PROPOSAL 49

5 AAC 84.270. Furbearer trapping.
5 AAC 85.056. Hunting seasons and bag limits for wolf.
5 AAC 92.008. Harvest guideline levels.

Utilize the lower confidence interval of the wolf population for estimating the population in Unit 2 as follows:

General authority, as applicable: 5 AAC 84.270(13), 5 AAC 85. 056(1), 5 AAC 92.008

5 AAC 92.008 is amended to read:

The lower confidence interval of the population estimate shall be utilized for the purposes of estimating the wolf population in Unit 2.

To exercise the state's precautionary management policy in the face of high uncertainty, utilize the lower bound of the confidence interval as the assumed wolf population for purposes of management and quota-setting. To gauge the magnitude of this adjustment, this proposed change would lower the official estimated wolf population size in the fall of 2020 from 386 wolves to 320 wolves.

What is the issue you would like the board to address and why? The Board of Game (BOG) is currently utilizing the statistical mean of the Spatially Explicit Capture–Recapture (SECR) analysis as the assumed wolf population for purposes of management and quota-setting in Unit 2. Given uncertainty about the veracity of these population estimates, a more conservative measure is advisable.

The department has acknowledged that the observed changes in the Unit 2 wolf population from year to year, concurrent with reported harvests, are not particularly logical. An experienced trapper on Prince of Wales Island who sits on the Federal Subsistence Regional Advisory Council was succinct: "This roller-coaster ride of population estimates has really upset a lot of people, including myself….Somebody ought to admit there's some shortcomings somewhere."[1]

Let's examine this "roller-coaster ride" he references, starting in regulatory year 2013[2], to illustrate why the population estimates for wolves in Unit 2 are questionable:

- In 2013, after 26% of the estimated wolf population was harvested, the population *declined* 60% (unlikely).
- In 2014, after 34% of the estimated Unit 2 wolf population was harvested, the population *increased* 21% (unlikely).
- In 2015, after 6% of the estimated wolf population was harvested, the population *increased* 114% (impossible).
- In 2016, after 13% of the estimated wolf population was harvested, the population *decreased* 3% (possible).
- In 2017, after 27% of the estimated wolf population was harvested, the population *decreased* 24% (unlikely).
- In 2018, after 25% of the estimated population was harvested, the population *increased* 76% (highly unlikely).

- In 2019, after 52% of the estimated population was harvested, the population *increased* 23% (impossible).

The numbers simply do not align. A barely sustainable 26% harvest in 2013 caused wolves to *decrease* 60%, while the same percentage harvest in 2018 supposedly caused wolf numbers to *increase* 86%. A population more than doubling in a single year (2015-2016) is impossible. A harvest of 52% in one year causing wolf numbers to increase 23% the next is impossible.

Year after year, the department reports the new numbers, absent critical thought as to their believability. Their desire to show wolf population increases, and "fight off" a possible listing by the U.S. Fish and Wildlife Service reflects the department's mindset, and a lack of objectivity.[3]

Why these estimates might be wrong is not for the Alaska Wildlife Alliance, or the Board of Game to determine. Any number of assumptions in the SECR methodology may have been violated, and those violations may differ year to year. But what the Board of Game *must* do is recognize the inherent unreliability of these population estimates, and err on the side of caution when managing wolves on this basis.

The department has sometimes excused these swings by pointing out that these are the means (i.e., point estimates) and that there are quite broad confidence intervals around those means.

Pointing to poor precision as a positive, and as an excuse for population trends that do not make sense, only underscores the basis for our concerns.

Likewise, it is incorrect to claim, as the department does, that because confidence intervals overlap in consecutive years, the population is stable.[4] Failure to detect a decline does not mean there was no decline…it simply means the data were too variable to detect a decline. Declines of 50% or more can be "not significant" if the underlying data are noisy, and the confidence limits excessively large.

It appears the "goodness" of the population estimates is, in the department's eyes, linked to the value itself. Signs of abundance, or increase, are trustworthy. Signs of scarcity, or decline, are discounted with reference to small sample size, or unrefined methods. Such post-hoc rationalizing damages the department's credibility.

[1] From transcripts of an ADFG meeting with the regional Advisory Committee, held 20 November 2020.

[2] Data on population size and number of wolves harvested are by same regulatory year, as reported in ADF&G memos and reports, available online. The harvest numbers are for legally reported harvest only. They do not include illegal kills or natural mortality. Regulatory year, population size, and reported harvest are as follows: (2013,221,57) (2014,89,30) (2015,108,7) (2016,231,29) (2017,225,61) (2018,187,44) (2019,316,165) (2020,389,68) (2021, ,64)

[3] "And we need to keep that (cooperation) going, because we have a petition we have to fight off. Like I said, this is the time when we really have to work together to avoid a listing decision. Because this petition is more likely than the last one to end up in a listing decision, just because of how it's structured." *(quote from ADF&G Region 1 supervisor, at a 20 November 2020 meeting with the Southeast Regional Advisory Committee).*

[4] "The fall 2019 and fall 2020 population estimates are statistically indistinguishable suggesting that the Unit 2 wolf population is stable." From: *6 Dec 2021 ADFG memo on Unit 2 Wolf Population update, fall 2020.*

PROPOSED BY: Alaska Wildlife Alliance (HQ-F22-025)

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