

PROPOSAL 45

5 AAC 84.270. Furbearer trapping.

5 AAC 85.056. Hunting seasons and bag limits for wolf.

5 AAC 92.008. Harvest guideline levels.

Raise the population objective from 150-200 wolves to 250-350 wolves in Unit 2, and raise the threshold for closing the season from 100 to 200 wolves as follows:

General authority, as applicable: 5 AAC 84.270. (13), 5 AAC 85.056(1), and 5 AAC 92.008.

The annual harvest of wolves in Unit 2 shall be managed to maintain a unit-wide population objective of 250-350 wolves.

In light of this historic data, we suggest the current population objective of 150-200 wolves is both too low and too narrow. It should align more closely with ~250-350 wolves when conservation measures were initially put in place. The goal is to maintain a number that may sustain a significant annual harvest and not lead to a downward spiral in the wolf population.

To that end, and until a more rigorous evaluation of this vulnerable population is completed, we suggest that the Board of Game raise the threshold for season closure from 100 to 200 wolves, and raise the population objective from 150-200 wolves (current), to 250-350 wolves.

What is the issue you would like the board to address and why? At the January 2019 Board of Game (BOG) meeting, the BOG adopted a spring wolf population objective between 135-180 wolves in Unit 2. In the discussion record, the lower goal of the population objection (135 wolves) was derived by subtracting 40% of the Department of Fish and Game (department) historic population point estimate. One hundred wolves was set as the lowest acceptable population level for wolves in Unit 2. This was because the BOG believed that there was a 40% maximum mortality that the wolf population could recover from year-to-year, as long as trappers do not take too many adults. The upper limit of the population objective was based on 20% of the low-end population estimate.

The population objectives were adopted by the board in 2019 in step with a new proposal to manage wolves by population objective. The department specifically avoided recommending those objectives, deferring instead to the BOG and the public process. In that process, the BOG referenced wolf population estimates gathered in the 2014 and 2015 season¹, which was the all-time low point in the Unit 2 wolf population. The department has since adopted the position that these early estimates were likely biased low.² On that basis alone, the population objectives need to be revised to reflect the new, more accurate population numbers.

Some history may be useful in revising this objective. The department's research biologist in 1996 published a population estimate for Unit 2 that was based on two different methodologies. One, based on home range modeling, estimated the wolf population at 321. The second, based on empirical observations of wolves from the air, returned a population estimate of 218 wolves. He believed the first method (home range) *overestimated* the population due to the fact that many of the islands in Unit 2 are not permanently occupied by wolves. The second method (empirical observations) was believed to underestimate the population because of heavy wolf harvest in the area preceding the fall 1994 counts. He therefore averaged the two and produced his best estimate of the Unit 2 wolf population at the time: 269 wolves³ (Roffler et al. 2016).

This population estimate was low enough to raise concerns by the BOG about unsustainable harvest, which at the time, was ranging from 85-105 wolves per year⁴. Consequently, the BOG, in

1997, enacted wolf harvest guidelines that capped legal harvest at 25% of the most recent population estimate.

During the 1980s and early 1990s, the Unit 2 wolf population probably hovered between 250 and 350 wolves, with 30-50% being harvested annually. As the population declined through the 1990s and 2000s, the static harvest cap of 90 wolves (later reduced to 60 wolves) drove the population further downward. In 2014, if the Spatially Explicit Capture–Recapture (SECR) population estimate showed the Unit 2 wolf population numbered just 89 animals.

The department excused itself from establishing a population objective in 2019, preferring, instead, to let local residents set it. The public has no way of knowing wolf carrying capacity, much less what number of wolves might be needed to maintain viability or to provide for a maximum sustained yield.

The decision to set 100 wolves as the minimum did not include a consideration of the genetic diversity needed to sustain this isolated, genetically distinct population; genetic bottlenecking, susceptibility to rabies and disease; resiliency to harvest over 40%; or resilience to habitat fragmentation and loss from old growth logging. In fact, the department conducted no population viability analysis to support the BOG’s decision to set 100 wolves as the minimum acceptable level.

Since 2019, and in light of new genetic studies, it appears the minimum population number has been on the department’s mind. At a public hearing in Prince of Wales on November 9th, 2021, the department representative stated, that “new genetic data raises questions about genetic diversity to prevent inbreeding” in Unit 2 and that the agency was keeping the trapping season short (one month) because, “the population objective might not be genetically sustainable.”

There is no area within Unit 2 where a wolf pack is not exposed to legal and illegal killing. With no evidence of immigration into Unit 2 from surrounding management areas, a small residual population of 100 wolves could be feasibly extirpated, and risks a positive ESA listing decision.

¹ “When setting the current fall population objective (150–200 wolves) the Alaska Board of Game referenced estimates from 2014 and 2015.” (ADF&G press release 10 Nov 2021)

² “Although ADF&G’s Unit 2 wolf population estimates have always been reasonable and consistent with the DNA collected, analysis of data from 2019 and 2020 suggests earlier estimates may have been biased low. Along with incremental improvements in capturing DNA from hair samples, in 2019 and 2020 ADF&G first had access to DNA from relatively large numbers of wolves harvested within the study area during the October–December study period. That DNA collected at sealing contributed to larger datasets available for the 2019 and 2020 population estimates and in part, appears responsible for higher estimates in those years. Fewer samples from harvested wolves available for earlier estimates may have biased those estimates low.” (ibid)

³ Page 9, in: *Roffler, G. H., J. N. Waite, R. W. Flynn, K. R. Larson, and B. D. Logan. 2016. Wolf population estimation on Prince of Wales Island, Southeast Alaska: a comparison of methods. Alaska Department of Fish and Game, Final Wildlife Research Report ADF&G/DWC/WRR-2016-1, Juneau.*

⁴ “These results are consistent with observations made in the field by biologists and trappers who believe that wolves on Prince of Wales and Koscusko Islands were at a population peak during winter 1992-93 and have declined since, owing primarily to trapping and hunting (in GMU 2, 86, 105, 103, 85, and 99 wolves were reported killed during the 1991-92, 1992-93, 1993-94, 1994-95, and 1995-96 trapping seasons, respectively”. From *Person, David K.; Kirchhoff, Matthew; Van Ballenberghe, Victor; Iverson, George C.; Grossman, Edward. 1996. The Alexander Archipelago wolf: a conservation assessment. Gen. Tech. Rep. PNW-GTR-384. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 42 p.* Person et al. 1996. *Person, David K.; Kirchhoff, Matthew; Van Ballenberghe, Victor; Iverson, George C.; Grossman, Edward. 1996. The Alexander Archipelago wolf: a conservation assessment. Gen. Tech. Rep. PNW-GTR-384. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 42 p.*