

**SUMMARY OF FINDINGS
UNIT 19 A & B MOOSE**

The Board of Game heard public testimony, staff reports, advisory committee reports, and discussed the issue of management of moose in Units 19A and 19B on April 1 and April 2, 1992. Based upon all the testimony and reports, both oral and written, the Board makes the following observations and conclusions:

Biological Findings:

1. The Board finds that the moose found in the Holitna and Hoholitna river drainages in 19A and 19B are a moose "population." AS 16.05.940 (18). The boundary between 19A and 19B was drawn to reflect different use patterns of the population. The Unit 19A and 19B portions of this population have been subjected to discreet management.

2. The moose population within the Holitna and Hoholitna river drainages in GMU 19A and 19B is of moderate density, increasing in size, and highly productive. Calf:cow ratios in the lower Holitna and Hoholitna rivers in the fall during the past 10 years have averaged about 50-60 calves per 100 cows. Calf:cow ratios in the upper Hoholitna drainage in Unit 19B over this time have averaged about 25 to 30 calves:100 cows.

3. Bull-cow ratios within the 19A portion declined from 60-70 bulls:100 cows to approximately 30 bulls:100 cows during the 1976-1990 period as a result of high hunting pressure. The current ratio remains biologically adequate for productivity and the population sex and age structure provides for high sustained harvests.

4. Bull-cow ratios within the 19B portion remain higher than 19A, reflecting lower hunting pressure.

5. An estimate of the annual moose harvest during the period 1985-1990 for the Holitna and Hoholitna drainage for all types of uses is approximately 300 bulls and 30 cows, which is well within sustained yield limits. Of this estimated harvest, an average of 40-50 bulls were harvested each year by non-residents during this period, with the remainder by Alaska residents.

6. In general, the harvest of moose in the 19A portions of the Holitna and Hoholitna river drainages is predominately by hunters using boats, primarily residents of Units 18 and 19. The harvest of moose in the 19B portions of the Holitna and Hoholitna river drainages is primarily by hunters using aircraft access. Wheel-equipped aircraft are used to access upland areas, and float-equipped aircraft are used to access Whitefish Lake and certain landing and takeoff points along the rivers, including the

confluence of the Holitna with the Kuskokwim, the confluence of the Hoholitna with the Holitna, and other locations downriver from the mouth of the South Fork.

Subsistence Use Patterns:

1. The Board of Game found in 1987 that there are subsistence uses of moose in Unit 19, including the Holitna and Hoholitna drainages described above.

2. There are at least three distinct subsistence use patterns for moose in the Holitna and Hoholitna river drainages: a Lower Kuskokwim Use Pattern by hunters from Unit 18, a Middle Kuskokwim Use Pattern by hunters from Unit 19, and a Floater/Drifter Use Pattern by Alaska residents supported by floatplanes. In the Lower Kuskokwim Use Pattern, hunters tend to access 19A and 19B by boats powered by outboard engines often in excess of 70 horsepower, which is part of the means and methods of harvest. In the Middle Kuskokwim Use Pattern, including Sleetmute residents, hunters tend to access the areas by boats with horsepower engines less than 70 horsepower. In the Floater/Drifter Use Pattern, hunters typically access the area by airplanes or transporters combined with float craft.

3. In addition, there is some non-Alaska resident guided hunting in 19A and 19B. Guided hunters typically access the area by airplane, and harvest is predominately large bulls. The number of moose taken by guided hunters in 19A is small; harvest information indicates 7 moose taken by guided hunters for all of Subunit 19A in 1991.

4. The success rate during the fall in 19A and 19B for hunters who are part of the Lower Kuskokwim Use Pattern is about 50%. The success rate during the fall in 19A and 19B for hunters who are part of the Middle Kuskokwim Use Pattern is in the 70% range. The success rate for hunters who are part of the Floater/Drifter Use Pattern is estimated to be about 50%, although there is no detailed information on this group.

5. Hunters from Sleetmute hunt as part of the Middle Kuskokwim Use Pattern. The Department estimated an annual subsistence harvest to be somewhat more than 1 moose per multiperson household during the 1980s. A high estimate of the traditional use level by Sleetmute residents for the 1980s was between 1 to 2 moose per multiperson household, or about 48 moose for the community; however, actual harvest levels fluctuate according to a number of factors including weather and competition from other hunters. The reported harvest during the September season was approximately 12 with an additional 7 taken in the November and February seasons during the 1982-83 season, or about .86 moose per multiperson household. There

probably also were moose taken outside the open moose hunting seasons, but there is no estimate of numbers for Sleetmute. Sleetmute residents have indicated increasing difficulties in hunting moose along the river corridor during the September season.

Moose Required for Subsistence Uses:

The Board concludes that there is not a Tier II situation for moose hunting in the Holitna and Hoholitna drainages, as there is a reasonable opportunity for subsistence uses for the Lower Kuskokwim Use Pattern, the Middle Kuskokwim Use Pattern, and the Drifter/Floater Use Pattern. The number of harvested moose necessary to provide for subsistence uses of this moose population for all subsistence uses is within a range that may fluctuate from year to year, and is estimated to be about 300 in the period 1985-90. This is also a reasonable estimate for 1992 based on available information.

Subsistence Use Concerns:

There is evidence that the Middle Kuskokwim Use Pattern, particularly for Sleetmute, is being impacted by an increased number of hunters and increased noise and disturbance by hunters in the river corridor of the Holitna and Hoholitna river drainages of 19A and 19B. Most of the increase is by Unit 18 residents who hunt as part of the Lower Kuskokwim Use Pattern. There also may be an increase in hunters who hunt as part of the Floater/Drifter Use Pattern based on reports of local hunters, although the Department has no firm estimate of trends in numbers for this user group. The board received testimony from local residents who perceived that the use of aircraft in Units 19 A and B contributed to disturbance of moose and competition from urban hunters. The board found that the disturbance exists primarily along the river corridor from boat traffic, and that the use of aircraft for access to this population for hunting is not a significant disturbance factor. The major impact on the Middle Kuskokwim Use Pattern has been that there are fewer bull moose available along the Holitna and Hoholitna river corridor. Hunters of the Middle Kuskokwim Use Pattern report having to spend more days afield and spend more money hunting in the fall to obtain moose. A shortfall of fall moose takes are made up to some extent by harvests in the November and February seasons.

Board Regulatory Action:

The board adopted the Holitna-Hoholitna Controlled Use Area (5 AAC 92.540 (e) (2)) at the Spring 1992 board meeting. The board finds that this regulation, combined with the moose hunting seasons for Unit 19 A and B, provide a reasonable opportunity to satisfy the subsistence uses of this moose population. The moose seasons for Units 19 A and B (outside the Lime Village Management area) are as follows:

Unit 19 A (except the Lime Village Management Area):

Resident hunters: Sept. 1 - Sept. 20; Nov. 20 - Nov. 30; Feb. 1 - Feb 10: 1 moose; however, antlerless moose may be taken only during the Nov. 20 - Nov. 30 and Feb. 1 - Feb. 10 seasons.

Nonresident hunters: Sept. 1 - Sept. 20: 1 bull with 50 inch antlers.

Unit 19 B:

Resident hunters: Sept. 1 - Sept. 25: 1 bull.

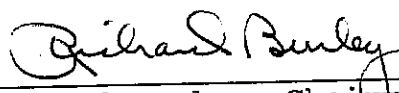
Nonresident hunters: Sept. 1 - Sept 25: 1 bull with 50 inch antlers.

The purpose of the controlled use area is to minimize disturbance along the Holitna - Hoholitna River corridor which has tended to displace moose, especially bull moose, making moose less accessible to subsistence users who rely on river access. The horsepower restriction is intended to limit noise disturbance while still allowing reasonable access by the method primarily used by subsistence users of this moose population. The board is also recommending that the department establish a check station at Whitefish Lake to further document the use pattern for Floater/Drifter hunters and better assess the extent of this use.

Based upon the best available information presented to it, the board believes that the regulations now established for moose hunting of this population will provide a reasonable opportunity for subsistence users of this population to satisfy their subsistence needs.

Dated: April 3, 1992

Location: Anchorage, Alaska


Richard Burley, Chairman
Board of Game