

The attached plan, or substantially similar language, will be submitted to the Board of Game at its November, 2011 meeting as Departmental recommendations for substitute language if the Board decides to proceed with adopting proposals 35 and 36, which are listed in the 2011-2012 Proposed Changes to Regulations booklet. The topic of developing intensive management plans for Units 15A and 15C has been under discussion and subjected to public comment several times at recent meetings, and has been again noticed for the November meeting. Final wording for such plans is developed during the meetings, following Departmental input and public comment, and the Department does not normally have the ability to submit its recommendations on proposed final language several weeks in advance of the meetings. However, in order to solicit the best informed public comment on what for many is a very controversial topic, the Department has prepared and is publicizing its suggested substitute language now, well in advance of the meeting, in this particular case. The public is encouraged to study these submissions and provide specific comments to the Board for its consideration of proposals 35 and 36.

PROPOSAL 35 -5 AAC 92.125. Intensive management plan. Approve 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);
- 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 mortality to reverse the long term decline of the bull:cow ratio and increase calf survival; a March 2010 survey estimated 41-45 wolves in Unit 15(A); annual productivity will likely raise the wolf population the fall of 2011 to 55-60 wolves; wolf control objectives are to remove 25-40 wolves from the population through trapping, hunting, and wolf control activities and 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(A) is as follows:
 - i) the moose population size was estimated in 2008 at 2088 moose (95% confidence interval=264); while this estimate is not statistically different from estimates calculated in 1995 or 2001, it does show a 40% statistically significant decline from the 1990 estimate (3432 moose [95% confidence interval=511]);
 - 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 and lower than the harvest during the decade from 1981-1991 where the average yearly harvest was 240 moose; the entire area is a non-subsistence use area so there is no Amount Necessary for Subsistence 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 was thought 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 from predators in the late 1970s in the unit showed 49% 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; each wolf pack over 2 wolves in size took on average 1 moose every 4.7 days in the winter; 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;
 - c) with limited habitat, 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 improvements in calf survival and recruitment are not sufficient to meet objectives; due to the potential effectiveness of aerial wolf control and the logistical constraints for black bear control activities given the land ownership patterns;
 - 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 post-winter wolf population was estimated at 41–45 wolves in March 2010; the harvest has been inadequate to reduce wolf numbers considering yearly growth; additional active management methods are necessary to further reduce the wolf population; assuming a pre-winter population of 55-60 wolves, the wolf harvest would likely need to be over 25 wolves per year from all methods (trapping, hunting, and wolf control) to reduce the annual wolf population growth 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.
 - 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; and
 - f) with current harvest levels well below Intensive Management objectives, any increase in sustainable harvest will benefit Alaska residents;
- 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;

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- 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 most feasible 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 indicating less than sufficient improvement in survival of moose, methods to improve moose survival will include same day airborne shooting of wolves by members of the public under permit, and airborne shooting of wolves by the Department;
- 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–January 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 intensive management objectives for the moose population size and harvest are obtained; 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 there is no detectable difference in calf:cow ratios (e.g., at least 2 standard deviations above the 20-year mean, pre-wolf control) after 3 years of the program, indicating that there is no significant improvement in calf survival;
 - b) when one or more measure of nutritional stress (e.g., pregnancy rates, rump fat, age at first reproduction, short yearling weights, or twinning rates) shows a decline in 3 consecutive years;
 - c) if after 3 years, any measure consistent with significant levels of nutritional stress [e.g., twinning rates less than 20%, adult female (greater than 2 years old) pregnancy rates less than 80%] fails to improve to levels no longer showing significant levels of nutritional stress [e.g., twinning rates greater than or equal to 20%, adult female (greater than 2 years old) pregnancy rates greater than or equal to 80%];
 - d) if the wolf population falls below 15 wolves at any time during the program estimated from one or more of the following techniques: population survey, population census, modeling, harvest, or pilot and trapper interviews;
- 7) Supporting and implementing documentation for this IM Plan are found in the Operational Plan for Intensive Management of Moose in Game Management Unit 15A, 2012-2017; October 2011, and the Feasibility Assessment for Moose in Game Management Unit 15A, 2012-2017; October 2011.