Sustained Yield of Predators Under Department Removal: Overview for the BOG, July 2026

Division of Wildlife Conservation, Alaska Department of Fish & Game

This document focuses on the Alaska Department of Fish and Game's (ADF&G, department) consideration of the sustained yield principle in making this proposal. That is, the requirements for the department and the Alaska Board of Game (BOG, board) to consider all the important, relevant, and material factors relating to the sustainability of a replenishable, public, wildlife resource prior to adoption of a regulatory proposal.

Background

Wildlife management in Alaska is based on the North American Model of Wildlife Conservation (the Model). Alaska's constitution, statutes, and regulations have been and continue to be developed and implemented consistent with the principles of the Model. This proposed program is designed to grow the 26B Muskox herd by reducing predation by brown bears through the lethal removal of these predators. We must consider all the important, relevant, and material factors relating to the sustained yield of the populations impacted by this management program—muskox and brown bears. This board and the department are responsible for ensuring that the proposed program meets the sustained yield clause of the Alaska Constitution.

When the Alaska Supreme Court has reviewed cases pertaining to the sustained yield clause of the Alaska Constitution (e.g., *Native Vill. of Elim v. State,* 990 P.2d 1, 7 [Alaska 1999] and *West v. State,* 248 P.3d 689 [Alaska 2010]) they referenced

1) the text of sustained yield clause in the Alaska Constitution

> Fish, forests, wildlife, grasslands, and all other replenishable resources belonging to the State shall be utilized, developed, and maintained on the sustained yield principle, subject to preferences among beneficial uses.

2) the definition of the "sustained yield principle" provided to the constitutional delegates by the Resources Committee of the Constitutional Convention:

> As to forests, timber volume, rate of growth, and acreage of timber type can be determined with some degree of accuracy. For fish, for wildlife, and for some other replenishable resources such as huckleberries, as an example, it is difficult or even impossible to measure accurately the factors by which a calculated sustained yield could be determined. Yet the term "sustained yield principle" is used in connection with management of such resources. When so used it denotes conscious

> application insofar as practicable of principles of management intended to sustain the yield of the resource being managed. That broad meaning is the meaning of the term as used in the article.

3) the section from the *Report to the People of Alaska from the Alaska Constitutional Convention* on administering the state's natural resources

> The article's primary purpose is to balance maximum use of natural resources with their continued availability to future generations. In keeping with that purpose, all replenishable resources are to be administered, insofar as practicable, on the sustained yield principle. This includes fish, forests, wildlife and grasslands among others.

These founding documents provide the framework for considering issues under the sustained yield clause. The Alaska Supreme Court has also clarified aspects of the sustained yield clause that should guide how the board and the department review this and other IM programs, especially with respect to predator populations, specifically

The sustained yield clause applies to both predators and prey populations. In deciding *West vs. the State of Alaska* (248 P.3d 689 (Alaska 2010)) the court stated

> We find nothing in the plain language of the sustained yield clause suggesting that a distinction should be drawn between predator and prey populations for purposes of applying the sustained yield principle, and there is no such distinction in the descriptions of "sustained yield" supplied by the delegates who drafted the constitution or to the voters who ratified it. We have acknowledged that "the framers of Alaska's constitution intended the sustained yield clause to play a meaningful role in resource management," and we hold today that the sustained yield clause in Alaska's constitution applies to both predator and prey populations, including populations of wolves and bears. (internal references omitted)

The sustained yield clause permits the state to establish preferences for prey over predators. In deciding *West vs. the State of Alaska* (248 P.3d 689 (Alaska 2010)) the court stated

> The qualifier that makes sustained yield "subject to preferences among beneficial uses" suggests that the legislature and the Board have some discretion to establish management priorities for Alaska's wildlife. … Based upon the text and constitutional history of the sustained yield clause, the State argues that "it allows for some uses, and therefore some resources, to be preferred over others." And Defenders recognize that "[w]hile [the sustained yield clause] requires that all wildlife, including predators, be managed for sustained yield, that does not mean

> the sustained yield principle precludes 'predator control' in appropriate circumstances." We agree with both these statements and affirm the superior court's ruling "that the management of wildlife resources may constitutionally include a selection between predator and prey populations."

The sustained yield clause is a broad principle of management that does not require the board to determine a numerical yield. (*Native Village of Elim vs the State of Alaska* 990 P.2d 1, 7 [Alaska 1999])

In deciding the *Native Village of Elim vs the State of Alaska*, a case focused on a fishery, the court stated

> We agree with the Board that the sustained yield clause does not require it to determine a specific level of yield for each fish stock. The plain language of the provision requires resource managers to apply sustained yield principles; it does not mandate the use of a predetermined formula, quantitative or qualitative. As a practical matter, the record suggests that to require the Board to devise such a formula would consume an amount of time, money, and energy wholly disproportionate to potential benefits.

and

> [T]he phrase "insofar as practicable" cannot fairly be construed to support the kind of mechanical application of the sustained yield principle that Elim proposes. To the contrary, the primary emphasis of the framers' discussions and the glossary's definition of sustained yield is on the flexibility of the sustained yield requirement and its status as a guiding principle rather than a concrete, predefined process.

What this means is that the state, specifically the board and department, are required to always manage for sustained yield of both predators and prey, but the board has the authority to establish a preference for prey populations over predator populations. Additionally, sustained yield should be implemented as a broad principle of management that does not require a formula with factors measured precisely.

The state has a track record of success in managing the harvest of game populations to continue the sustained yield of those populations. No population of bears in Alaska has been managed in a way that threatened the extirpation of the species. On the contrary, even in Game Management Units (GMU, units) where predator control occurs, open seasons for harvest of brown bears remain in all units where those species naturally occur.

The Department's Analysis and Approach

Area Biologist Mark Nelson and Management Coordinator Jason Caikoski will communicate details regarding how the department has taken a "hard look" at populations of muskoxen and brown bear in this area. Not only have we (the department) taken a "hard look," we have considered all salient issues in managing these populations for sustained yield under the proposed program.

As described above, sustained yield is the constitutional mandate given to this board and the department in Article VIII, Section 4. In the context of predator reduction, sustained yield for predators means the ability to achieve and maintain a high level of human harvest in the long-term. This combines the concept of sustained yield into the future, modified over the near-term by the preferences among beneficial uses (i.e., prey). In practical terms, during a predator removal program, predator populations can be reduced (i.e., preference for prey in the short-term), so long as the predator populations can recover and provide a harvestable surplus in the future. Note that sustained yield is a higher bar than "sustainability". It is not just adequate for predators to remain on the landscape; rather, the population needs to be at a level where harvest can be continued.

Addressing Biological and Scientific Criticisms

Those who are opposed to predator control programs, including some former department biologists, will likely provide criticism. Some of these criticisms will be semantic in nature, while others come from a misunderstanding of what is required in constitution. In addition, some biologists and organizations try to use the attainment of scientific information or standards to establish difficult hurdles to implement management actions. For example, the critique that "correlation is not causation," while accurate in general, is largely a semantic argument to distract from the weight of evidence. Given the treatment design, we will not be able to conclusively state that removing bears did or did not result in increased survival. However, we will be able to state that there is evidence that supports the conclusion. Another likely claim is the assertion that there must be clear and current information on predator abundance and landscape carrying capacity prior to proceeding with predator removals. This demonstrates a misunderstanding of what is required to meet Alaska's sustained yield obligation and is an effort to set the attainment of a high scientific standard to intentionally avoid the action from being implemented.

The difference between decision science (using scientific information to inform decisions) and the scientific method is the origin of many criticisms of predator control programs. The National Resource Council's recommendation (1997) for the application of IM is to design the programs as an experiment (i.e. with controls and replication). That recommendation

focuses on improving knowledge around predator control and is something that the department strives for whenever possible, but does not reflect the practical realities of active, adaptive wildlife management under the sustained yield principle. The 1997 report does not address evidence or standards of sustained yield for predators and clarifies that predator control is a policy decision. We acknowledge that the scientific method has a very high bar to conclusively establish cause and effect, but in light of the information presented today, including the department's research, we are very confident that predation is the main factor limiting this herd and that targeted predator control activities are expected to improve muskox survival and ultimately human harvest.

Additionally, we would like to address several factors about this program for this board's consideration.

- Factor #1. **Bear viewing and non-consumptive use for Alaskans could be impacted by this proposed removal of bears.** Bear viewing is a popular activity along the Dalton Hwy in Unit 26B. However, this area is not similar to coastal bear viewing areas like Katmai where bears congregate along salmon streams or sedge meadows and are seen in predictable large aggregations. Bears are viewed randomly when seen from the highway. The removal of a few bears within the highway corridor is unlikely to have significant impacts on bear viewing. Similarly, bears have an intrinsic value to the people of Alaska. That intrinsic value is recognized and considered when establishing harvest regulations and predator removal programs.

- Factor #2. **The 26B muskox decline is likely caused by brown bear predation.** Studies in the past and evidence collected at muskox mortality events suggest bears are responsible for most of the muskox mortality. A study during 2007 to 2011 indicated that 62% of adult mortality (n=73) and 58% of calf mortality (n=44) was attributed to bear predation. Since 2023, 79% of the adult female muskox mortality (n=14) was related to bear predation. When the population of muskoxen is only 200 to 300, these predation events have a dramatic effect on the overall population.

- Factor #3. **The limited removal of bears poses no threat to the sustainability of the bear population.** The removal is capped at 10 bears annually. In the previous program no more than 3 were removed annually. This removal cap will keep total human take at a level that is sustainable.

- Factor #4**. Although not required to meet sustainability for conducting predator removal, bear abundance has been evaluated in Unit 26B.**

Limitations on removals (i.e., cap on annual removal, limited duration) ensure the sustained yield clause is being met without having a precise density estimate. Further, the sustained yield clause of the Alaska Constitution is to be implemented as a broad principle that does not require the department to precisely measure factors, such as density, necessary to calculate sustained yield.

- Factor #5. **Nutrition and disease are not limiting muskox population growth and increasing the population is feasible**. Physical condition of adult females is good. Calf production is at levels that will allow for growth. Mortality of calves and adults is limiting the population. Brown bear predation is the largest factor for muskox mortality in Unit 26B.

We can assure the board that the department is committed to the conscious application, insofar as practicable, of principles of management intended to sustain the yield of muskox and brown bears. We have considered the role of predators in the ecosystem, as well as their distribution within the range of the Unit 26B muskox population. The application of predator control in this area under the proposed plan will occur in a relatively small geographic area dictated by the location of muskox groups within the larger control area. Removing brown bears will have a minor effect on this population and includes a goal of long-term sustained yield. The proposed non-IM program has been carefully developed and implemented and is adaptable as new observations and information are gathered. The department has taken a hard look at a wide variety of factors impacting muskox and brown bears. We have made decisions regarding the sustainability of all species, specifically one prey, and 1 predator—within Unit 26B and the north slope ecosystem. Evidence supports that prior implementations of focused predator control likely improved muskox abundance. This program will operate within the context of the sustained yield provisions of the constitution.