PROPOSAL 35B -5 AAC 92.125. Intensive management plan. Authorizes an intensive management plan for moose in Unit 15A

(x) **Unit 15A Wolf Predation Control Area.** Notwithstanding any other provisions in this title, and based on the following information contained in this section, the commissioner or the commissioner's designee may conduct a wolf population reduction or wolf population regulation program in Unit 15(A):

1) the Unit 15A Predation Control Area is established and consists of all lands within Unit 15(A) (1314 square miles), non federal lands are approximately 83 square miles;

2) the Intensive Management population and harvest objectives for moose in Unit 15(A) are 3000–3500 and 180–350, respectively; the sustained yield of moose is currently below objectives; the goal is to reduce calf and adult mortality for reallocation of moose from wolves to harvest; a November 2011 survey estimated 60-62 wolves in Unit 15(A); wolf control objectives are to remove wolves from the population through trapping, hunting, and wolf control activities and retain at least 15 wolves in Unit 15A; wolf surveys will be conducted as necessary to ensure that the population contains at least 15 wolves;

3) the discussion of wildlife populations and human use information is as follows:
   a) the moose population and harvest information in Unit 15(A) is as follows:
      i) the moose population size was estimated in 2008 at 2088 moose (95% confidence interval=264);The moose population is below intensive management objectives.
      ii) the average yearly harvest during the past decade (2001-2010) has been 140 moose; this is a lower harvest compared to the previous decade (1991-2000) where the average yearly harvest was 194 moose; the entire area is a non-subsistence use area so there is no Amount Reasonably Necessary for Subsistence Use (5AAC 99.025 (8)) for 15A;

   b) declining habitat quality is the main limiting factor affecting low moose densities in Unit 15(A); there has not been a fire of significant size in the unit for over 40 years; studies from 1987-1992 showed 96% of cows aged 2-15 were pregnant whereas 73% of cows in the same age group were pregnant in 2006; twinning rates calculated in 1983 in an area that burned in 1969 showed a 72% twinning rate whereas twinning rates calculated in the unit for 2011 were at 16%; the moose population appeared to be at or above carrying capacity in the early 1990s and declined at a rate of 9% per year during the 1990s; research on calf mortality in the late 1970s in the unit showed 48% of calves dying from predation, 6% was caused by wolves, 6% was caused by brown bears, 34% was caused by black bears, and 2% undetermined predation from wolves or bears; while habitat is limiting, wolf predation has been shown to limit calf and adult moose survival in the unit; predation rates by these three primary predators may have changed due to changes in prey availability however, all three predator species are still relatively abundant in the unit; over the last decade highway vehicle collisions (41% cows, 51% calves, average 85 per year) represented approximately 38% of human caused mortality of moose in the unit;

c) with limited habitat this action is not intended to make significant progress toward the IM population objective, rather reducing predation will allow for possible reallocation of moose from predators to harvest; the program will initially focus on wolves due to potential effectiveness of aerial wolf control; additional black bear take will be considered if additional improvements in calf survival and recruitment are needed to meet harvest objectives; ;

d) the wolf harvest over the past decade in Unit 15(A) has ranged between 4–16 wolves taken each year with a mean of 11 wolves; the pre-winter wolf population was estimated at 60–62 wolves in November 2011; the harvest has been inadequate to reduce wolf numbers considering yearly growth; assuming a pre-winter population of 60-62 wolves, the wolf harvest would likely need to be 45-47 wolves from all methods (trapping, hunting, and wolf control) to reduce the wolf population and result in a reduction in predation rates on moose; the hunting season and bag limit for wolves has remained unchanged since 1989 but the bag limit on the Kenai National Wildlife Refuge, which was limited to 2 wolves per year on the refuge, was liberalized to 5 wolves per year in 2011; the trapping season and bag limits have been the same since 1997, additional active management methods are necessary to reduce the wolf population;

e) roughly 79% of Unit 15(A) is Federal land, 18% is private land, and 3% is state/borough land; wolf control will be initiated pending authorization by land managers/owners;

4) the authorized methods and means used to take wolves include: hunting and trapping of wolves by the public in Unit 15(A) during the term of the management program as provided in the hunting and trapping regulations; the commissioner may issue public aerial shooting permits, public land and shoot permits, or allow agents of the state, or department employees to conduct aerial, land and shoot, or ground-based shooting as a method of wolf removal under AS 16.05.783, including the use of any type of aircraft; prey harvest may include bull-only harvests with variable combinations of antler restrictions, any-bull hunts, and/or antlerless harvest;

a) Factors described in Section 3 and other considerations unique to the situation indicate that aerial shooting of wolves by members of the public under permit is the desired option to reduce predation in the management area described in Section 1 to a level sufficient to improve survival of moose and the potential for population growth.

b) Based on measured response of biological parameters additional airborne shooting of wolves by the Department may be necessary to reach the upper levels of intensive management objectives for harvest,

5) the anticipated time frame, schedule for update and reevaluation and conditions for termination of the plan are as follows:

a) this plan is for 5 years (January 2012–June 30, 2017) unless renewed;

b) annually the department shall, to the extent practicable, provide to the board a report of program activities conducted during the preceding 12 months, including implementation activities, the status of the moose and wolf populations, and recommendations for changes, if necessary to achieve the objectives of the plan;

c) Predator control activities shall be terminated;

i) when the upper levels of intensive management objectives for the moose population size and harvest are exceeded; or

ii) upon expiration of the period during which the commissioner is authorized to reduce predator numbers in the predator control plan area;

6) the program will be suspended if one of the following conditions are met:
   a) if there is no detectable increase in calf:cow ratios after 3 years of predation control, indicating that there is no significant improvement in calf survival;
   b) if after 3 years, any measure consistent with significant levels of nutritional stress are identified.];
   c) annually if the wolf population falls below 15 wolves at any time estimated from one or more of the following techniques: population survey, population census, modeling, harvest, or pilot and trapper interviews;

PROPOSAL 36B -5 AAC 92.125. Intensive management plans. Authorize an intensive management plan for moose in Unit 15C.

(x) **Unit 15C Wolf Predation Control Area**. Notwithstanding any other provisions in this title, and based on the following information contained in this section, the commissioner or the commissioner's designee may conduct a wolf population reduction or wolf population regulation program in Unit 15(C):

1) the Unit 15C Predation Control Area is established and consists of all lands within Unit 15(C) north of Kachemak Bay including the Fox River Flats (1171 square miles); State and private lands are approximately 865 square miles

2) the Intensive Management population and harvest objectives for moose in Unit 15(C) are 2500–3500 and 200–350, respectively; while the past harvest has been within intensive management objectives, the goal is to reverse the long-term decline of the bull:cow ratio through changes in bull harvest strategy and reduced calf mortality; with improved calf survival, the sustained yield would be within harvest objectives; three major predators, brown bears, black bears and wolves occur in the unit; reducing wolves will be the initial focus; with the wolf population likely numbering between 44-52 wolves, wolf control objectives will be to remove wolves from the population through trapping, hunting, and wolf control activities but retain at least 15 wolves; wolf surveys will be conducted to determine the current wolf population size and the level of take that will ensure the minimum population objective is met;

3) the discussion of wildlife populations and human use information is as follows:
   a) the moose population and harvest information in Unit 15(C) is as follows:
      i) the moose population size was estimated in 2010 at 2919 moose (95% confidence interval=277) ; the moose population is currently within intensive management objectives for population size;
      ii) to address low bull cow ratios the board reduced the bag limit for moose and the preliminary 2011 harvest is 29 cows and only 12 bulls; the average yearly harvest during the past decade (2001-2010) has been 275 moose; compared to the average yearly harvest of 260 moose the previous decade (1991-2000); the harvest has been within intensive management objectives and generally higher than harvest from the 1980s but harvest restrictions adopted by the board in 2011 will reduce the harvest below intensive management objectives in 2011 and in 2012; the proposed intensive management area is a non subsistence area ante there is no Amount Reasonably Necessary for Subsistence Use (5AAC 99.025 (8))

   b) the moose population in 2011 showed a 30% twinning rate and does not appear greatly limited by habitat; fall surveys in 2011 showed 21 calves:100 cows; assuming a standard calving rate of 80% with 30% twins, spring 2011 calf production may have yielded 104 calves:100 cows with 83 calves:100 cows assumed lost from approximately June to November likely due to predation; over the last decade highway vehicle collisions

averaged 63 per year (41% cows, 51% calves,) which represented approximately 21% of human caused mortality of moose in the unit;

c) a reduction of predation can reasonably be expected to aid in meeting the intensive management harvest objectives at a higher level than has previously been achieved through both bull and antlerless harvest;

d) the wolf harvest over the past decade in Unit 15(C) has ranged between 10–21 wolves taken each year with a mean of 14 wolves; the wolf population in Unit 15(C) was surveyed in 2011 and is likely stable between 44-52 wolves; the hunting season and bag limit for wolves has remained unchanged since 1989 except for the bag limit on the Kenai National Wildlife Refuge which was increased from 2 wolves per year to 5 wolves per year in 2011; the trapping season and bag limits have been the same since 1997; additional active management methods are necessary to reduce the wolf population to the desired objective;

e) roughly 25% of the portion of Unit 15(C) described in (1) is national wildlife refuge, 40% is private land, and 35% is state/borough land; wolf control will be initiated pending authorization by land managers or private land owners; and

f) current moose harvest levels are well below Intensive Management objectives, future harvests are expected to remain below objectives without a combination of solutions including wolf predation control and/or changes to moose harvest strategies;

4) the authorized methods and means used to take wolves include: hunting and trapping of wolves by the public in Unit 15(C) during the term of the management program as provided in the hunting and trapping regulations; the commissioner may issue public aerial shooting permits, public land and shoot permits, or allow agents of the state, or department employees to conduct aerial, land and shoot, or ground-based shooting as a method of wolf removal under AS 16.05.783, including the use of any type of aircraft; prey harvest may include bull-only harvests with variable combinations of antler restrictions, any-bull hunts, and/or antlerless harvest;

   a) Factors described in Section 3 and other considerations unique to the situation indicate that aerial shooting of wolves by members of the public under permit is the desired option to reduce predation in the management area described in Section 1 to a level sufficient to improve survival of moose and the potential for population growth.

   b) Based on measured response of biological parameters additional airborne shooting of wolves by the Department may be necessary to reach the upper levels of intensive management objectives for harvest,

5) the anticipated time frame, schedule for update and reevaluation and conditions for termination of the plan are as follows:

   a) this plan is for 5 years (January 2012–June 30, 2017) unless renewed;

   b) annually the department shall, to the extent practicable, provide to the board a report of program activities conducted during the preceding 12 months, including implementation activities, the status of the moose and wolf populations, and recommendations for changes, if necessary to achieve the objectives of the plan;

   c) predator control activities shall be terminated;

      i) when the upper levels of intensive management objectives for the moose population size and harvest are exceeded; or

ii) upon expiration of the period during which the commissioner is authorized to reduce predator numbers in the predator control plan area;

6) the program will be reviewed and suspended if one of the following conditions are met:
   a) if the moose population exceeds 3.0 moose per square mile;
   b) if after 3 years, any measure consistent with significant levels of nutritional stress are identified
   c) annually if the wolf population falls below 15 wolves at any time as estimated from one or more of the following techniques: population survey, population census, modeling, harvest, or pilot and trapper interviews;

RC3

Effect of the proposal:

- **Seeks to remove the reference to Federal Fish and wildlife agent within 5 AAC 92.135 (c)**

- **5AAC 92.135 (c) states:**

A person giving, shipping or receiving game or parts of game shall allow inspection of that game or parts of game upon request from a peace officer of the state or a federal fish and wildlife agent.

Rationale:

- **Alaska Wildlife Troopers are responsible for wildlife and fisheries enforcement statewide. Some logistical challenges include:**
  - **586,412 square miles**
  - **Mountains, Glaciers, Forests, Ocean etc..**
  - **More than 3,000 rivers and 3 million lakes**
  - **More than 6,600 miles of coast line**
  - **Weather conditions make it difficult to simply "get there"**
  - **Manpower; 97 commissioned Wildlife Troopers statewide**

Understanding how it all works

- The Department of Public Safety operates under the direction of a Commissioner appointed by the Governor.

- The Commissioner of Public Safety is given authority through his position to grant commissions to federal and state police agencies.

- These commissions are granted on a need only basis and each agency and it's officers apply to the commissioner of Public Safety when they wish to have a special commission.

How it works Continued…

- When granted, each commission gives specific authority to a federal police officer to enforce selected state statutes and regulations.

- Some commissions are broad (Title 16 and 5 AAC), while others are narrow (Specific area of the state and specific state laws)

- Once the commission is implemented, that federal officer has the authority to enforce state law through the special commission.

Regulation change

- If the board chooses to remove the reference to "federal fish and wildlife agent" from 5 AAC 92.135 (c), it will not make any difference in the authority of agents granted commissions.

- Since the authority to enforce this regulation is granted through the Commissioner of Department of Public Safety, the Board of Game cannot dictate when that authority is given or removed.

AWT's partners in Wildlife Enforcement

- **Alaska Wildlife Troopers sometimes struggle to enforce existing laws statewide.**
- **Our federal law enforcement partners provide additional assistance in enforcing state law.**
- **Wildlife Troopers and federal wildlife agents work together on a regular basis to remove habitual wildlife violators and commercial operators from Alaska.**
- **Wildlife Troopers routinely work with United States Fish and Wildlife Service as well as BLM, USFS, NOAA office of LEO, US Park Service and many other state and federal partners in wildlife enforcement.**

What will happen if this is removed?

- **If this is removed from regulation, there will be no change in enforcement authority.**

- **<u>The public will be more confused as to the enforcement authority of federal agents</u>.**

- **US Fish and Wildlife agents will continue to have federal authority granted through their job as well as the authority granted through the Department of Public Safety.**

Proposal 113

- **AWT recommends <u>DO NOT ADOPT</u>**

RC 57

DECEMBER 27, 2011

2012 BOG Statewide Dall sheep proposal comments—Wayne E. Heimer, Dall sheep biologist

OVERALL RECOMMENDATION: I recommend the Board reject Dall sheep season length and nonresident restriction proposals #78-#91.

There are three types of proposals. Proposal #91 (which proposes to disadvantage residents and their relatives) is unique among these proposals, and represents guide's special interest

The second set of proposals (#80, #82, #87, #88, #89, #90) suggests limiting nonresident hunting opportunity. These proposals are based on an alleged legal ram/opportunity crisis. These allegations are anecdotal in nature, and are unsupported by any objective data. Recent analysis of reported harvest age structure data and hunter effort patterns for the last 20 years indicate there is no demonstrable legal ram availability or opportunity limitation problem which can be solved by the approaches suggested in these proposals.

I reason that IF no biological or harvest scarcity actually exists, the proposals are contrary to constitutionally established policies and Alaska Statutes governing allocation of the state's resources. I suggest the Board of Game seek rigorous legal review of these proposals in this context and consider the longer term future of sheep management before acting.

The remaining proposals, (#78, #79, #81, #83, #84, #85, and #86) are to confer an additional perceived advantage on resident hunters. Based on the independent harvest data analyses detailed below, these "additional resident advantage" proposals appear to be "resource-neutral. IF these proposals are "resource-neutral," the issue may be seen as simple allocation of a harvestable surplus. However, the issues raised are not simple. If there is no definable resource or opportunity shortage, the proposals will change all of sheep management based on alleged (but undocumented) public "will." As structured, the proposals will also establish a *de facto* Tier I hunt for full-curl Dall rams outside of the normal limited-opportunity subsistence context. If the harvestable surplus of full-curl rams is not being taken at present, and because there is no constitutional or legislative mandate for resident preference, restricting use of any kind will be unnecessary. Alaska Constitution Article VIII Section 1. sets the policy of the state as making resources available for maximum use.

If there were an Alaskan Statute mandating "residents first" beyond less costly licenses, it might be reasonable to make an arbitrary allocation (whether cosmetic or functional) for resident hunters. However, I know of no such statute relating to full-curl Dall rams. Hence, I suggest the Board of Game solicit a rigorous review of whether such a mandate exists before accepting these populist proposals to limit participation and harvest by nonresidents and provide the impression of additional advantage for resident hunters.

Certainly, the relationship of resident hunters to nonresident hunters (and their required guides) has always been strained. However, the present heightening of this tension by these statewide proposals (all of which seem to have arisen from the Interior Region) makes this proposed "resident benefit" seem a suspiciously simple solution to a multifaceted problem which is not clearly defined. Below I offer a comprehensive review.

INTRODUCTION AND HISTORY

For 20 years, Alaska's regulated Dall ram harvest management system has limited harvest to full-curl, double-broomed, or eight-year-old rams to safely maximize hunting opportunities and harvests in accordance with constitutional and statutory mandates. These changes from earlier harvest strategies were driven by coincidence of discoveries in sheep biology with federal actions that reduced (by 25%) the number of Dall sheep available for hunting. When Alaska's full-curl regulation was implemented, managers required hunters report the age of each harvested ram. Nobody paid much attention to sheep harvest management for the next two decades, during which Dall sheep populations declined across most of Alaska. These population declines were apparently due to difficult weather and increased predation. Decreased hunter interest and participation followed the declines in Dall sheep population sizes.

Nevertheless, activist resident Dall ram hunters long for a return of "the good old days" when there were more sheep, fewer guides, sheep hunting was spread over a wider area, and there was less anxiety over shooting an illegal ram. In spite of consistently high overall hunting success among resident hunters, this longing, coupled with the natural human inclination to instinctively explain "effect" by intuitively assuming "comfortable cause," has lead to the wide-spread notion that "*Dall ram hunting is in crisis.*" This canard's corollary is that "*We're killing all the old rams.*" By further extension, some resident hunters argue that "*Nonresidents* (who, by law, must have a guide*) are killing all the old rams, and should be restricted to favor us.*"

THE ISSUE TO BE ADDRESSED

For the 2012 regulatory cycle, there are 13 different statewide proposals (one of the 14, #91 is atypical) authored by eight different Alaskans before the Board of Game to limit nonresident hunting or provide an additional perceived advantage for Alaska residents (APPENDIX A). These proposals place Dall sheep management in Alaska at a critical juncture.

If accepted, either set of these proposals will radically change Dall sheep management for the foreseeable future. These proposals have in common the intuitively presumed problem that "*We're killing all the old rams*," and/or "*Guides and nonresidents are killing all (or too many) of the old rams, and should be restricted to favor residents.*" An objective test of this inferred problem's actual existence (beyond the anecdotal allegations of frustrated resident hunters who have "instinctively hated" guides for decades) was not available till quite recently.

Two new and innovative analyses of harvest age-structure data collected over the last 20 years contradict the assertions that maximal harvest is being closely approached and that harvest by nonresidents is materially affecting resident hunting opportunity and success. While it is true

that nonresidents have a higher cumulative success rate than residents, residents consistently take home approximately "half-again" as much of the available ram harvest as nonresidents. Nevertheless, the regulatory proposals to solve this alleged but undocumented problem (which were drafted prior to development of the relevant harvest data analysis) remain on the agenda of the Board of Game.

METHODOLOGY

The analytical breakthrough necessary for objectively testing the subjective impressions of hunters proposing radical changes in sheep management was driven by questions raised by the commonly-alleged justifications for the proposals #78-#90. Once developed, these analytical techniques were applied to test the intuitive impressions and justifications alleged for the proposals. The analysis involved use of the harvest age-structures reported by hunters over the last 20 years. It allowed data-testing of these perceptions and subsequent allegations by several means. The first method was comparing legal ram mortality/survival in hunted populations with that in unhunted populations. If we're "*Killing all the legal rams*" the mortality at age eight years will go to 100 percent. At the other extreme, if we're having no effect, the mortality/survival graph over time will look like an unhunted population.

After testing the alleged justifications based on survival of legal rams in unhunted and heavily hunted populations, the percentage of legal rams harvested each year will be estimated from reported age structure data. This process begins with realizing that all rams become age-legal at eight years of age. It builds on the obvious fact that if a ram is killed at any age older than the minimum, eight years, he had to be both legal and alive in the population till he was shot. The other assumption is that rams will be harvestable during a five-year window (between ages eight and 13 years—the number of rams older than 13 years is insignificant). Using these data the percent harvest of the "standing crop" of age-legal rams for any given year can be calculated by dividing the "standing crop" by the reported harvest from any given area in any given year.

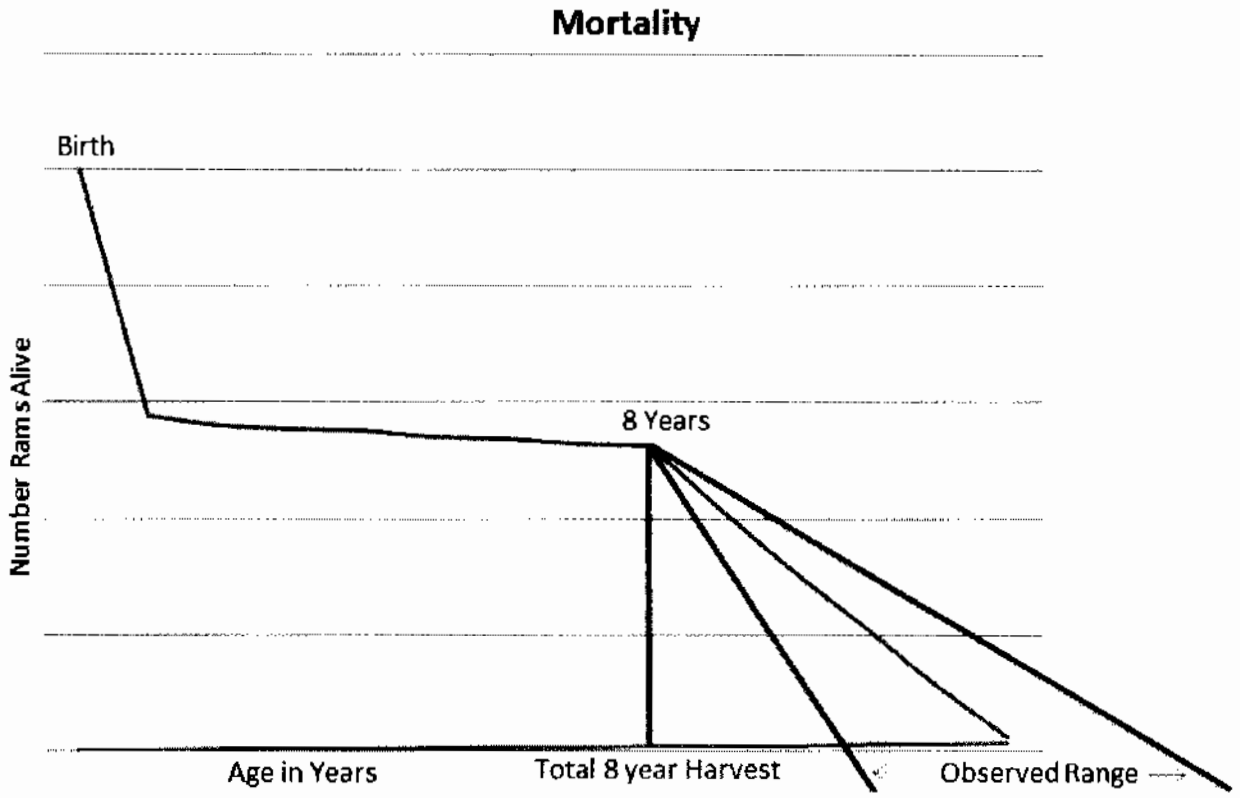
RESULTS

Testing the basic assertion of near-total harvest by ram survival

Knowing the age distribution of the ram harvest allowed testing of the assertion that "*We're killing all the old rams.*" The ages of rams harvested are the key to this method. We have those data from harvest tickets going back 20 years. The ages reported by hunters were more than accurate enough for this analysis.

Dall ram survival in an unhunted population was classically defined by the data gathered by Adolph Murie in McKinley Park in the late 1930s. Based on a sample of about 650 known-aged at death rams (determined by counting horn annuli on the "pick ups"), a "life table" was made with the percentage remaining alive each year from birth (100% alive) to death at age 12 years (all dead). The pattern was a 40% mortality between birth and age one-year. Then mortality was low from yearling age through age eight years. At eight years, the mortality increased dramatically. Represented stylistically, the data from an unhunted population look like the

lighter gray line on the following graph. I did not include units because the shape of the graph is the important thing here.



If we were killing all the rams as they become legal at age eight years, the mortality at eight years would suddenly become 100 percent at age eight. That means the graph would show no rams surviving past legal age. This would produce the result depicted above as the heavier gray vertical line from "8 years" straight down to "Total 8 year harvest." The actual data showed no indication that the harvest from any Game Management Unit even approached matching that plot. Hence, we should reject the notion that "*We're killing all the legal rams.*" That was an obvious overstatement.

When the data accumulated over the last 20 years were analyzed, converted to "life tables" and then plotted as "mortality/survivor curves" for each five-year period, there was virtually no variation from five-year period to five-year period. Consequently, I constructed a composite survival line from the data for each Game Management Unit over the last 20 years. The extreme range of these survival/mortality curves is depicted by the two black ("Observed Range") lines slanting down from "8 Years" to below the bottom of the graph above. The steeper line (the one closest to the perpendicular "total harvest" line) represents the 20 year average from GMU 13A, the Talkeetna Mountains north of the Glenn Highway. The "flattest" line (which falls above the gray "Murie line") is from the northeastern Brooks Range averaged over the last 20 years.

The "Observed Range" lines represent the extremes of ram survival inferred from "open harvest" areas from the last 20 years of harvest data. Neither line approaches the perpendicular, so we must reject the allegation that "*We're killing all the legal rams.*"

> A biological note: Several factors affect the slope of survival curves after rams reach eight years of age. These include hunting, predation, weather, forage, and perhaps other environmental components of environmental resistance to ram population growth. These factors may vary over time for each sheep population, and there is no reason to assume that environmental resistance averaged over the last 20 years in the southern Talkeetna Mountains or northeastern Brooks Range should exactly match that operating in McKinley Park in the late 1930s. The best we can say is that this analysis of harvest age structure reflects average survival in each area, and all of the legal ram survival data contradict the presumption of hunter-harvest-driven maximal harvest which is the central justification for these proposals.

Calculating percent harvest from age structure:

If we know the total harvest from any given area where we have the required age-structure data, we can calculate the percent harvest from the minimum number of rams which had to have been alive after becoming age-legal at eight years (because we killed them later).

If it were true that "*We're killing all, or most, of the available legal rams,*" this harvest percentage should approach 100%. If the method is acceptable and calculations are correctly done, and the harvest percentage does not approach 100%, the assertion of maximal harvest rate must be rejected.

The calculated minimum harvest rates indicate the assertion that "*We're killing all the legal rams*" must be rejected. Ram harvest rates during the first 15 years of the 20-year full-curl harvest period have ranged from 40% to 60% (with the statewide average being about 50%) of the minimum number of age-legal rams known to have been present. Actual percent harvests cannot be accurately calculated for the most recent four years because of the assumed five-year harvest window (from age eight to age 13 years). Still, the reported age structures from these more recent four years suggest no changes from the previous 15 years. There are no data from calculated percent harvests which support the allegation that "*We're killing all the legal rams.*"

This finding is consistent with the inference from the survival plot method of analysis above.

> A note on horn length: Average horn size could be used similarly, but would not allow quantitative estimation of harvest rate. If all the older rams were being harvested, the reported horn size would approach the legal minimal length. However, there is considerable variability associated with mean horn size measurements because the diameter of curl is quite variable within any given sheep population. The average variability in minimum full-curl horn length for any sheep harvest area is not known. Still, if mean horn size has not decreased to

the minimum or variability in horn length doesn't narrow over time, the assertion must be rejected. Using the reported ram age structure is a better tool because it allows definition of minimal harvest rate and is less influenced by variability in horn sizes from population to population.

Are nonresidents harvesting older rams than residents?

The data indicate the allegation, "*Nonresidents are killing all the big rams,*" must also be rejected. The reported ram age distributions among both residents and nonresidents are identical, and have been remarkably consistent over the last 20 years. Nonresidents do not kill older rams than residents, and haven't for the last 20 years.

Does hunting earlier increase chances for harvesting older rams?

The data say, "No." Age distributions from 10-day grouped quarters of Alaska's 42-day season show no age-structure variance within themselves over the course of the season. Hence, data collected over the last 20 years show no suggestion that hunting earlier in the season leads to killing older rams.

What about hunting patterns?

Nothing has changed with respect to hunter effort or pattern-of-effort over the last 20 years. There has been no identifiable change in *per capita* days spent hunting for successful or unsuccessful hunters over the last 20 years regardless of residency.

DATA SUMMARY:

It is widely acknowledged (and supported by trend counts) that there are fewer sheep today than 20 years ago. Even though we still have the same "open hunting" policy we have had for the last 20 years, the relative age-distribution/survival plot among Alaska's harvested ram populations generally matches that typically expected in an unhunted Dall sheep population. The inference here is that hunting, as practiced during the last 20years, has not significantly affected the survival rate or age distribution of age-legal full-curl rams.

Similarly, in spite of the anecdotal impressions of some residents, inferences from the data on age structure among harvested rams indicate that harvests are about half of the biological surplus of full-curl rams.

Resident success still hovers around 30, the traditional success rate for residents. Resident hunter effort has not changed over the last 20 years. The number of resident hunters has declined along with sbeep populations, but the number of nonresident hunters has remained relatively stable. Having a guide does increase sheep hunting success. However, there is no apparent advantage associated with having a guide when it comes to taking an older ram. Also, having an earlier hunt seems to convey no advantage in killing older/larger rams. Blaming nonresident hunters for a problem which cannot be defined is not rationally allowable.

DISCUSSION

DATA ISSUES: The alleged problem apparently does not actually exist.

The available data contain no indication of overharvest of full-curl rams, and suggest we're taking about half of what is available each year. Hence, there is no rational argument that we have a harvestable-resource crisis. Similarly, there is no evidence for an "opportunity crisis." The sheep season is 42 days long. Half of the harvest occurs during the first 10 days of the season. The mountains are relatively "lonely" during the latter half of the 42-day season.

The data apparently belie much of the lore and mystique associated with presumed ram availability and the size/age advantages assumed for nonresident (guided) hunters. The data also bring the presumption of hunter selectivity for more mature rams into question. There is no evidence to support the anecdotal claim that overhunting (by either residents or nonresidents) is severe enough to demand a statewide remedy.

The data seem to preclude both resource and opportunity-driven justifications for limiting nonresidents to favor resident hunters. Similarly, the data apparently falsify past allegations of genetic disruption due to hunter harvest impacts on ram abundance or ram social biology. If the relatively low harvest rates (~50%) are accurate, restrictions on nonresident participation in an earlier resident season will likely be more cosmetic than inherently management-effective in increasing the quality or quantity of the resident hunter experience.

Furthermore, if there is no biological problem or demonstrably opportunity-driven allocation disparity, the proposed restriction of nonresident hunters may logically fall into a "forbidden zone" with respect to Alaska Constitutional directives and the Alaska Statutes.

LEGAL ISSUES

Give the absence of a demonstrable conservation or opportunity-driven problem, acceptance and codification of these proposals appears to be prohibited by the Alaska Constitution.

What does the Alaska Constitution say?

Article VIII (Natural Resources) Section 1. ***Statement of Policy*** says:

> *It is the policy of the State to encourage the settlement of its land and the development of its resources by making them available for maximum use consistent with the public interest.*

Argument: Dall sheep are clearly an Alaska state resource. Consequently, the state's policy as set forth in Alaska's Constitution, is to make Dall sheep available for *maximum use consistent with the public interest*. Restricting use of Dall sheep by nonresident hunters may or may not be in the "public interest." However, unnecessarily limiting nonresident participation in Dall sheep hunting cannot be consistent with the constitutional policy of making the state's Dall sheep

resource available for *maximum* use. If it is true that harvests of age-legal rams have averaged about half of what is available for two decades, any further restriction on harvest opportunity cannot be consistent with the Alaska Constitution's Statement of Policy regarding Alaska's natural resources.

Additionally, restriction for non-biological purposes is out of line with Article VIII Sec. 2 of the Alaska Constitution.

Article VIII Section 2 says:

> *The legislature shall provide for utilization, development, and conservation of all natural resources belonging to the state including land and waters, for the maximum benefit of its people.*

Argument: It seems unlikely that the phrase, *the maximum benefit of its people,* refers only to resident sheep hunters. Certainly, those Alaskans involved in supporting the nonresident sheep hunting industry will suffer unnecessarily reduced (non maximal) benefits if nonresident Dall sheep hunters are unnecessarily excluded or limited.

Alaska's Constitution Article VIII Section 3 says:

> *Wherever occurring in their natural state, fish, wildlife, and waters are reserved to the people for common use.*

Argument: The 3rd Edition of ALASKA'S CONSTITUTION: A CITIZEN'S GUIDE, comments on this section by stating the following:

> This section, together with Sections 15 and 17, emphatically prohibits the state from granting to any person or group privileged or monopolistic access to a natural resource. This "anti-monopoly purpose" of the section, the Alaska Supreme Court has said, "was achieved by constitutionalizing common law principles imposing on the state a public trust duty with regard to the management of fish, wildlife and waters" (Owsichek v. State, 763 P.2d 499, 1988). While it prohibits special privileges, the constitution also recognizes that proper resource management may require restricting the harvest of resources and establishing "preferences among beneficial uses" (Section 4). As a consequence, the courts have frequently been called upon to decide if a restrictive harvest regulation is a legitimate exercise of the power of the state to manage for conservation goals and set priorities among users, or creates a special privilege that violates the intent of this and other equal protection clauses of the constitution. . . .

If the harvest data reviewed above are accurate, there is no necessity for restricting nonresident participation to achieve "proper resource management."

Alaska's Constitution Article VIII Section 4. Sustained Yield says:

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.

Argument: Alaska's present sheep harvest regulations (a 42-day resident season for biologically surplus full-curl rams, requiring minimal investment in license to participate) are consistent with providing the opportunity for maximum harvest on the sustained yield principle. If, as the harvest data suggest, we are (with all this opportunity) still harvesting only about half of what is conservatively considered the harvestable surplus, it is difficult to rationalize how further restriction of nonresident hunting can be consistent with the maximal ("imported" here, by me, from Article VIII Sections 1, and 2) sustained yield principle mandated in Article VIII Section 4.

With respect to "preferences among beneficial uses," I raise the question, "Did the Legislature define guided nonresident hunting for Dall sheep as a "preferential use" when it passed the "Guide Law?" (See A final question about Alaska's "Guide Law?" later in this review.)

What about other Alaska Statutes?

I suggest the statutory obligations of the Commissioner of Fish and Game argue against acceptance of these proposals in the absence of a legal mandate, a biological conservation crisis, or a lack of opportunity to harvest. If there is no biological conservation or opportunity crisis, the issue of a legal mandate remains. If there is a legal mandate to provide preference for Alaska residents, it about has to be the Alaska subsistence law.

Dall sheep, Tier I resident preference, and the Alaska Subsistence Law?

The facts, that typical full-curl Dall ram hunting is difficult to qualify as a subsistence use under the state's eight criteria, that there is no apparent shortage of full-curl rams (because we only harvest about half of what's minimally available), and that there is no shortage of "opportunity"(since the entire season is not fully utilized) make arguing that full-curl Dall ram harvests should be restricted to residents only for a specific statewide period to provide preference for Alaska residents difficult. If the full-curl Dall rams in question live in a designated non-subsistence area, can the argument that Alaskans need/deserve an exclusive open season be sustained under the state's subsistence law?

It may be argued that residents deserve a preference because Dall sheep are "game." The legislature has recognized subsistence as the highest priority use of fish and game, and all Alaska residents are legally-recognized subsistence users under Alaska law. Furthermore, the Alaska Board of Game has made occasional "customary and traditional" use findings for Dall sheep in federal subsistence areas. Hence, one may argue that residents have an already-established priority. If this argument is to prevail in the contexts of "residents only" subsistence use harvests (the existing situation where Alaska excludes nonresident sheep hunters) it seems a "customary and traditional" finding for full-curl Dall rams will have to be expanded to any or all areas where residents may be excluded by regulation. I don't consider this a strong argument for an exclusive resident season.

Alaska Hunting Regulations #52 (for 2011-2012) limit special resident-only seasons for Dall sheep to specific, localized areas in the Brooks Range. These are areas under "dual management" where the State of Alaska has accommodated uniquely existing traditional uses of Dall sheep. These "resident-only" state seasons are basically equivalent to the "federally-recognized rural subsistence user preference" on the federal lands. That is, these "residents only" hunts look exactly like subsistence hunts for Dall sheep (whether state or federal), and bag limits in these hunts are not restricted to full-curl rams.

Proposals (#78, #79, #81, #83, #84, #85, and #86) provide for establishment of an effective statewide "resident's only" season (via an earlier opening which excludes nonresidents). The effect of these proposals, if implemented, would seem analogous to the state-recognized subsistence seasons for Dall sheep on federal lands. This raises the question:

Can the Board of Game establish what looks for all the world like a Tier I subsistence hunt for full-curl rams statewide without finding there is insufficient harvestable surplus to allow open hunting, or making a statewide customary and traditional use finding for full-curl Dall rams—which could only take place on designated "subsistence areas?" I suggest this question should be properly addressed before action is taken on this subset (proposals #78, #79, #81, #83, #84, #85, and #86) of the total proposal package.

What about the Intensive Management Law?

The other legal mandate which may be relevant to some sort of resident preference could be the Intensive Management Law. Dall sheep were specifically excluded by the drafters of the Intensive Management Law. It cannot be used to justify resident-only seasons.

What about Alaska Statutes 16.05.010 and .020?

Alaska Statute 16.05.010 designates the Commissioner of Fish and Game as the principle executive officer of the Department. That is, the Commissioner is the official manager of Alaska's Fish and Game. How the commissioner is to manage is prescribed in the next section of AS 16.05.

Alaska Statute 16.05.020 defines the functions of the commissioner. It says: *The commissioner shall:*

> *(2) manage, protect, maintain, improve, and extend the . . . game . . . resources of the state in the interest of the economy and general well-being of the state.*

The economic value of Dall ram hunting: our present situation: A general estimate of the annual revenue which accrues to Alaska from Dall ram hunting is approximately $17 million (present day value extrapolated from studies in 1983 and 1994) annually from the harvest of less than 1,000 rams. A conservative estimate of the contribution nonresident Dall ram hunters make to Alaska's general economy is in the neighborhood of $10 million annually (excluding the approximately $1.4 million which comes into the Fish and Game Fund from nonresident hunters

via the Pittman-Robertson matching fund mechanism). Losses in benefits to the Alaska economy should be expected to be proportional to the amount of restriction imposed on nonresident hunters.

Argument: Within AS.16.05.020 itself, the definition of "general well-being" may be open to some argument. However it seems a logical inference that the "interest of the economy" has to do with generating monetary income from Alaska's Dall sheep resource. I suggest the $11.4 million benefit to Alaska's economy from nonresident hunting for Dall rams represents "the interest of economy of the state." It seems AS 16.05.020 directs the commissioner to maintain this economic benefit unless there is a "sustained yield" or other statutory reason to limit it. For full-curl Dall rams, I've argued that neither exists at this time. A failure to vigorously protect the revenue stream resulting from nonresident hunting would seem inconsistent with one specifically prescribed function of the Commissioner's Office.

Alternate argument: On the other hand, the commissioner is also instructed to manage for the benefit the "general well-being of the state."

If there is no biological or opportunity crisis, legislative mandate, or constitutional policy driving further restrictions on hunting Dall sheep, I argue the benefit of accepting proposals #78-#90 in the interest of the "general well-being of the state" comes down to the emotional satisfaction of an unknown number of frustrated, activist, resident Dall sheep hunters (see SUPPLEMENTARY COMMENT #4). The harvest and hunter-effort patters do not suggest accepting any of these proposals should be expected to produce a major definable benefit to the resident hunter.

If a significant resident-hunter benefit is to occur, it will have to result from increased resident hunter effort. Based on 20 years of past history, I suggest it is unreasonable to anticipate a huge surge in resident hunting effort. If residents do not benefit materially (by increased harvest of older rams), the benefit to the "general well-being" becomes a rather abstract matter of perceived satisfaction among an unknown number of resident hunters. Alaska presently supports about 2,000 resident hunters each year. Hence, if every resident hunter felt fully satisfied with the changes, there would be about 2,000 Alaskans that would feel great about this impression of benefit. However, providing this level of satisfaction would come with apparently underappreciated economic costs.

Estimating costs and benefits of "general well being:"

Estimating the costs and benefits of potential increases in resident hunter satisfaction is challenging. If it took foregoing all of the estimated $11.4 million ($10M from general economy plus $1.4M loss via the Pittman-Robertson mechanism) benefit to the economy from nonresident Dall sheep hunting, the price would be quite (perhaps unacceptably) high for the actual realized benefit.

In the interest of fairness, the perceived benefits of providing an unknown number of frustrated resident hunters with emotional satisfaction would have to be weighed against the human and economic costs represented by the *loss of well-being* to those Alaska residents providing services to nonresident hunters. Obviously, the frustrated resident sheep hunters offering this suite of

proposals have decided their increased well-being is more important than the loss of economic benefit (and well-being) to other Alaskans. Whether the losses to others or the economic and administrative costs were considered by the handful of Alaskans making these proposals is unknown to me.

A final question about Alaska's "Guide Law"

With respect to establishing "preferences among beneficial uses" (Article VIII Section 4), may it be rationally argued that the legislature recognized nonresident hunting as a preferred beneficial use when it passed "the guide law?" I realize the polite justification for requiring a guide for nonresident sheep hunters has always been "safety." However, the Alaskan field experience requirements for an assistant guide to take a client sheep hunting do very little to assure the safety of the nonresident hunter. Given that this is the case, the legislature was either "duped" by the guide industry with the "safety issue," or "enshrined guiding's future" as a matter of practical economics under the guise of safety. If the latter, I suggest it may be argued that nonresident hunting may have been implicitly identified as a "preferred use" which cannot be affected except through remedial legislation. I realize this may not be the strongest argument in this situation, but I think it serves to demonstrate this is not a simple issue which may be satisfactorily addressed by *ad hoc* regulation proposals from what appears to be a coordinated cadre of frustrated Interior Alaska resident hunters.

UNIT SUMMARY:

If the legal ram survival and harvest rate analyses are correct, and the Alaska Constitution Article VIII Sections 1-4 plus Alaska Statutes 16.05 are considered relevant to the context of these proposals, I suggest the proposals to restrict nonresident hunting should he rejected on the grounds that they are constitutionally and statutorily inappropriate. Taking this action should deal with proposals #80, #82, #87, #89, and #90. The additional consideration of whether an apparent Tier I hunt can be simply established for non-subsistence areas seems to suggest additional caution in accepting the special "resident only" season statewide.

I now offer some supplemental comments:

SUPPLEMENTAL COMMENT #1: EXISTING ADVANTAGES ALREADY ENJOYED BY RESIDENTS:

Residents presently enjoy significant advantages over nonresidents.

1. Their hunting license is essentially "free" ($25 for the privilege of harvesting an almost-embarrassing number of big game animals) while nonresidents must pay $85 for a hunting license plus $425 for a tag to harvest a Dall ram. There has been no resident license fee increase for the last 30 years.

1A. When proposal proponents argue Alaska is too "easy" on nonresidents because our fee is relatively low, they fail to recognize the trend established in other states and jurisdictions that nonresidents can't be charged more than about 10 times the fees charged for residents. Under this system, courts would not allow Alaska to charge any more for nonresidents since we already charge them about 510 times as much as we charge a resident.

2. Nonresidents must hire a guide at a mean cost in the neighborhood of $10,000. Residents don't have to have this required expense.

3. Residents enjoy a 42-day open hunting season. Nonresidents are constrained to hunt during the time their guide will take them (typically 10 days). Hence, ten days may be the "practical" nonresident season length. This gives residents a four-fold season-length advantage in opportunity (although the latter season is pretty much "neglected" by the vast majority of resident sheep hunters).

4. Residents may hunt on any open area throughout Alaska. Nonresidents are limited to the area assigned to their guide.

   4A Within those permit-restricted areas where nonresidents are allocated a defined percentage of permits, residents are assured a significant (typically 90%-10%) advantage in the drawings.

5. Residents have the advantage of access to local knowledge of access points and routes plus familiarity with areas which they may hunt repeatedly. Residents also have greater access to local Fish and Game sheep specialists for hunting advice.

6. Residents receive a permanent fund dividend check which, depending on any Alaskan's sheep hunter's priorities, may be used to subsidize a resident sheep hunt.

SUPPLEMENTAL COMMENT #2: WOULD AN EARLY "RESIDENT ONLY" SEASON NEGATIVELY AFFECT THE NONRESIDENT ECONOMIC REVENUE STREAM?

Sheep hunter activities and behaviors have always been heavily driven by oral tradition (i.e. hunting gossip). If this pattern holds, the perceived advantage granted to residents via an early "residents only" season may logically be seen as a disadvantage by potential nonresident hunters. My personal experience with FNAWS/WSF involvement in marketing the GMU 14C special permit over a 10-year span indicates that nonresidents are exquisitely susceptible to "hunting gossip." All it took to drive the auction price of the GMU 14C special permit down from four to six times "normal market value" to "low market value" was for one guide to tell his prospective clients, "There's nothing left there." If nonresidents remain susceptible to gossip, it may be reasonable to anticipate the nonresident sheep hunter will be harder to "sell" on an Alaskan hunt if/because residents have a longer season. This may be particularly relevant considering that

Alaska's competition for the nonresident Dall sheep hunting dollar is "Canada." Canada does not impose many of the obstacles which face nonresidents in Alaska. Lengthening the resident season may place Alaska at a further competitive disadvantage for the nonresident Dall sheep hunting dollar.

SUPPLEMENTAL COMMENT #3: How crowded are sheep hunters and why?

By my rough calculation, there are about 40,000 square miles of sheep habitat in Alaska not counting Denali Nat. Park (which has "never" been open to hunting).

These area estimates, with the possible exception of the Brooks Range, should be pretty reliable, being taken from Table 6 in Heimer and Smith, 1975 where percent glacial cover was the issue and "map area" of sheep habitat and glaciers were hand-measured from USGS topographic maps. However, the issue at that time was estimating percent glacial cover, and there weren't enough glaciers in the Brooks Range to justify analyzing it. To include the Brooks Range, I've roughly estimated the sheep habitat area in the Brooks at around 22,000 square miles (of the Alaska total of 40,000). I estimated the sheep habitat area in the Brooks Range by roughly outlining the known Brooks Range sheep habitat in pencil in my Delorme gazetteer and then estimating the area.

Estimated areas closed to hunting by ANILCA:

300 square miles in Lake Clark Park

1,500 square miles in Wrangell-St. Elias Nat Park

11,000 square miles in Gates of Arctic Nat. Park

Total closed to hunting in National Parks = 12,800 square miles

Areas restricted by state permitting:

764 square miles in Delta Controlled use area (aesthetic hunting goal from 1976)

1,200 square miles in Tok Management Area established in 1974 (trophy hunting goal from 1976)

945 square miles in Chugach State Park (aesthetic hunting goal from 1976 permits established to maintain maximal opportunity in Chugach State Park by Harkness 1982)

1,726 square miles in "new" Chugach permit area (aesthetic goal from 1976 not pursued till 2007 for crowding and experimental "genetic conservation" reasons)

Total restricted by state permit = 11,500 square miles

Calculating the total remaining area for "open hunting"

From the total area of 40,000 square miles, subtract 12,800 square miles for ANILCA losses to hunting leaving **27, 200 square miles for state management of hunting.** Then subtracting another 11,500 square miles (42% of the 27,200 square miles available for state hunting management) from this 27,200 square miles for state-restricted permits. This leaves **15,700 square miles (58% of that area available for state managed hunting)** for "open hunting."

Sheep habitat area per hunter

Presently, there are about 2,500 hunters in the field during sheep season in a typical year. Of these, about 2,000 are residents, and about 500 are nonresidents.

ADF&G presently issues about 500 permits to hunt sheep in restricted areas each year. Most of these go to residents. If none of these 500 permit winners chose to hunt on open areas, this would leave roughly 1,500 residents and 500 nonresidents to hunt on the 15,700 remaining square miles of open huntable sheep habitat. If all these 2,000 hunters took to the field at the same time each hunter would have an average of about eight square miles completely to him/herself. Of course, if only half of these hunters went opening week (a reasonable approximation of the actual situation) each would have about 16 square miles completely to him/herself. If half of the nonresidents don't go during the first 10 days of the season, there would be only 1,750 hunters using 15,700 square miles. In this event, each hunter would have nine square miles to him/herself. One or two more square miles to glass in the alpine isn't really much of an advantage. This may mean the actual benefit to residents of a "residents only early season opening" is less significant than intuitively felt.

Of course, the hunters do not all go at the same time or distribute themselves uniformly over the huntable habitats. They concentrate in time and location as oral tradition suggests their chances of success will be greater.

Resident sheep hunters have always preferred to hunt in the first ten days of the 42 day open season. Half of the resident harvest occurs during the first quarter of the season. Residents already have the option to reduce crowding by hunting later. To date, significant numbers of them simply have not chosen this option. If they believe their chances for success or an old ram decline significantly (the existing oral tradition) they have no incentive to do otherwise. The natural human thing to do is to attempt excluding others to preserve existing behavioral patterns and still find satisfaction.

Naturally, sheep hunters also concentrate themselves at access points. Distribution from those access hubs is a function of individual hunter effort. Statistically, the odds of success or of killing an older ram are essentially uniform throughout the season. I suggest this means Alaska Dall sheep hunters tend to "crowd themselves" through their traditional hunting patterns and strategies. This "self crowding" tendency is heightened by the distribution of access points. There's not much that can be done about the locations of access points.

However, to the extent that "self crowding" is a function of choosing when to hunt, crowding may be alleviated by hunters choosing to alter their traditional patterns. If hunters were aware that they needn't go sheep hunting early in the season to increase their success, they might not have been moved to propose opening the season earlier to disadvantage nonresidents by eliminating a maximum of 500 hunters for that week. In practice the early hunt period might reduce the number of nonresidents in the field by a third (assuming a guide has "three rotations" of hunters per year). If so, about 150 hunters would not be present during the early opening week. However, the guides are typically in camp a week before opening day, and the anticipated reduction in crowding might not be realized. My instincts and experience in the field suggest excluding nonresidents will do little to limit "crowding."

SUMMARY

In the end, 42% of the huntable sheep habitats in Alaska are already permit-restricted. Alaska is still a big place, uniquely blessed with Dall sheep habitat. ADF&G has a variety of management objectives (including "maximum hunting opportunity," "aesthetic hunting conditions," and "trophy management"), but the proposals before the Board at this time seem largely focused on "aesthetic conditions" at the expense of the other Board-approved objectives. This raises the question of how seriously these proposals should be taken. Proponents allege they represent a grass roots groundswell of resident Alaskan sheep hunter preference.

SUPPLEMENTAL COMMENT #4: Do the proposals to further restrict sheep hunting represent a "groundswell" of resident sheep hunter opinion?

It may seem so since there is an unusually large batch (14 statewide proposals) before the Board of Game. Additionally, it has been alleged that "for every sheep hunter making a proposal, there are 100 who feel the same way." (T. Lamal of the Fairbanks Adv. Comm.). In an effort to test the reasonableness of this assertion, I looked into the proposals in more detail. Two originated from interests that could be considered "atypical." One was from a guide, the other was associated with an air taxi operation. Both stood to gain monetarily from their proposals so I dismissed them as atypical. That left seven individuals. Of these, about half were associated with a past failure to achieve the same goals previously rejected by the Alaska Board of Game. If there were "100 like-minded hunters" for each "spontaneous activist" I recognized, there would be 350 passionate supporters of the proposals.

The number of resident sheep hunters in Alaska is probably about 4,000. About 2,000 go hunting in any given year these days, and past ADF&G surveys of sheep hunter habits have shown a fairly consistent pattern where the "average hunter" goes sheep every other year. Hence, 2,000 times 2 = 4,000 hunters.

If there were 350 passionate advocates out of 4,000 hunters the percent calculates to equal about 9% of total hunters.

Another way to gauge public opinion would be to sample the internet forums about these proposals. To get a sense of how this was going, I looked into an Alaska Outdoors Forums "thread" recruiting activists to support these proposals. It was titled "*If you are a sheep hunter, please get involved.*" This is a large "thread" with about 730 "posts" as of Dec. 27. I didn't have time to check every "post" on the "thread," but most were supportive of the proposals. This should not be surprising because the" thread" title solicited support which tended to focused favor on proposal #88.

I sampled the first 200 "posts," and found that they were expressions of just 35 "posters." That averaged 6 "posts" per forum participant. Occasionally, a new individual would join the conversation, and some individuals became inactive as time went along. How many passionate Alaskans did this represent?

I reasoned that if the first 27% (the 200 "posts" I sampled) of the 730 total "posts" were a representative sample, and if the average of six "posts" per individual were typical, dividing the number of "posts" (730) by six posts per individual would give an estimate of the number of Alaskans (presumably internet-savvy sheep hunters) passionate enough to enter the forum conversation on this "thread." The calculation was 730 "posts" divided by 6 "posts" per individual in the "posting population" as of Dec. 27. This gave an estimated population of passionate internet-savvy supporters of about 122 individuals.

Using the same calculation of percentage of the estimated 4,000 Alaskan resident sheep hunters gives a percent representation of about three percent. If I underestimated by 100% the percentage of passionate, internet-savvy sheep hunters favoring these proposals would be six percent of the total sheep hunting population. This is not an overwhelming expression of public sentiment. However, it does seem well-coordinated to create that impression.

SUPPLEMENTAL COMMENT #5: HOW SHOULD WE MAKE SHEEP HUNTING BETTER?

The simple way to make sheep hunting better and reestablish the "good old days," would be to make more sheep. There is one obvious way to do this, predator control for sheep. This is a tough job with an uncertain and delayed yield.

The less obvious way is to "go get more sheep." I suggest that if the effort put into making sheep hunting better were directed toward this end, it would be more productive. Where do we "go get more sheep?" My suggestion is Gates of the Arctic National Park. The feds are 95% sure there are between 6,000 and 11,000 sheep there based on their most recent survey. The feds argue their mandate is to maintain "natural and healthy" populations of sheep in the Park, and this means "no hunting" (except subsistence). Before you "give up to the feds," consider this:

If our last 20 years of "open full-curl hunting" has not altered the heavily hunted populations of Dall sheep throughout the open hunting areas in Alaska (where the creation of Parks has concentrated hunters on non-Park lands for the last 20 years), why should even "open hunting" compromise the Park's mandate for "natural and healthy" populations?

This seems "impossible," but I suggest is the shortest way to make Dall sheep hunting in Alaska better. Fighting over the presumed last rams won't do it.

OVERALL SUMMARY: Alaska has managed Dall sheep hunting simply on an equal footing for all (with exception of the guide requirement for nonresidents) with good success since statehood. The Dall sheep management system shows little sign of being broken. However, the administrative regulation-making process invites attempts to secure advantage from both resident and other economic special interests (e.g. guides and transporters). Alaskans cherish this "open" management system, and I'm not for closing it. However, I am suggesting we look closely at the context in which regulations are proposed and establish their legality prior to Board consideration.

I suggest we not "fix" a functional system to mitigate the misperceptions of resident sheep hunters who seem unfamiliar with the harvest data that show the problem they propose to solve is impossible to document using the best data available.

Before any "game changing" proposals are accepted by the Board of Game, I suggest a comprehensive review of Dall sheep management by the Department would be productive. I would prefer our professional managers be involved as leaders rather than reactionary (or un-reactive) bystanders in a decision of the magnitude represented by the present suite of proposals.

A closing thought: Much of this distress results from the ease with which anyone, including a nonresident, may become a sheep guide. This casual approach to regulating commerce fuels the notion that "There are too many guides." I think there are. If the industry does not police itself, we may expect future attempts at "public policing" such as represented in these proposals. The industry is presently trying to "police itself" via the DNR leasing process. I suggest the Board would be wise to delay action on these proposals pending the outcome of the Guide Area Leasing Program currently under consideration at Alaska DNR. I realize this has been a slow process, but if the system isn't demonstrably "broken" why should we hurry to "fix" it? There are other viable options for approaching the resident/nonresident problem (which has simmered for decades). These options should be considered before taking a draconian step as these proposals recommend. The system isn't broken, and fixing it to satisfy the perceptions of an apparently over-represented but unknown number of frustrated resident hunters seems premature.

APPENDIX A: List of proposals by sponsor with stated intent

#78 by Wayne Valcq to open resident sheep seasons seven days earlier than nonresident seasons
#79 by Wayne Valcq same as #78 but with some language about youth and future hunting
#80 by Wayne Valcq same as #78 and #79 except would require a drawing permit for nonresidents
#81 by Ethan Graham to open resident sheep seasons a week before nonresidents
#82 by Jake Sprankle and James Von Holle to split seasons to open early for residents and close early for nonresidents