of predator control that is occurring in Alaska on all lands open to hunting. This is because the State defines “predator control” as not including liberalizations of the general hunting and (for wolves) trapping regulations which are the mechanism for most ongoing predator reduction efforts in Alaska (Miller et al. 2017, Ripple et al. 2019, Miller 2022). Rather, the state defines as “predator control” only small areas that they officially classify as being “predator control areas” (PCAs). The terms “intensive management” and “predator control” are used confusingly and sometimes interchangeably by Alaska Department of Fish and Game (ADFG) and the BOG. Both are frequently used to describe actions taken to reduce abundance of large carnivores with this intent just being more explicit for the term “predator control”. “Intensive management” is most commonly used to describe the efforts taken to reduce predators by liberalizing regulations (see ADFG 2011). The magnitude of changes (not officially defined as “predator control”) in brown bear predator reduction efforts was documented by Miller et al. (2011, 2017), Ripple et al. (2019), and Miller (2022). For brown bears, frequently the IM efforts are identified as management objectives designed to “provide maximal opportunity to take brown bears” (e.g. Wells 2021). The Alaska Department of Fish and Game (ADFG) Intensive Management Protocol (2016) acknowledges that 97.5% of Alaska has received a “positive determination” for IM (under 5 AAC 92.108) but asserts that only 7-11% of Alaska has had “active predator control” since 1994 (e.g. ADFG 2011: 2). Predator reduction efforts through regulation liberalization, however, are ongoing in essentially all of the area where a “positive determination” has been made (e.g. the NPS “EA for Wildlife Harvest on National Park System Preserves in Alaska”, 2014, Figure 1, page 13) .

The BOG has consistently rejected NPS requests not to adopt certain regulations that would affect predator take on national preserves in Alaska or, failing this, to explicitly exclude the national preserves from these regulations most of which are designed to encourage more take of large carnivores. This refusal to accommodate NPS requests is what resulted in the need for NPS to adopt the 2015 rule. We recommend that the introduction to the proposed rule include some of this history of NPS efforts to cooperate with the BOG (e.g. the 2013 Agenda Change Request from NPS to the BOG dated 6 November 2011).

We recommend that the proposed NPS rule include a definition of “predator control” in ways that captures the reality of regulations adopted by the BOG that are designed to or have the effect of altering predator:prey ratios by reducing the abundance of predators. The wording of the proposed rule does not do this and this failing arguably leaves the definition of “predator control” in the hands of the misleading definitions adopted by the BOG (see above). Elements of the NPS definition in the new rule could usefully include the following concepts:

1. A historical pattern or individual case of liberalized predator hunting and trapping regulations by the BOG that apply to National Preserves that have the potential or intent to alter predator:prey ratios to achieve results that are inconsistent with the NPS’s mandate in

the Organic Act and subsequent amendments and policies to manage NPS lands in ways that leave park resources and values “unimpaired”.

2. NPS has the ultimate authority under ANILCA and the NPS Organic Act to disallow methods and means of taking predators that are, in the view of NPS, inappropriate for Alaska’s national preserves. In addition to methods currently itemized in Table 1 of the proposed rule, examples of such regulations may include hunting bears during denning periods or periods when hides or meat are subprime, baiting bears or wolves, mechanically-assisted (including aircraft and other mechanized vehicles) take of predators, inaccurate methods of monitoring take, taking predators (including bears and wolves) in dens, financial inducements to take predators including bounties or allowing non-traditional sale of predator parts, etc. Rather than list all potentially problematic regulations and take methods for predators, the proposed rule should just make it clear that acceptable methods, take methods and other regulations governing take adopted by the BOG that apply to national preserves are subject to NPS approval and BOG adopted regulations need not be deferred to by the NPS.
3. Significant liberalization of take regulations for predators in the absence of adequate methods in effect to monitor impacts on abundance and trends of the predator populations or that are likely to adversely affect other important uses of affected predators (e.g. bear viewing in Katmai National Preserve). We do not recommend that extensive and expensive monitoring is necessarily required in all instances for predator take in national preserves but we do believe that this is essential where take regulations are being or have been dramatically liberalized or where harvests are dramatically increasing from a historical baseline. Adequate monitoring includes reliable data on numbers of killed animals.

It is unfortunate that adoption of the above recommendation defining “predator control” will likely result in differences in what hunters and trappers are allowed to do within and outside of NPS managed lands. However, this is already the case for actual national park areas. The BOG could alleviate some such difficulties by, when they adopt problematic regulations designed to reduce predators, excluding national preserves from the regulation they adopt. This is already done, for example, in the case of restricting snowmachine or ATV use to take wolves and wolverines on NPS-managed area or on national wildlife refuges where “...not approved by the federal agencies” (2021-2022 hunting regulations page 18 and trapping regulations page 14).

History illustrates that the liberalized hunting regulations that have been adopted to reduce brown bear numbers are essentially permanent and one-directional (Table 1). All of the changes tabulated in Table 1 were adopted by the BOG as general hunting regulations; the liberalized regulations in officially designated bear PCAs (such as snaring bears and shooting females with cubs and cubs [e.g. GMU 16B (former) bear PCA] and state employees shooting predators from aircraft (e.g. in GMU 19 (former) PCA] are not included. Regulation changes in GMUs 1-10 and 15 (SE Alaska, Kodiak, and the Alaska Peninsula) are also not included in Table 1 because brown bear management objectives in these areas are to maintain older (larger and trophy) brown bears in the population. Additionally, moose are uncommon or non-existent in most of the excluded GMUs so predation control of bears to augment moose harvests is not a priority for the BOG. It is of concern, however, that brown bears in the areas tabulated in Table 1 have less (or no) access to salmon than the untabulated areas and, correspondingly,

much lower brown bear densities (Miller et al. 1997, Hildebrand et al. 1998). Because of these lower bear densities, these areas have less resilience to heavy hunting pressure.

Table 1. Number of regulation changes making brown bear hunting regulations more liberal and more conservative in a subunit in Alaska’s GMUs 11-14 and 16-26 (83% of Alaska generally corresponding with areas of moose distribution from Miller (2022, updated from Miller 2017)

REGULATION TYPE	1993-2010	2011-2020	TOTAL
Lengthen season	40	11	51
Bag limit 1 per 4 years to 1/year	47	3	50
Bag limit 1/year to 2/year	5	17	22
Eliminate resident tag fee	26	1	27
Allow baiting	0	29	29
Allow sale of hides & skulls	0	22	22
Other (salvage, same day airborne at bait stations, etc.)	1	51	52
Total number regulation made more liberal in a subunit	119	134	253
Total made more conservative in a subunit (typically change from open hunting to registration permits.	2	4	6

Efforts to reduce brown bear abundance in order to increase moose harvests have been very aggressive since the 1980s in GMUs 12 and 20E (which includes the Wrangel-St. Elias National Preserve). These GMUs clearly illustrate the ADFG’s and BOG’s approach toward brown bear management in areas where brown bears and moose are sympatric. The routine (every 5 years) ADFG brown bear species management report (Wells 2021:2)¹ identified the (former) brown bear management objectives as having been: “Brown bear management in Units 12 and 20E during recent decades has been driven primarily by 1) the goal to reduce brown bear predation on moose calves, and 2) the goal to provide for maximum sustainable hunting opportunity.” Wells (2021:17) identified new management objectives for these areas (effective in 2023) as nothing more than:

“M1. Prohibit the harvest of cubs (within the first 2 years of life) and sows accompanied with cubs.

M2. Manage for a stable or increasing trend in [brown bear] harvest.”

These new objectives replaced former objectives that included metrics associated with harvest composition, managing for “temporary reductions in brown bear predation”, and “After moose populations increase to desired levels, reduce bear harvests to allow for bear population stabilization or recovery.” Wells (2021) justified the new objective M1 by reference to a comment by Brockman et al. (2017) that protection of females with cubs (first or second year of life) from harvest was a valuable buffer against rapid declines caused by heavy hunting pressure. However, the Brockman paper did not suggest that this alone was sufficient to prevent undetected and excessive declines. In fact, the Brockman paper documented a significant (20-40%) decline over 13 years in their GMU 13 study area

¹ We do not impugn the integrity of Wells’ report which contains many innovative elements including assessments of brown bear habitat conditions. Rather, this discussion of Wells’ report is designed to provide an example of the incompatibility of Alaska’s current IM management programs and objectives with the NPS mandates.

where regulations prohibiting shooting females with cubs existed. If anything, the Brockman paper demonstrated that if management objective M2 is achieved, objective M1 could be irrelevant.

Noteworthy in the new objectives is the complete absence of metrics associated with trends in the bear population or targets for desired population declines. The new management objectives display what is effectively a complete disinterest in responsible brown bear management. It would be easy to model a situation where protection of females accompanied by cubs alone could result in driving a bear population to extirpation just by killing females when not accompanied by cubs.² The previous management objectives for brown bears in GMU 12 and 20E also illustrated some of the same disinterest as they were couched as metrics of the moose population and not the bear population (e.g. *“After moose populations increase to desired levels...”*). The kinds of objectives that existed and currently exist in GMUs 12 and 20E cannot be acceptable management objectives from the perspective of the NPS’s mandate to maintain “unimpaired” wildlife populations. Although not (yet) stated quite so baldly elsewhere in Alaska, the same brown bear management approach by the state is implicit throughout most of the area where brown bears and moose are sympatric (the areas tabulated in Table 1).

The management objectives in GMUs 12 and 20E are not necessarily inconsistent with the wildlife management objectives set by the Alaska Constitution which requires only that wildlife harvests must be managed for “sustainable yields”. Mathematically, a sustainable harvest of the same fixed percentage could be taken both from a population of size x and one of $100x$. From the perspective of NPS’s mandate to maintain “unimpaired” wildlife populations, reductions of a population from $100x$ to x would not qualify as acceptable even though a sustainable harvest might be possible at size x . The state’s constitutional mandate of “sustainability” is too low a bar to be acceptable to NPS. We recommend that the new rule clearly make the point that mere sustainability is not sufficient for NPS.

We are aware of nowhere in Alaska’s predator management policy (ADFG 2016) or elsewhere where “sustainability” is defined. For example, is a harvest level “sustainable” if harvest numbers are subsidized by immigration? How much can a population be reduced from natural levels defined by carrying capacity and still be considered to be sustainably harvested? What are the acceptable risks to ungulate habitat that result from setting objectives that are based on hunter demand rather than habitat capacity? Absent an acceptable definition of sustainability by Alaskan wildlife managers, the NPS should not accept sustainability as an acceptable standard. The NPS should consider adding its own definition of sustainability to the proposed rule.

Currently, the BOG classifies black bears as “furbearers” although no trapping regulations for taking black bears with a trapping license have been adopted so far. The new NPS rule should make it clear that bears of either species may not be trapped or snared on national preserves even if authorized by BOG trapping regulations. Bears should be added to the prohibition in Table 1 of the proposed rule against “(14) taking a fur animal or furbearer by disturbing or destroying a den” but, possibly, retaining the existing exception in some areas for federally recognized subsistence users in cases where this is customary and traditional.

Examples of trends in predation reductions regulations in National Preserves

Table 2 compares some BOG regulations that apply to Alaska national preserves during regulatory year 1990/91 (prior to adoption of the IM law in 1994) with those existing in 2021/22. In 3 national preserves, wolf bag limits changed from 10/year to 20/year and in 3 national preserves they

² We recognize that extirpation is unlikely in National Preserves where harvests can be subsidized by immigration from adjacent national parks

changed from 10/year to 10/day. The 10/day quotas were in 3 national preserves on the Alaska Peninsula (GMU 9) (Table 2). In 2 national preserves wolf bag limits declined (from “unlimited” to 5 or 20/year) and in 2 others bag limits remained the same (Table 2). Wolf trapping quotas in both periods were unlimited (Table 2). Currently, BOG authorized wolf bag limits are >10/year in all Alaskan National Preserves. Given the difficulties of taking wolves and lack of data, we cannot assume there is much effective difference between these quotas. The significant point of the trends in quotas, however, is that they demonstrate the intent of the BOG is to reduce wolf abundance on national preserves as well as in areas surrounding these preserves where the same regulations also apply.

There have also been liberalizations of hunting regulations for brown bears on many national preserves in Alaska between 1990 and 2021. For season liberalizations and brown bear baiting these are tabulated in Table 2 (see Miller et al. 2017 and Miller 2022 for other liberalized regulations). In 5 national preserves bag limits have changed from 1 brown bear every 4 years (1990) to 2 per year and sales of hides and skulls also authorized (2021) (Table 2). In two national preserves brown bear bag limits changed from 1 per year (1990) to 2 per year and hides and skull sales authorized as well. In a clear illustration of the intent of these regulations being to reduce brown bear abundance, and reduce bear:ungulate ratios, the BOG has automatically linked sale of hides and skulls being authorized and bag limits of 2 brown bears per year; this is the case for 5 national preserves (Table 2). In 5 national preserves bag limits declined or remained the same; all of these are on the Alaska Peninsula, or SE Alaska (Table 2) where brown bear densities are high because of salmon and populations are still managed relatively conservatively.

The BOG has been most aggressive at liberalizing bag limits in areas of low brown bear density compared to areas with abundant salmon and resulting much higher bear densities such as the Alaska Peninsula and SE Alaska (Miller et al. 1997; and Hilderbrand et al. 1999). There are also no or few moose in the salmon rich areas of high bear density so bear reduction IM efforts to increase moose harvests is not necessary to comply with IM mandates. Since low density populations of slow reproducing species like brown bears are more vulnerable to overharvests, this means that the state’s policy is to manage brown bears most aggressively in the populations that are most vulnerable to overharvest. This should be of concern to NPS in the national preserves with low brown bear densities.

The length of brown bear hunting seasons has also increased in 5 national preserves, again most dramatically in the 3 that occur in interior national preserves with low bear densities (Table 2) and correspondingly highest vulnerability to overharvest. The most dramatic increase (440% from 62 days in 1990 to 272 days in 2021) was in the 3 most northern preserves in GMU 23 (Table 2). Length of open brown bear hunting seasons between 1990 and 2021 was the same in 2 and declined in 2 other national preserves (Table 2). In 8 national preserves brown bear hunting is allowed all winter when bears are in their dens; hunting is closed during winter only in the 3 high bear density national preserves on the Alaska Peninsula (Table 2) Hunting denned bears (both species) is ethically and biologically problematic because typically hunters have no way of determining if a bear flushed from its den has left cubs behind in the den until after the adult bear is killed.

In 1990 baiting of brown bears was not authorized anywhere in Alaska. By 2021, however, baiting was widely authorized in Alaska including in 5 national preserves (Table 2). Again, by 2021 baiting was allowed in all 5 of the 6 national preserves with the lowest brown bear densities and corresponding highest vulnerabilities to overharvest (excluding Bering Land Bridge National Preserve).

In contrast to the bag limit regulations for brown bears, the most aggressive bag limits for wolves of 10 per day occur in 3 national preserves on the Alaska Peninsula (Table 2). This is because the BOG is

focused on reducing wolf predation on caribou on the Alaska Peninsula (moose are common only in northern subunit 9A). Very liberal bag limits for wolves in the same area where brown bear bag limits are relatively conservative illustrates that the BOG's primary focus is on reducing predator:prey ratios and not on retaining "unimpaired" ecological processes that is the NPS mandate for national preserves.

Table 2. Examples of changes in some hunting and trapping regulations for Alaska residents in Alaskan National Preserves between Regulatory year 1990/91 and 2021/22. No column for baiting for brown bears in 1990 because it was not allowed anywhere (but was in some areas for black bears).

National Preserve (state Game Management Unit (GMU))	Wolf hunting [trapping] bag limit 1990	Wolf hunting [trapping] bag limit 2021	Brown Bear season (days open in year)		Brown bear bag limit		Brown bear baiting in 2021
			1990	2021	1990	2021	
Gates of the Arctic N.P. & Preserve (GMU 23)	10 per year [no limit]	20/year [no limit]	62 (9/1-10/10 & 6/15-5/25)	272 (8/1-5/31)	1 per 4 years	2 per year**	yes
Noatak National Preserve (GMU 23)	10 per year [no limit]	20/year [no limit]	62 (same as above)	272 (same as above)	1 per 4 years	2 per year**	yes
Cape Krusenstern National Monument (GMU 23)	10 per year [no limit]	20/year [no limit]	62 (same as above)	272 (same as above)	1 per 4 years	2 per year**	yes
Bering Land Bridge National Preserve (GMU 22E)	No limit [no limit]	20/year [no limit]	325 (8/10-6/30)	283 (8/1-6/15)	1 per year	2 per year**	no
Yukon-Charley Rivers National Preserve (GMU 20E)	10 per year [no limit]	10/year [no limit]	325 (same as above)	325 (8/10-6/30)	1 per year	2 per year**	yes
Wrangell-St. Elias N.P. & Preserve (GMU 12)	10 per year [no limit]	10 per year [no limit]	272 (9/1-5/31)	325 (same as above)	1 per 4 years	1 per year	yes
Lake Clark N.P. & Preserve (GMU 9A)	10 per year [no limit]	10 PER DAY [no limit]	36 (10/1-10/21 & 5/10-5/25)*	42 (10/1-10/21 & 5/10-5/31)*	1 per 4 years	1 per 4 years	no

Katmai N.P. & Preserve (GMU 9C)	10 per year [no limit]	10 PER DAY [no limit]	86 9/1- 10/31 & 5/1- 5/25*	42 (same as above)*	1 per 4 years	1 per 4 years	no
Aniakchack Nat. Monument. & Preserve (GMU 9E)	10 per year [no limit]	10 PER DAY [no limit]	29 (10/7- 10/21 & 5/10- 5/25)*	35 (10/7- 10/21 & 5/10- 5/31)*	1 per 4 years	1 per 4 years	no
Glacier Bay N.P. & Preserve (GMU 5A)	No limit [no limit]	5 per year [no limit]	272 (9/1- 5/31)	272 (9/1- 5/31 272)	1 per 4 years	1 per 4 years	no

*Season closed every other year

** Hunters also allowed to sell tanned or untanned hides and skulls of bears killed

Monitoring

The aggressive liberalizations of hunting and trapping regulations adopted by the BOG to reduce predator abundance documented above have not been accompanied by adequate monitoring studies. There have been almost no rigorous studies conducted by the State of Alaska to document trends in abundance of predators in the areas most targeted by the liberalized hunting regulations for wolves and bears. The BOG mostly relies on anecdotal accounts from the public or ADFG for trend information. Instead, most rigorous studies in these areas have been conducted by federal agencies sometimes with ADFG participation (e.g. Robison et al. 2018). ADFG has done some rigorous trend estimates in GMU 13 (e.g. Miller et al. 1997, Brockman et al. 2017). This inadequacy should be of concern to NPS and represents another significant reason for the NPS to not defer predator management on national preserves to the BOG and ADFG. This inadequacy and concern was recognized by the National Research Council in its review of predator management in Alaska (NRC 1997). Monitoring of exploited predator populations is expensive and frequently imprecise and may not be necessary in many cases where exploitation rates are recognized as being moderate and unlikely to cause significant declines.

It is unknown how many predators (or prey) individuals are killed by hunters or trappers on national preserves because ADFG codes kill data to Uniform Coding Units (UCUs). These were established prior to ANILCA and do not align with preserve boundaries in many cases. Currently, kill numbers on national preserves can only be estimated based on assuming the number of animals killed in the national preserve portion of a UCU is the same as the percentage of the national preserve's area that overlaps that UCU. This estimation process is rarely done and may result in an underestimation bias of kills in national preserves. This is because hunters may concentrate their efforts on national preserves which are adjacent to national parks and therefore may have more or larger individuals as a result of immigration from park to preserve. To the degree this occurs, it means that the preserve is a demographic sink to populations of animals in national parks. Absent redrawing UCU boundaries, which has significant downsides, the underestimation bias may be reduced by having less generous take regulations in effect on national preserves than adjacent non-preserve areas. This would result from the proposed rule change.

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SIGNATORIES

- Judy Alderson. US Fish and Wildlife Service and National Park Service, 30 years in Alaska (ret.)
- Tim Aldrich. Appointed by MT Governor to Montana Fish and Wildlife Commission (4 years, retired) and MT State Board of Outfitters (3 years, retired), US Forest Service (retired). Missoula Montana
- Steven C. Amstrup Ph.D. Chief Scientist, Polar Bears International, (former) Polar Bear Project Leader, U. S. Geological Survey, Alaska Science Center. Kettle Falls, Idaho
- Michael Antony. USFWS, USGS Alaska Science Center (ret.). Anchorage, AK
- Keith Aune MS, CWB, Research Biologist (31 years) for Montana Fish, Wildlife and Parks (ret). 10 years Conservation Scientist Wildlife Conservation Society (10 years, ret)
- Ed Bangs MS. US FWS wolf recovery coordinator, former biologist Kenai National Wildlife Refuge, and former member NRM wolf recovery program. Helena, Montana
- Joel Berger Ph.D. Barbara Cox Anthony University Chair in Wildlife Conservation, CO State Univ., Univ. of Montana (former) Craighead Professorship. Ft. Collins, CO.
- Mark Boyce Ph.D. University of Alberta, Edmonton, Alberta, Canada
- Len Broberg Ph.D. Univ. of Montana, Environmental Studies (Prof. Emeritus). Missoula, MT
- Steven W. Buskirk, Ph.D. Professor Emeritus of Zoology and Physiology, University of Wyoming. [author “Carnivoran Ecology: Evolution and Community Function” (2023)]
- Douglas H. Chadwick M.Sc, Wildlife biologist and National Geographic natural history reporter, Whitefish, MT
- Judy Caminer MS. U.S. National Park Service Alaska (ret.). Anchorage, Alaska
- Anthony DeGange MS. ADF&G, USFWS, and USGS (ret.), Chugiak, Alaska
- Dirk V. Derksen Ph.D. Alaska U.S. Geological Survey & U.S. FWS (ret.), Anchorage, AK
- Warren Eastland Ph.D. Wildlife Ecologist/biologist Alaska Region of Bureau of Indian Affairs (retired). Prince George, BC, Canada
- Glenn Elison, M.S., US FWS Refuge Manager (retired) of Arctic and Alaska Peninsula National Wildlife Refuges & Asst. Regional Director (FWS) for Refuges and Wildlife, Alaska (ret.). Lewistown, MT
- Jeff Fair MS. Independent Wildlife Biologist and author. Palmer, Alaska
- Joe Fontaine BS, USFWS APHIS. Helena, Montana
- Kerry R. Foresman Ph.D. Prof. Biology and Wildlife Biology (Emeritus), University of Montana, Missoula, Montana, Author “Mammals of Montana”
- William H. Geer MS. Wildlife Biologist and former Director of Utah Division of Wildlife Resources. Missoula, MT.
- Mike Getman. Refuge Manager, Kodiak NWR (retired), Lewistown, MT
- Barrie K. Gilbert Ph.D., Utah State University (Faculty Emeritus), Logan, Utah
- Jay Gore MS. USFS National Grizzly Bear Habitat Coordinator (retired). Missoula, MT
- Doug Heard MSc. Consulting Ecologist Tithonus Wildlife Research, Prince George, BC, Canada
- Stephen M. Herrero Ph.D. Professor Emeritus Faculty of Environmental Science University of Calgary. Author of “Bear Attacks their Causes and Avoidance” and leader of field studies of bears in Alaska. Calgary, Alberta Canada
- Mary Hogan, MSc., U.S. Fish and Wildlife Service (retired), Anchorage, Alaska
- Jeff Hughes M.Sc., CWB. Alaska Department of Fish & Game (Ret.) North Bend, WA

Thomas A. Hanley Ph.D., Research Wildlife Biologist for US Forest Service Research in SE Alaska (retired), Haines, AK

Mike Jimenez. MS. US FWS Wolf management biologist (retired). Big Arm, Montana (retired). Island Park, Idaho

Katherine Kendall MS. U.S. Geological Service leader Northern Continental Divide Ecosystem grizzly bear study team (retired), Big Fork, Montana

Winifred B Kessler PhD, CWB, Wildlife Society Fellow. U.S. Forest Service Alaska (retired), formerly the Alaska Regional Director for Wildlife, Fisheries, Ecology, & Subsistence Management (2000-2010). Prince George, British Columbia.

Matthew Kirchhoff M.Sc. ADF&G Wildlife Research Biologist (retired), Juneau, Alaska

Joanna E. Lambert PhD. Professor, Environmental Studies, Faculty, Ecology & Evolutionary Biology, University of Colorado. Boulder. Boulder, CO

Sterling Miller Ph.D., CWB. Alaska Dept. Fish and Game (retired), Lolo, Montana

SuzAnne M. Miller. ADFG, Division Wildlife Conservation chief Biometrician (ret.) and US FWS in Alaska (ret.). Lolo, Montana

John Morton, Ph.D. U.S. Fish and Wildlife Service (retired). Anchorage, AK

Steve Nadeau M.Sci., Large carnivore manager (retired) Idaho Dept. Fish and Game, Boise, ID

Jay Nelson MSc., The Pew Charitable Trusts (Juneau, ret.) ADFG Chief ESA Coordinator (Juneau, ret.) U.S. FWS (Juneau, ret.). Patagonia, AZ

Bob Nelson, MS. Alaska Department of Fish & Game Unit 22 Area Biologist (retired), Kealahou, HI

Karen Noyce MSc. CWB. Minnesota Department of Natural Resources, Wildlife Populations and Research (ret). Grand Rapids, MN..

Gordon Orians Ph.D. University of Washington (Emeritus), Seattle, Washington [Chair of the NRC panel on predator management in AK referenced as NRC (1997)]

Paul C. Paquet Ph.D University of Victoria and Raincoast Conservation Foundation. Victoria, British Columbia, Canada

James Peek Ph.D. University of Idaho, Department of Fish & Wildlife Science (Emeritus Professor). Moscow, ID

Michael Pelton, Ph.D. Wildlife Science, School of Natural Resources (Emeritus), University of Tennessee. Tennessee

David K. Person Ph.D. ADFG wolf research biologist (ret.). Braintree, VT

Rolf O. Peterson Ph.D., Research Professor, Michigan Technological University, Houghton, MI

Margaret R. Peterson Ph.D. Alaska U.S. Geological Survey & U.S. FWS (ret.), Anchorage, AK

Mike Phillips M.Sc., CWB, Executive Director, Turner Endangered Species Fund, Bozeman, Montana

Michael Proctor Ph.D. IUCN Bear Specialist Group Co-Chair, Kaslo British Columbia, Canada

Sanford Rabinowitch BS & MLA. Member IUCN World Commission on Protected Areas and (former) NPS Subsistence Manager (Alaska). Anchorage, AK

Kenneth J. Raedeke PhD. Professor, retired, University of Washington, Seattle, WA

Ann G. Rappoport M.S., U.S. Fish and Wildlife Service Alaska (ret.), Anchorage, AK

Thomas C. Rothe, M. Sci, Alaska Department of Fish and Game and U.S. Fish and Wildlife Service (retired), Eagle River, AK

Frank Rue MLA, (former) Commissioner, ADFG, (former) ADFG Director, Habitat Division.

Christopher Servheen Ph.D. CWB, U.S. Fish and Wildlife Service. (retired) Missoula, Montana

John Schoen Ph.D. Alaska Department of Fish and Game (retired), Anchorage, Alaska

Charles C. Schwartz Ph.D. Alaska Department of Fish and Game (retired), USGS Yellowstone grizzly bear study team leader (ret.), Bozeman, Montana
Steve Sheffield Ph.D. Bowie State University, Bowie, Maryland
Rick Sinnott M.Sc, CWB, Wildlife Biologist, Alaska Department of Fish and Game (retired), Chugiak, Alaska
Douglas Smith Ph.D. NPS Wolf research team leader, Yellowstone National Park (retired), Bozeman, MT
Tom S. Smith, Ph.D. Brigham Young University, Wildlife and Wildlands Conservation Program & federal government research scientist in Alaska
Rick Steiner, M.Sc, Professor, University of Alaska (ret.). Anchorage, Alaska
Ian Stirling OC, PhD, FRSC, Hon. DSc from Universities of Alberta and British Columbia; Univ. Alberta; Research Scientist Emeritus, Environment and Climate Change Canada, Govt. Canada. Edmonton, Canada
Derek Stonorov MS. Alaska Department of Fish and Game (retired), Watchable Wildlife Guide, Homer, Alaska.
Jon Swenson Ph.D. Professor Emeritus Norwegian Univ. Life Sciences, Research Biologist Norwegian Inst. Nature Research (ret.), Research Biologist Swedish University Agricultural Sciences (ret.), Wildlife Biologist Montana FWP (ret.). Ås, Norway
Nancy G. Tankersley, M.Sc., Wildlife Biologist, Alaska Department of Fish and Game and U.S.Fish and Wildlife Service (ret.), Anchorage, AK.
Deborah Boege Tobin Ph.D. Prof. Biological Sciences . (Ecology, Evolution and Systematics). UAA-Kenai Peninsula College - Kachemak Bay Campus, Homer, Alaska
Adrian Treves Ph.D. Prof. Environmental Studies, Univ. Wisconsin. Madison, Wisconsin
John L. Weaver Ph.D. Wildlife Conservation Society (retired). St. Ignatius, MT
Kevin Winker PhD, Prof. Biology & Wildlife, University of Alaska Fairbanks. Fairbanks, Alaska.