93-10-BOG

BOARD OF GAME

FINDINGS ON UNIT 16(B) MOOSE SEASONS AND BAG LIMITS

March 31, 1993

At its March 15-April 3 meeting,the Board of Game considered proposals to modify Unit 16(B) moose seasons and bag limits. After considering public testimony and staff reports presented by the Department of Fish and Game concerning, among other things, the customary and traditional subsistence uses of moose, the biological status of moose populations, allowable moose harvest levels, and historical harvest patterns in the unit, including seasons and bag limit regulations, numbers and residency of hunters, and numbers of moose harvested, as documented in state harvest records dating back to 1963, the board adopted Proposal 70A. In adopting Proposal 70(A), the board found that moose in Unit 16(B) are customarily and traditionally taken and used for subsistence by Alaska residents, that a portion of the moose population can be harvested consistent with sustained yield, and that the allowable harvest of moose is sufficient to provide an amount reasonably necessary for subsistence uses, and for other uses in portions of the unit. The board adopted regulations that provide a reasonable opportunity for subsistence uses.

Customary and traditional subsistence use of moose in Unit 16(B)

The board readopted a 1986 Board of Game finding that moose in all of Unit 16(B) support customary and traditional subsistence uses. This action followed a review by the board that included 1) regulatory provisions for subsistence uses of moose in portions of Unit 16(B) dating back to 1983, 2) the 1986 board finding of customary and traditional subsistence uses of moose in Unit 16(B), 3) new information about moose harvest levels and hunter characteristics in the portion of the unit north of the Beluga River, and 4) findings by the Board of Fisheries in 1988 and 1992 that salmon in Unit 16(B) north of the Beluga River did not support customary and traditional subsistence uses. In reconsidering whether uses of moose in Unit 16(B) north of the Beluga River met the eight criteria for identifying customary and traditional subsistence uses, the board was deadlocked three to three. After protracted discussion, the motion to reconsider the previous unitwide finding as it applied to the area north of the Beluga River was withdrawn and the 1986 finding for all of Unit 16B was readopted.

Allowable sustained yield harvests of moose in Unit 16(B)

The board received information from the department, including the geographical distribution, biological status, management objectives, and harvestable surplus of bull and cow moose for different populations, and portions of populations, of moose in Unit 16(B). Moose in the unit occur as four more or less geographically separate populations with different demographic characteristics. In addition, the hunting conditions and hunter characteristics differ among the areas, with differences in accessibility and availability of moose, numbers and origin of hunters, and access methods used. These areas have been managed differently by the board and/or the department since the early 1980s. Different regulations have applied to Kalgin Island and Redoubt Bay drainages, and administration of permit hunts in the remainder of the unit has differed north and south of the Beluga River. The moose populations addressed by the board in Proposal 70A and their allowable sustained yield harvests are as follow:

Kalgin Island has an estimated population of 20-30 moose. Originally introduced by transplant to the island in the 1950s, the population increased to high densities in the 1970s and severely overbrowsed the island's forage species before being intentionally reduced through intensive hunting to current levels. Management objectives are to maintain the population at a density of about 1 moose/mi^2 with a minimum bull:cow ratio of 20 bulls:100 cows until the island's vegetation recovers from past overbrowsing. At current population size the allowable sustained yield harvest is 3-4 bulls.

Redoubt Bay drainages have an estimated moose population of about 250 moose. The population has declined since the mid-1980s due to limited habitat and predation and it continues to exhibit low productivity. Management objectives are to maintain or increase the population, with a minimum bull:cow ratio of 20 bulls:100 cows.The allowable sustained yield harvest for 1993 is 10 bulls.

The Tyonek area (the portion of Unit 16(B) south of the Beluga River and north of Redoubt Bay) has an estimated moose population of 500 moose. The population has declined since the mid-1980s, especially following the severe winter of 1989-90. The population is moderately productive and has a relatively high bull:cow ratio (19 calves:38 bulls:100 cows). Management objectives are to allow the population to increase to late 1980s levels of 700-800 moose with a minimum bull:cow ratio of 20 bulls:100 cows. Based on estimated natural mortality and recruitment of yearlings to the population, the allowable sustained yield harvest for 1993 is 20 bulls.

Unit 16(B) drainages north of the Beluga River have an estimated moose population of 6800 moose. The population was reduced by the severe winter of 1989-90. The population is moderately productive and has a relatively high bull:cow ratio (24 calves:34 bulls:100 cows). Management objectives are to allow the population to increase to late 1980s levels of 7500-8500 moose with a minimum bull:cow ratio of 20 bulls:100 cows. Based on estimated natural mortality and recruitment of yearlings to the population, the allowable sustained yield harvest for 1993 is 305 bulls and 30 cows.

The numbers of harvestable moose reasonably necessary for subsistence uses in Unit 16(B)

The board reviewed information from the department on the historical numbers of resident moose hunters and moose harvests for each of the four areas in Unit 16(B) described above for allowable sustained yield harvest determinations. Based on this information the board determined the numbers of moose reasonably necessary for subsistence uses are as follows:

Kalgin Island - 2 moose

From 1986-1991 the average annual number of resident hunters, all nonlocal, was 28, and the average annual harvest was 7 moose. Less than 1 nonresident per year hunted on the island. Available information prior to 1986 was not representative due to the abnormally heavy hunting effort intentionally encouraged by regulations to reduce the excessive moose population in the early 1980s.

Redoubt Bay drainages - 10 moose

From 1986-1991 the average annual number of resident hunters, all nonlocal, was 44, and the average annual resident harvest was 13 moose. An average of 1.5 nonresidents hunted and took 1 moose per year. Prior to 1985 more liberal seasons and cow moose hunts attracted more hunters to the area and resulted in larger moose harvests than the population could sustain.

Tyonek area - 29-37 moose

From 1986-1991 the average annual number of resident hunters was 131 (38 local and 93 nonlocal residents), and the average annual resident harvest was 50 moose. An average of 7 nonresidents took 3 moose per year. These averages are somewhat lower than earlier years due to reduced numbers of moose and more restrictive regulations following the severe winter of 1989-90. Prior to 1987, general open seasons for antlerless moose attracted more hunters to the area and increased harvests of moose, and limited participation winter either-sex permit hunts from 1983-89 increased overall hunter success rates.

Unit 16(B) north of Beluga River - 160-180 moose

From 1986-1991 the average annual number of resident hunters was 677 (52 local and 625 nonlocal residents), and the average annual resident harvest was 210 moose. An average of 65 nonresidents hunted and took 34 moose per year. These averages are somewhat lower than earlier years due to reduced numbers of moose and more

restrictive regulations following the severe winter of 1989-90. Prior to 1987, general open seasons for antlerless moose attracted more hunters to the area and increased harvests of moose, and limited participation winter either-sex permit hunts increased overall hunter success rates.

Regulations adopted provide a reasonable opportunity for subsistence uses

For each of the four hunt areas into which Unit 16(B) has been subdivided for population-specific management of moose, the board considered the number of moose determined to be reasonably necessary for subsistence uses in relation to the allowable sustained yield harvest level, length and timing of historical moose hunting seasons, historical moose bag limits, hunter success rates, and expected numbers of hunters and found that the following regulations adopted for 1993-94 will provide a reasonable opportunity for subsistence uses.

Kalgin Island

The regulations adopted will provide subsistence and general hunts for bull moose during an Aug.20-Sept.20 season. The allowable harvest of 3-4 moose exceeds the 2 moose necessary for subsistence uses, therefore 1-2 additional moose are available for other uses. An additional 10 days of hunting opportunity is being provided with the expanded season. The number of hunters expected to hunt in 1993 is 10-20. Although the expected hunter success rate (20%) would be below the previous 6-year average of 25%, it would be within the previous 6-year range (11-50%). Limitations on participation would not increase success rates due to the difficult hunting conditions on the island and the low moose density. Reasonable opportunity for subsistence uses is provided by the regulations.

Redoubt Bay

The regulations adopted will provide a subsistence hunt for spike-fork/50" bulls during an Aug.20-Sept.20 season. The allowable harvest of 10 moose is equal to the number of moose necessary for subsistence uses, therefore additional moose are not available for other uses. Although antler restrictions will result in fewer bulls available to hunters, there will be a sufficient number of spike-fork/50" bulls (15 bulls) to provide the allowable harvest, and hunters will have additional hunting opportunity with the 20-day expansion of the season. The number of hunters expected to hunt in 1993 is 25-35, and the expected success rate of 30% would be consistent with the previous 6-year average of 30% (range = 21-40%). Therefore, it is not necessary to limit participation of resident hunters to provide a reasonable opportunity for subsistence uses.

Tyonek area

The regulations adopted will provide a Tier II subsistence hunt for bulls only during an Aug.20-Sept.20 fall season and a 2-week winter season to be announced by Emergency Order during the period Dec.1-Feb.28. The allowable harvest of 20 bulls is less than the 29-37 moose necessary for subsistence uses, therefore other uses of moose cannot be accommodated. Furthermore, a reasonable opportunity for subsistence uses cannot be provided to all subsistence users with an allowable harvest of 20 bulls. With an annual average of 131 hunters in the prior 6 years, a harvest of 20 moose would be a 15% success rate, well below local (38%) and statewide (25-30%) historical averages. In addition, to ensure that the allowable harvest not be exceeded if participation of subsistence hunters were not limited, a shortened fall season and elimination of the winter season would be necessary. Such season reductions would significantly reduce opportunity for some subsistence users. Accordingly a Tier II hunt is adopted whereby a reasonable opportunity for subsistence uses is provided to a limited number of subsistence users. The seasons adopted continue the basic season framework in effect since the mid-1980s. The number of Tier II permits to be issued will be based on observed success rates for Tier II permittees in recent years.

Unit 16(B) north of Beluga River

The regulations adopted will provide subsistence and general hunts for spike-fork/50" bulls during an Aug.20-Sept.20 fall season and a Jan.10-Jan.23 winter season, and a Tier II subsistence hunt for cows during the Jan.10-Jan.23 season. The number of moose reasonably necessary for subsistence uses is 160-180. The allowable harvest of moose for 1993 is 305 bulls and 30 cows. For 1993, the board is allocating the allowable harvest of cows to subsistence uses only. Therefore, the number of bull moose necessary for subsistence uses is 130-150. The allowable harvest of 305 bulls exceeds the 130-150 bulls necessary for subsistence uses, therefore, additional bulls are available for other uses.

Although antler restrictions adopted for 1993 will reduce the number of bulls available to hunters, there will be a sufficient number of spike-fork/50" bulls to provide the allowable harvest, and hunters will have additional hunting opportunity with the expansion of the fall season by 10 days and an additional 14-day winter season. An estimated 402 spike-fork/50" bulls will be available to provide the 130-150 bulls necessary for subsistence uses. The number of resident hunters expected to hunt for bulls in 1993 is unknown but will probably be larger than the prior 6-year average of 678 hunters due to the expected participation in the winter bull hunt of additional hunters who normally do not hunt in the unit. Hunter success rates are expected to be lower in 1993 (20-25%) than the average of 31% in the prior 6 years, due in part to the expected influx of new hunters, but this level of success would be within the range of success rates of the prior 6 years (19-36%) and will still provide reasonable opportunity for subsistence uses.

The allowable harvest of 30 cows is allocated to subsistence uses. In this hunt area, cow moose hunts need to be scheduled for midwinter after upland subpopulations of moose have migrated down to winter ranges, in order to avoid disproportionately heavy harvests of cows on localized resident moose subpopulations that would result from fall hunts. Because the number of resident hunters who would participate in an antlerless moose hunt is large and the ready availability of cow moose to hunters create conditions where a large kill of cow moose would occur in a very short time, the only practical means of ensuring that the allowable harvest is not exceeded is to limit participation. Accordingly a Tier II hunt is adopted whereby a reasonable opportunity for subsistence uses is provided to a limited number of subsistence users. The winter season length and timing adopted is consistent with the 2-week winter seasons provided since the mid-1980s. By January 10 the seasonal migration of upland moose to lowland winter ranges should be sufficiently complete for the hunt. The number of Tier II permits to be issued will be based on observed success rates for Unit 16(B) winter permit hunts, in order that the harvest of 30 cows not be exceeded.

Richard Burley

Richard Burley, Chair
Alaska Board of Game

Adopted April 1, 1993

Vote: 5 Favor, 0 Oppose, 2 Absent