

ALASKA BOARD OF GAME
Policies and Resolutions

2013

2013-200-BOG Board Direction Concerning the Unit 4 Brown Bear Management Strategy

2012

2012-199-BOG Resolution Supporting Funding for the Outdoor Heritage Foundation

2012-198-BOG Board of Game Bear Conservation, Harvest, and Management Policy
(*Policy 2011-194-BOG Revised*)

2012-197-BOG Units 9B, 17, 18, 19A and 19B (Mulchatna Caribou Herd) Intensive
Management Supplemental Findings

2012-196-BOG Unit 19A Intensive Management Supplemental Findings

2012-195-BOG Unit 24B Moose Intensive Management Supplemental Findings

2012-194-BOG Board of Game Bear Conservation, Harvest, and Management Policy
(*Policy 2011-186-BOG Revised*)

2012-193-BOG Subunit 26B Muskoxen - Intensive Management Supplemental Findings

2012-192-BOG Subunit 15C Moose - Intensive Management Supplemental Findings

2012-191-BOG Subunit 15A Moose - Intensive Management Supplemental Findings

2012-190-BOG Falconry, Federal Migratory Bird Rulemaking and Delegation of
Authority

2011

#2011-189-BOG Subunits 9C and 9# (Northern Alaska Peninsula Caribou Herd) Intensive
Management Supplemental Findings

#2011-188-BOG Units 9B, 17, 19, and 19B (MCH) Intensive Management Supplemental
Findings

#2011-187-BOG Unit 16 Predation Control Area for Moose Intensive Management
Supplemental Findings

#2011-186-BOG Board of Game Bear Conservation, Harvest, and Management Policy.

#2011-185-BOG Board of Game Wolf Management Policy (this policy supersedes BOG
policy 82-31-GB)

#2011-184-BOG Game Management Unit 13 Caribou and Moose Subsistence Uses
(*Supplement findings to 2006-170-BOG*)

2010

#2010-183-BOG Harvest of Game for Customary and Traditional Alaska Native Funerary
and Mortuary Religious Ceremonies.

2009

#2009-182-BOG Units 12, 20B, 20D, 20E, and 25C Intensive Management Supplemental
Findings

#2009-181-BOG Unit 19D-East Intensive Management Supplemental Findings

#2009-180-BOG Unit 19A Intensive Management Supplemental Findings

#2009-179-BOG Resolution Supporting Increasing Non-Resident Hunting License and Tag Fees

2008

#2008-178-BOG Finding of Emergency: Predator Control Implementation Plans
#2008-177-BOG Units 12, 20B, 20D, 20E, & 25C Intensive Management Supplemental Findings
#2008-176-BOG Units 16A & B Intensive Management Supplemental Findings
#2008-175-BOG Unit 9D (South AK Peninsula Caribou Herd) Intensive Management Supplemental Findings
#2008-174-BOG Unit 19D East Supplemental Findings

2007

#2007-173-BOG Nonresident Drawing Permit Allocation Policy – (#162 Revised)
#2007-172-BOG Annual Reauthorization of Antlerless Moose

2006

#2006-171-BOG Resolution supporting a Moratorium on New Zoo Applications
#2006-170-BOG Unit 13 Caribou and Moose Subsistence Uses
#2006-169-BOG Unit 19D-East Intensive Management Supplemental Findings
#2006-168-BOG Unit 19A Intensive Management Supplemental Findings
#2006-167-BOG Unit 16 Intensive Management Supplemental Findings
#2006-166-BOG Unit 13 Intensive Management Supplemental Findings
#2006-165-BOG Unit 12 and 20E Intensive Management Supplemental Findings
#2006-164-BOG Board of Game Bear Management and Conservation Policy
#2006-163-BOG Resolution Regarding Declining Fish and Wildlife Enforcement in Alaska
#2006-162-BOG Nonresident Drawing Permit Allocation Policy
#2006-161-BOG Finding of Emergency: Predator Control Implementation Plans

2005

#2005-160-BOG Finding of Emergency: Methods of Harvest for Hunting Small Game in the Skilak Loop Special Management Area of the Kenai National Wildlife Refuge
#2005-159-BOG Resolution in Support of Allowing Guides to Take Wolves while Under Contract to Clients
#2005-158-BOG Resolution in Support of Public Education Program on Predator Control
#2005-157-BOG Reauthorizing Wolf Control in Portions of Unit 13
#2005-156-BOG Supporting Joint Federal and State Deer Harvest Reporting
#2005-155-BOG Supporting Governor's Lawsuit Against Federal Government; Extent and Reach of Subsistence Regulations in State Navigable Waters

2004

#2004-154-BOG Supporting Increasing Resident and Non-Resident Hunting License and Tag Fees
#2004-153-BOG Increase FY06 Budget for Boards of Fisheries and Game and State Advisory Committees

#2004-152-BOG Predator Control in Portions of Upper Yukon/Tanana Predator Control Area
 #2004-151-BOG Bear Baiting Allocation
 #2004-150-BOG Authorizing Predator Control in Central Kuskokwim Area, Unit 19A
 #2004-149-BOG Signage for Traplines on Public Lands
 #2004-148-BOG Authorizing Predator Control in Western Cook Inlet, Unit 16B
 #2004-147-BOG Bear Conservation and Management Policy
 #2004-146-BOG Americans with Disabilities Act Exemptions

2003

#2003-145-BOG Authorization of Airborne Shooting in Unit 19D East Predation Control Program
 #2003-144-BOG Authorizing Wolf Control in Portions of Unit 13
 #2003-143-BOG Authorizing Wolf Control in Portions of Unit 13
 #2003-142-BOG Resolution of the Alaska Board of Game Concerning a Statewide Bear Baiting Ballot Initiative
 #2003-141-BOG Request for Commissioner’s Finding Regarding Same-Day-Airborne Wolf Hunting in Game Management Unit 13
 #2003-140-BOG Guidelines for a Unit 19D East Predation Control Program
 #2003-139-BOG A resolution of the Alaska Board of Game Concerning Management of Kenai Peninsula Brown Bear Mortality

2002

#2002-138-BOG Request to US Forest Service re: Management of Guided Brown Bear Hunting in Unit 4
 #2002-137-BOG Unit 1C Douglas Island Management Area Findings
 #2002-136A-BOG Unit 1D Brown Bear Drawing Hunt Finding
 #2002-136-BOG Government to Government Relations with Tribes in Alaska

2001

#2001-135-BOG Resolution concerning Unit 19D-East Adaptive Management Team Work

2000

#2000-134-BOG Unit 4 Brown Bear Management Team Findings
 #2000-133-BOG Habituation of Wildlife (unsigned – left in draft)
 #2000-132-BOG Reaffirm Resolution re: Management of Alaska’s Fish and Game Resources/Ballot Initiative Process
 #2000-131-BOG Finding of Emergency: Unit 19D-East (Wolf Control Implementation Plan)
 #2000-130-BOG Resolution re: Support of the Conservation and Reinvestment Act of 1999

1999

#99-129-BOG Snow Machine Use in the Taking of Caribou

1998

#98-128-BOG Findings on Elk Management in Region I
#98-127-BOG Findings on Commercial Guiding Activities in Alaska
#98-126-BOG Emergency Findings – Moose in Unit 25B and Unit 25D
#98-125-BOG Emergency Findings – Moose in Unit 21D
#98-124-BOG Emergency Findings – Moose in Unit 18
#98-123-BOG Emergency Findings – Caribou in Unit 9
#98-122-BOG 1998 Intensive Management Findings: Interior Region
#98-121-BOG Findings: HB 168, Traditional Access
#98-120-BOG Resolution re: Ballot Initiative Banning Use of Snares
#98-119-BOG Trapping and Snaring of Wolves in Alaska
#98-118-BOG Customary and Traditional Use of Musk Ox in Northwest Unit 23

1997

#97-117-BOG Customary and Traditional Use of Musk Ox on the Seward Peninsula
#97-116-BOG Dall Sheep Management in the Western Brooks Range
#97-115-BOG Resolution supporting Co-management of Alaska's Fish and Game Resources

#97-114-BOG Resolution re: Dual Management of Alaska's Fish and Game Resources
#97-113-BOG Resolution re: Methods and Means of Harvesting Furbearers and Fur Animals Including Wolves

#97-112-BOG Resolution re: Management of Alaska's Fish and Game Resources/Ballot Initiative Process

#97-111-BOG Finding to Include Unit 22 (except 22C) in the Northwest Alaska Brown Bear Management Area

#97-110-BOG Finding of Emergency re: Stranded Musk Oxen
#97-109-BOG Findings re: Unit 16B-South Moose
#97-108-BOG Resolution re: Subsistence Division Budget
#97-107-BOG Findings re: Wanton Waste on the Holitna and Hoholitna Rivers

1996

#96-106-BOG Delegation of Authority re: Issuing Permits to Take Game for Public Safety Purposes

#96-105-BOG Delegation of Authority to Implement Ballot Measure #3
#96-104-BOG Finding of Emergency re: Western Arctic Caribou Herd
#96-103-BOG Findings – Antlerless Moose in Unit 20A
#96-102-BOG Findings – Nelchina Caribou Herd Management
#96-101-BOG Findings – Intensive Management for GMU 19D East
#96-100-BOG Establishment of the Nenana Controlled Use Area
#96-99-BOG Moose Populations in Unit 26A
#96-98-BOG Taking Big Game for Certain Religious Ceremonies
#96-97-BOG Forty Mile Caribou Herd Management Plan
#96-96-BOG Finding of Emergency – Moose in Remainder of Unit 16B

1995

#95-95-BOG Resolution – Wildlife Diversity Initiative

#95-94-BOG Resolution – Change Name of McNeil River State Game Refuge to Paint River State Game Refuge

#95-93-BOG Requiring License Purchase in advance

#95-92-BOG *Open Number*

#95-91-BOG Delegation of Authority – Comply with Alaska Supreme Court Opinion in Kenaitze vs. State

#95-90-BOG Board Travel Policy

#95-89-BOG Findings – Noatak Controlled Use Area

#95-88-BOG Delegation of Authority to Increase Bag Limits in Unit 18 for Mulchatna and Western Arctic Caribou Herds

#95-87-BOG Subsistence Needs for Moose in Unit 16B

#95-86-BOG Findings on Intensive Management in Unit 19D

#95-85-BOG Findings on Intensive Management in Unit 20D

#95-84-BOG Findings on Intensive Management in Unit 13

#95-83-BOG Resolution: Subsistence Use on National Park Lands

#95-82-BOG “No Net Loss” Policy for Hunting and Trapping Opportunities

#95-81-BOG Resolution: Remove Federal Management of F&W on Public Lands and Waters

#95-80-BOG Resolution to Legislature to Define Subsistence

1994

#94-80A-BOG Wolf Predation Control Program in Unit 20A

#94-79-BOG Delegation to Commissioner to Adopt Regulations Resulting from Kenaitze Decision which Invalidates Nonsubsistence Areas

#94-78-BOG Addendum to Findings on Unit 16B Moose

#94-77-BOG Resolution on SB325 (Repeal Antlerless Moose Statute)

1993

#93-76-BOG Findings on McNeil River Refuge Bears

#93-75-BOG Resolution on Adak Caribou

#93-74-BOG Delegation of Authority for Permits to Take Furbearers with Game Meat

#93-73-BOG Delegation of Authority to Make Emergency Regulations Permanent, Moose in Unit 19D

#93-72-BOG Wolf Control Findings – Delta Area

#93-71-BOG Resolution on Round Island Walrus Hunt

#93-70-BOG Findings on Unit 16B Moose Seasons and Bag Limits

#93-69-BOG Resolution on Popof Island Bison

#93-68-BOG Resolution on Commercialization of Moose

#93-67-BOG Resolution on Elk Transplants in Southeast

#93-66-BOG Resolution on Clear-cut Management in the Tongass National Forest

1992

#92-65-BOG Findings in Units 12, 20B, D, and E on Wolves

#92-64-BOG Findings in Unit 20A Wolves

#92-63-BOG Findings in Unit 13 Wolves

#92-62-BOG Findings Wolf Area Specific Management Plans for Southcentral and Interior

#92-61-BOG Resolution on Unit 13 Moose

#92-60-BOG Findings Unit 13 Moose Seasons and Bag Limits

#92-59-BOG Findings Unit 19 A&B Moose – Holitna and Hoholitna Controlled Use Area

#92-58-BOG Findings on Kilbuck Caribou re Fall Hunt

#92-57-BOG Report of the Board of Game, Area Specific Management Plans for Wolves

#92-56-BOG Relating to Moose in GMUs 19A and 19B per Superior Court order in Sleetmute vs. State

#92-55-BOG Relating to Endorsement of State Closure of Deer Hunting in GMU 4 and Requesting Federal Closure

1991

#91-54-BOG Findings on Strategic Wolf Management Plan

#91-54a-BOG Relating to Kilbuck Caribou Management Plan

#91-53-BOG Relating to Taking of Walrus from Round Island by Residents of Togiak

#91-53a-BOG Board Direction to Committee for Strategic Wolf Plan

#91-52-BOG Findings on Unit 13 Moose Season and Bag Limits

1990

#90-51-BOG Delegation of Authority

#90-50-BOG Relating to the Reporting of Hunter Usage of Air Taxi Operations

#90-49-BOG Findings on Kwethluk Emergency Caribou Hunt Petition

#90-48-BOG Relating to the Use of Furbearers by Rural Alaskans, Including Alaska Natives

#90-47-BOG Relating to the Commercialization of Moose and other Wildlife

#90-46-BOG Relating to Destruction of Moose by the Alaska Railroad

1989

#89-45-BG Delegation of Authority to Adopt Waterfowl Regulations

1988

#88-44-BG Delegation of Authority for March 1988 Meeting

#88-43-BG Resolution Supporting Funding for Division of Game

1987

#87-42d-BG Procedures for Delegations of Authority (Replacing #75-2-GB)

#87-42c-BG Delegation of Authority to Correct Technical Errors

#87-42b-BG Delegation of Authority to Correct Technical Errors Before Filing Regulations

#87-42a-BG Delegation of Authority to Adopt Emergency Regulations (Replacing #75-3-GB)

1986

#86-41-BG Finding of Emergency: New State Subsistence Law
#86-40-BG Delegation of Authority

1985

#85-39-GB Resolution on Resources v/s Logging
#85-38-GB Findings: Madison vs. State Requirements
#85-37-GB Lime Village Management Area Findings
#85-36-GB Findings: Waterfowl hunting in and near Palmer Hayflats

1984

#84-35-GB Resolution on Waterfowl Stamp
#84-34-GB Transplant of Musk Ox to Nunivak Island

1983

#83-33-GB Resolution on Guide Board
#83-32-GB Findings on Moose in GMU 16B

1982

#82-31-GB Supplement to Wolf Population Control

1981

#81-30-GB Findings and Policy Regarding Nelchina Caribou
#81-29-GB Finding and Policy for Future Management of the Western Arctic Caribou Herd
#81-28-GB Letter of Intent: Wolf Reduction in Alaska

1980

#80-27-GB Letter of Intent Regarding Use of Alaska's Game for Religious Ceremony
#80-26-GB Findings and Policy Regarding Bowhunting
#80-25-GB Standing Committee II on Deer
#80-24-GB Regarding Advisory Committee Coordinators

1979

#79-23-GB Authorization to Export Animals from Alaska
#79-22-GB Staff Directive to Subsistence Section
#79-21-GB Relating to Brown Bear in GMU 4
#79-20-GB Relating to Brown Bear in GMU 4
#79-19-GB Brown Bear, GMU 4
#79-18-GB Relating to Muskoxen

1978

#78-18-GB Statement of Direction: Use of Airplanes in Controlling Predation by Wolves
#78-17-GB Relating to (d)(2) Legislation, State's ability to Manage Fish & Wildlife Resources

#78-16-GB Relating to (d)(2) Legislation, State's ability to Manage Fish & Wildlife Resources

1977

#77-15-GB Delegation of Authority to Commissioner to Address Petitions
#77-14-GB Repeal of Regulations Relating to Registration of Camps by Guides for Hunting Bears
#77-13-GB Regarding Closed Season for Caribou (rescinded November 30, 1977)
#77-12-GB Regarding the 17(d)(2) Land Settlement

1976

#76-11-GB Trapping Wolves by ADF&G
#76-10-GB Request for Public Safety Involvement in Enforcement of Caribou Regulations
#76-9-GB Management Goal: Western Arctic Caribou
#76-8-GB Export of Live Game Animals Outside of Alaska
#76-7-GB Musk Ox to Anchorage Children's Zoo (rescinded November 30, 1977)
#76-6-GB Taking of Wolves by Helicopter
#76-5-GB Regarding the Taking of Wolves in Units 23 and 26A

1975

#75-4-GB Endorsement of Trapping as a Legitimate Use of Renewable Resources
#75-3-GB Delegation of Authority to Adopt Emergency Regulations (See #87-42a-GB)
#75-2-GB Procedures for Delegations of Authority (See #87-42d-GB)
#75-1-GB Effectuating Delegation of Authority

**Findings of the Alaska Board of Game
2012-198-BOG**

**BOARD OF GAME BEAR CONSERVATION, HARVEST,
AND MANAGEMENT POLICY**

Expiration Date: June 30, 2016

Purposes of Policy

1. To clarify the intent of the Board and provide guidelines for Board members and the Department of Fish and Game to consider when developing regulation proposals for the conservation and harvest of bears in Alaska, consistent with the Alaska Constitution and applicable statutes.
2. To encourage review, comment, and interagency coordination for bear management activities.

Goals

1. To ensure the conservation of bears throughout their historic range in Alaska.
2. To recognize the ecological and economic importance of bears while providing for their management as trophy, food, predatory, and furbearer species.
3. To recognize the importance of bears for viewing, photography, research, and non-consumptive uses in Alaska.

Background

The wild character of Alaska's landscapes is one of our most important natural resources and the presence of naturally abundant populations of brown/grizzly bears (*Ursus arctos*) and black bears (*Ursus americanus*) throughout their historic range in Alaska is important to that wild character. Bears are important to Alaskans in many ways, including as food animals, predators of moose, caribou, deer and muskox, trophy species for nonresident and resident hunters, furbearers, problem animals in rural and urban settings, and as objects of curiosity, study, awe, and enjoyment. Bears are also important components of naturally functioning Alaskan ecosystems.

Bear viewing is a rapidly growing industry in selected areas of the state. The interest exceeds the opportunities provided now by such established and controlled sites as McNeil River, Pack Creek, Anan Creek, Wolverine Creek and Brooks Camp. In most areas, hunting and viewing are compatible uses but the Board may consider bear viewing as a priority use in some small areas, especially where access for people is good and bears are particularly concentrated. The Board and the Department will continue to discourage people from feeding bears to provide viewing opportunities.

Bears are frequently attracted to garbage or to fish and hunting camps, and can be a nuisance where they become habituated to humans and human food sources. Dealing with problem bears has

been especially difficult in Anchorage, Juneau, and the Kenai Peninsula. The department has worked hard, and successfully, with municipalities to educate people and solve waste management problems. The department's policy on human food and solid waste management (<http://www.wc.adfg.state.ak.us/index.cfm?adfg=bears.bearpolicy>) provides guidance on reducing threats to humans and the resulting need to kill problem bears.

Bears can pose a threat to humans in certain situations. Statewide, an average of about six bear encounters a year result in injuries to people. Most attacks now occur in suburban areas and do not involve hunters. About every two or three years, one of the attacks results in a human fatality. The Department and the Board will continue to educate people about ways to minimize threats to humans and the resulting need to kill problem bears.

Alaska is world-renowned as a place to hunt brown bears, grizzly bears and black bears. Alaska is the only place in the United States where brown and grizzly bears are hunted in large numbers. An average of about 1,500 brown and grizzly bears is harvested each year. The trend has been increasing, probably because of both increased demand for bear hunting and increasing bear numbers. Many of the hunters are nonresidents and their economic impact is significant to Alaska. Hunters have traditionally been the strongest advocates for bears and their habitat, providing consistent financial and political support for research and management programs.

Because bears can be both prey and predator, their relationship with people is complex. Throughout much of Interior Alaska and in some areas of Southcentral Alaska, the combined predation by bears and wolves keeps moose at relatively low levels. Bear predation on young calves has been shown to contribute significantly to keeping moose populations depressed, delayed population recovery, and low harvest by humans. People in parts of rural Alaska (e.g. Yukon Flats) have expressed considerable frustration with low moose numbers and high predation rates on moose calves in hunting areas around villages. The Board and the Department have begun to take a more active role in addressing bear management issues. Because the Constitution of the State of Alaska requires all wildlife (including predators) to be managed on a sustained yield basis, the Board of Game and the Department will manage all bear populations to maintain a sustained yield, but the Board recognizes its broad latitude to manage predators including bears to provide for higher yields of ungulates (*West vs State of Alaska*, Alaska Supreme Court, 6 August 2010).

Brown and grizzly bears

Although there is no clear taxonomic difference between brown and grizzly bears, there are ecological and economic differences that are recognized by the Board and Department. In the area south of a line following the crest of the Alaska Range from the Canadian border westward to the 62nd parallel of latitude to the Bering Sea, where salmon are important in the diet of *Ursus arctos*, these bears are commonly referred to as brown bears. Brown bears grow relatively large, tend to be less predatory on ungulates, usually occur at high densities, and are highly sought after as trophy species and for viewing and photography. Bears found north of this line in Interior and Arctic Alaska; where densities are lower and which are smaller in size, more predatory on ungulates, and have fewer opportunities to feed on salmon; are referred to as grizzly bears. Brown and grizzly bears are found throughout their historic range in Alaska and may have

expanded their recent historic range in the last few decades into places like the Yukon Flats and lower Koyukuk River.

Although determining precise population size is not possible with techniques currently available, most bear populations are estimated to be stable or increasing based on aerial counts, Capture-Mark-Resight techniques (including DNA), harvest data, traditional knowledge, and evidence of expansion of historic ranges. Throughout most coastal habitats where salmon are abundant, brown bears are abundant and typically exceed 175 bears/1,000 km² (450 bears/1,000 mi²). A population in Katmai National Park on the Alaska Peninsula was measured at 550 bears/1,000 km² (1,420 bears/1,000 mi²). In most interior and northern coastal areas, densities do not exceed 40 bears/1,000 km² (100 bears/1,000 mi²). Mean densities as low as 4 grizzly bears/1,000 km² (12 bears/1,000 mi²) have been measured in the eastern Brooks Range but these density estimates may be biased low and the confidence intervals around the estimates are unknown. Extrapolations from existing density estimates yielded statewide estimate of 31,700 brown bears in 1993, but the estimate is likely to be low.

Although some northern grizzly bear populations have relatively low reproductive rates, most grizzly bear and brown bear populations are capable of sustaining relatively high harvest rates comparable to moose, caribou, sheep, goats, and other big game animals that exist in the presence of natural numbers of large predators in most areas of Alaska. In addition, grizzly bears and brown bears have shown their ability to recover relatively quickly (<15 years) from federal poisoning campaigns during the 1950s and overharvest on the Alaska Peninsula during the 1960s. Biologists were previously concerned about the conservation of brown bears on the Kenai Peninsula and brown bears there were listed by the state as a “species of special concern”. The Department implemented a conservation strategy there through a stakeholder process. In recent years it has become apparent that brown bears remain healthy on the Kenai and the Board and the Department no longer believes there is a conservation concern.

In some areas of the state (e.g. Unit 13) where the Board has tried to reduce grizzly bear numbers with liberal seasons and bag limits for over 15 years, there is no evidence that current increased harvests have affected bear numbers, age structure, or population composition. In areas of Interior Alaska, where access is relatively poor, long conventional hunting seasons and bag limits of up to 2 bears per year have not been effective at reducing numbers of grizzly bears. In these areas, most biologists believe that as long as sows and cubs are protected from harvest it will not be possible to reduce populations enough to achieve increases in recruitment of moose.

Black bears

American black bears (*Ursus americanus*) are generally found in forested habitats throughout the state. Like brown and grizzly bears, black bears also occupy all of their historic ranges in Alaska and are frequently sympatric with grizzly and brown bears. Because they live in forested habitats it is difficult to estimate population size or density. Where estimates have been conducted in interior Alaska, densities ranged from 67 bears/1,000 km² (175 bears/1,000 mi²) on the Yukon Flats to 289 bears/1,000 km² (750 bears/1,000 mi²) on the Kenai Peninsula. In coastal forest habitats of Southeast Alaska’s Alexander Archipelago black bear densities are considered high. A 2000 estimate for Kuiu Island was 1,560 black bears/1,000 km² (4,000 black bears/1,000 mi²).

In most areas of the state, black bears are viewed primarily as food animals, but they are also important as trophy animals, predators of moose calves, and for their fur. The Board recently classified black bears as furbearers, recognizing the desire of people to use black bear fur as trim on clothing, to enhance the value of black bears, and to enable the Board and the Department to use foot-snares in bear management programs. The classification of black bears as a furbearer has legalized the sale of some black bear hides and parts (except gall bladders), and has thus made regulations in Alaska similar to those in northern Canada in this regard.

Black bears exhibit higher reproductive rates than brown and grizzly bears. In all areas of the state black bear populations are healthy and can sustain current or increased harvest levels. However, hunting pressure on black bears in some coastal areas like Game Management Unit (GMU) 6 (Prince William Sound), GMU 2 (Prince of Wales Island) and parts of GMU 3 (Kuiu Island) may be approaching or have exceeded maximum desired levels if trophy quality of bears is to be preserved, and are the subjects of frequent regulatory adjustments.

In some other parts of the state, deliberately reducing black bear numbers to improve moose calf survival has proven to be difficult or impossible with conventional harvest programs. The Board has had to resort to more innovative regulations promoting baiting and trapping with foot snares. The Department has also tried an experimental solution of translocating bears away from an important moose population near McGrath (GMU 19D) to determine if reduced bear numbers could result in significant increases in moose numbers and harvests. The success of the McGrath program has made it a potential model for other small areas around villages in Interior Alaska, if acceptable relocation sites are available.

Guiding Principles

The Board of Game and the Department will promote regulations and policies that will strive to:

1. Manage bear populations to provide for continuing sustained yield, while allowing a wide range of human uses in all areas of the state.
2. Continue and, if appropriate, increase research on the management of bears and on predator/prey relationships and methods to mitigate the high predation rates of bears on moose calves in areas designated for intensive management.
3. Continue to provide for and encourage non-consumptive use of bears without causing bears to become habituated to human food.
4. Favor conventional hunting seasons and bag limits to manage bear numbers.
5. Encourage the human use of bear meat as food.
6. Employ more efficient harvest strategies, if necessary, when bear populations need to be substantially reduced to mitigate conflicts between bears and people.
7. Primarily manage most brown bear populations to maintain trophy quality, especially in Game Managements 1 through 6, and 8 through 10.
8. Work with the Department to develop innovative ways of increasing bear harvests if conventional hunting seasons and bag limits are not effective at reducing bear numbers to mitigate predation on ungulates or to deal with problem bears.
9. Simplify hunting regulations for bears, and increase opportunity for incidental harvest of grizzly bears in Interior Alaska by eliminating resident tag fees.

10. Recognize the increasing value of brown bears as a trophy species and generate increased revenue from sales of brown bear tags.
11. Review and recommend revision to this policy as needed.

Conservation and Management Policy

The Board and the Department will manage bears differently in different areas of the state, in accordance with ecological differences and the needs and desires of humans. Bears will always be managed on a sustained yield basis. In some areas, such as the Kodiak Archipelago, portions of Southeast Alaska and the Alaska Peninsula, brown bears will generally be managed for trophy-hunting and viewing opportunities. In Southeast Alaska and Prince William Sound, black bears will generally be managed as a trophy species, food animals, or for viewing opportunities. In Interior and Arctic Alaska, black bears and grizzly bears will be managed primarily as trophy animals, food animals, and predators of moose and caribou. However in some parts of Interior Alaska, the Board may elect to manage populations of black bears primarily as furbearers.

Monitoring Harvest and Population Size

The Board and the Department recognize the importance of monitoring the size and health of bear populations on all lands in Alaska to determine if bear population management and conservation goals are being met. In areas where monitoring bear numbers, population composition, and trophy quality is a high priority, sealing of all bear hides and skulls will be required. At the present time, all brown and grizzly bears harvested under the general hunting regulations must be inspected and sealed by a Department representative. Where monitoring bear numbers and harvests is a lower priority, harvest may be monitored using harvest tickets or subsistence harvest surveys.

Harvest of black bears will generally be monitored either with harvest tickets or sealing requirements. Where harvests are near maximum sustainable levels or where the Department and the Board need detailed harvest data, sealing will be required.

Large areas of the state have subsistence brown/grizzly bear hunts with liberal seasons and bag limits, mandatory meat salvage, and relaxed sealing requirements. The Department will continue to accommodate subsistence needs.

Bear viewing also is an important aspect of bear management in Alaska. Increasing interest in watching bears at concentrated feeding areas such as salmon streams and sedge flats, and clam flats is challenging managers to find appropriate levels and types of human and bear interactions without jeopardizing human safety. Bear hunting and viewing are compatible in most situations.

Nothing in this policy affects the authority under state or federal laws for an individual to protect human life or property from bears (5 AAC 92.410). All reasonable steps must be taken to protect life and property by non-lethal means before a bear is killed.

Managing Predation by Bears

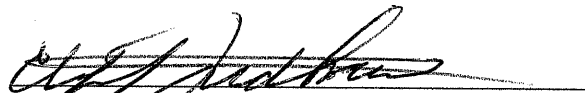
In order to comply with the AS 16.05.255 the Board and Department may implement management actions to reduce bear predation on ungulate populations. The Board may elect to work with the Department to remove individual problem bears or temporarily reduce bear populations in Game Management Units, Subunits, or management areas. The Board and the Department may also need to reduce bear predation on ungulates to provide for continued sustained yield management or conservation of ungulates. In addition, it may be necessary for the Department to kill problem bears to protect the safety of the public under AS 16.05.050 (a) (5). In some cases the Board may direct the Department to prepare a Predation Control Areas Implementation Plan (5 AAC 92.125 or 92.126) or in other cases the Board may authorize extensions of conventional hunting seasons, or implement trapping seasons to aid in managing predation on ungulates.

To comply with AS 16.05.255 to maintain sustained yield management of wildlife populations, or to prevent populations of ungulates from declining to low levels, the Board may selectively consider changes to regulations allowing the public to take bears, including allowing the following:

- Baiting of bears
- Trapping, using foot-snares, for bears under bear management or predator control programs.
- Incidental takes of brown or grizzly bears during black bear management or predator control programs.
- Use of communications equipment between hunters or trappers.
- Sale of hides and skulls as incentives for taking bears.
- Diversionary feeding of bears during ungulate calving seasons.
- Use of black bears for handicraft items for sale, except gall bladders.
- Use of grizzly bears for handicraft items for sale, except gall bladders.
- Taking of sows accompanied by cubs and cubs.
- Same-day-airborne taking.
- Aerial shooting of bears by department staff
- Suspension or repeal of bear tag fees.
- Use of helicopters.

The Board intends that with the exception of baiting, the above-listed methods and means will be authorized primarily in situations that require active control of bear populations, and only for the minimum amount of time necessary to accomplish management objectives. The Board allows baiting of black bears as a normal method of take in broad areas of the state, and will consider allowing brown bear baiting as a normal method of take in select areas.

Vote: 7-0
March 9, 2012
Anchorage, Alaska


Cliff Judkins, Chairman
Alaska Board of Game

**Findings for the Alaska Board of Game
2012-197-BOG
Units 9B, 17, 18, 19A, and 19B (Mulchatna Caribou Herd)
Intensive Management Supplemental Findings
March 9, 2012**

The Board of Game finds as follows: based on information provided by Department staff, Alaska residents, and users of caribou in Subunits 9B, 17B, 17C, 19A, and 19B. These findings are supplemental to the findings set forth in 5AAC 92.108 and 92.125.

1. The Mulchatna Caribou Herd (MCH) in Units 9B, 17, 18, 19A, and 19B has been identified by the Board as a herd that is important for providing high levels of human consumptive use. The Board established an intensive management population objective of 30,000 - 80,000 caribou and an intensive management harvest objective of 2,400 – 8,000 caribou annually for the MCH.
2. The most recent minimum population size estimate for the MCH indicates that the herd contained between 30,000 and 40,000 caribou in 2008, which is at the lower limit of the intensive management population objective of 30,000 - 80,000 caribou.
3. The harvestable surplus of MCH caribou in Units 9B, 17, 18, 19A, and 19B, as described in 5 AAC 92.106(3)(A), is currently estimated to be 1,050 caribou annually, which is less than intensive management harvest objective established by the Board of 2,400 – 8,000 caribou annually.
4. The cause of the decline of the MCH caribou population in Units 9B, 17, 18, 19A, and 19B is not known with certainty but was likely due to weather-related and/or density-dependent factors that resulted in range limitations and disease that caused low pregnancy, low calf production and low calf survival. The poor recruitment also affected a shift in the population's age structure toward older-aged individuals that was not conducive for population growth. The density-dependent factors affecting population growth have become less important in limiting population growth as the number of MCH has declined to 15% of peak numbers. Nutritional indices (pregnancy rates, calf weights, and the prevalence of disease) have improved, and the population's age should no longer be skewed to older animals.
5. The importance of predation in affecting population growth harvest has increased the current low population size. The poor survival of calves and calf recruitment currently observed can be reasonably attributed to the influence of predation on caribou calves. A caribou calf mortality study conducted in May and June 2011 found that predation by bears and wolves accounted for 89% of the of calves that died between birth and 1 month of age. Fall calf:cow ratios in the MCH have averaged 22 calves:100 cows since 2005.
6. The low MCH caribou calf recruitment in Units 9B, 17, 18, 19A, and 19B has prevented recovery of the bull:cow ratio to objectives (3-year average bull:cow ratio = 19 bulls:100 cows between 2009 and 2011), a decrease in the number of harvestable caribou, a

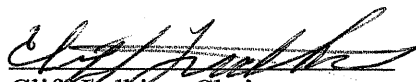
complete closure of the nonresident season (closed in 2009), and season and bag-limit restrictions for resident hunters. The reduced recruitment and low bull numbers have resulted in a failure to provide for human needs.

7. The intensive management harvest objectives for the MCH in Units 9B, 17, 18, 19A, and 19B will not be achieved in the near future unless action is taken to improve calf survival and recruitment.
8. Increases in caribou recruitment and abundance in the MCH are achievable utilizing the recognized and prudent active management technique of predator control.
9. The harvest objectives have not been achieved, at least in part, because wolf and brown bear predation have been important causes of mortality in the population. Objectives are unlikely to be achieved in the foreseeable future unless predator control is conducted. Population objectives are currently being met, however, low recruitment precludes this population from meeting harvest objectives.
10. Reducing predation can reasonably be expected to achieve a sex and age structure that will sustain the population, provide for harvest, and allow growth toward objectives.

Vote: 7-0

March 9, 2012

Fairbanks, Alaska


Cliff Judkins, Chairman
Alaska Board of Game

Findings for the Alaska Board of Game
2011-189-BOG
Subunits 9C and 9E (Northern Alaska Peninsula Caribou Herd)
Intensive Management Supplemental Findings
March 30, 2011

The Board of Game finds as follows, based on information provided by Department staff, Alaska residents and other users of caribou in Subunits 9C and 9E. These findings are supplemental to the findings set forth in 5AAC 92.108 and 5AAC 92.125.

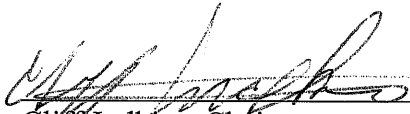
1. The Northern Alaska Peninsula (NAP) caribou herd in Subunits 9C and 9E has been identified by the Board as a herd that is important for providing high levels of human consumptive use. The Board established an intensive management population objective of 6,000 - 15,000 caribou and an intensive management harvest objective of 800 - 1,500 caribou annually for the NAP.
2. The population size of the Northern Alaska Peninsula (NAP) caribou herd in Subunits 9C and 9E is currently estimated to be 2,000 – 2,500 caribou, which is lower than the intensive management population size objective of 6,000 – 15,000 caribou. The population size objective had not been achieved during the past 8 years.
3. The harvestable surplus of NAP caribou in Subunits 9C and 9E, as described in 5 AAC 92.106(3)(A), is currently estimated at zero, which is less than the harvest objective of 800 – 1,500. The harvest objective has not been achieved during the last 14 years.
4. The NAP caribou population in Subunits 9C and 9E remains depleted due, in part, to poor calf survival. Since 2007 more than 60% of the caribou calve on Refuge lands managed by the US Fish and Wildlife Service. The remaining 40% of the caribou calve on state lands that are traditional calving areas for the NAP herd. The poor survival of calves on all lands has resulted in low calf recruitment, which is measured in the fall using calf:cow ratios. Fall calf:cow ratios in the NAP have ranged between 7 to 18 calves per 100 cows since 2003.
5. The low NAP caribou calf recruitment in Subunits 9C and 9E has resulted in a low bull:cow ratio (25 bulls per hundred cows), a lack of harvestable caribou, and a complete hunting closure since 2005. The absence of caribou harvest from the NAP has resulted in a failure to provide for human needs including subsistence needs.
6. Recovery of the NAP in Subunits 9C and 9E will be prolonged unless action is taken to improve calf survival and recruitment. Because the majority of calves are born on Refuge lands managed by the US Fish and Wildlife Service management actions designed to significantly increase calf survival should be conducted on both state and Refuge lands.

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7. The population and harvest objectives have not been achieved, at least in part, because wolf and brown bear predation have been important causes of mortality in the population. Objectives are unlikely to be achieved in the foreseeable future unless predator control is conducted.
8. Increases in caribou recruitment and abundance in the NAP are achievable utilizing the recognized and prudent active management technique of predator control, as has recently been shown for the adjacent Southern Alaska Peninsula caribou herd.
9. Reducing predation can reasonably be expected to achieve a sex and age structure that will sustain the population, provide for harvest, and allow growth toward objectives.
10. Recent actions by the US Fish and Wildlife Service to prevent the State of Alaska from exercising its authority to manage wolf predation on Unimak Island on US Fish and Wildlife Service lands that are part of the Alaska Maritime National Wildlife Refuge to correct the severe population decline of the Unimak Caribou Herd demonstrate the likelihood that the US Fish and Wildlife Service will continue to prevent the State of Alaska from actively managing wolf predation to restore subsistence harvest opportunity on Refuge lands and prevent the State of Alaska from fulfilling its mission to conserve, protect, and enhance wildlife resources within the State of Alaska.
11. Given the importance the NAP for subsistence use and human consumptive use and the lack of cooperation demonstrated by the US Fish and Wildlife Service to restore harvest opportunity on Unimak Island, the Board requests that the Department act as quickly as possible to reduce wolf predation on caribou on all lands in the range of the NAP herd including lands in Subunits 9C and 9E.
12. Because active management to reduce wolf predation using fixed-wing aircraft or helicopters is limited to state lands and any efforts on Refuge lands are likely to be ground based efforts by hunters and trappers under general hunting and trapping regulations, the program is not expected to achieve the same level of success in increasing caribou survival and recruitment compared to the implementation of a program to actively manage wolf predation on both state and Refuge lands.
13. Despite the reduced expectation of success in improving the overall calf survival and recruitment in the herd if active management of wolf predation is limited to state lands, an increase in caribou survival and recruitment may be achieved for a group or groups of caribou while occupying state lands.
14. The objective of the Northern Alaska Peninsula predation management program is to achieve a sex and age structure that will sustain a group or groups of caribou within the range of the NAP herd, to restore harvest, and to maintain the herd at a size that will allow for future population growth towards identified population and harvest objectives.

15. The immediate goal of the Northern Alaska Peninsula predation management program is to reduce the number of wolves on state lands to improve caribou survival and recruitment in any group or groups of caribou within the Northern Alaska Peninsula predation management area, and to attempt to achieve some reduction in wolf numbers on Refuge lands through increased trapping and hunting harvest opportunity.

Vote: 6-0-1
March 30, 2011
Anchorage, Alaska



Cliff Judkins, Chairman
Alaska Board of Game

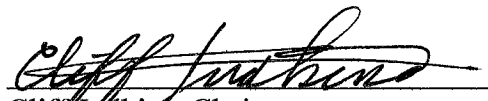
**Findings for the Alaska Board of Game
2011-188-BOG
Units 9B, 17, 18, and 19B (Mulchatna Caribou Herd)
Intensive Management Supplemental Findings
March 30, 2011**

The Board of Game finds as follows, based on information provided by Department staff; Alaska residents and users of caribou in Subunits 9B, 17B, and 17C. These findings are supplemental to the findings set forth in 5AAC 92.108.

1. The Mulchatna Caribou Herd (MCH) in Units 9B, 17, 18, and 19B has been identified by the Board as a herd that is important for providing high levels of human consumptive use. The Board established an intensive management population objective of 30,000 - 80,000 caribou and an intensive management harvest objective of 2,400 – 8,000 caribou annually for the MCH.
2. The most recent minimum population size estimate for the MCH indicates that the herd contained between 30,000 and 40,000 caribou in 2008, which is at the lower limit of the intensive management population objective of 30,000 - 80,000 caribou.
3. The harvestable surplus of MCH caribou in Units 9B, 17, 18, and 19B, as described in 5 AAC 92.106(3)(A), is currently estimated to be 1,050 caribou annually, which is less than intensive management harvest objective established by the Board of 2,400 – 8,000 caribou annually.
4. The cause of the decline of the MCH caribou population in Units 9B, 17, 18, and 19B is not known with certainty but was likely due to weather-related and/or density-dependant factors that resulted in range limitations and disease that caused low pregnancy, low calf production and low calf survival. The poor recruitment also affected a shift in the population's age structure toward older-aged individuals that was not conducive for population growth. The density-dependant factors affecting population growth has become a less important in limiting population growth as the number of MCH caribou declined as evidenced by improved nutritional indices. Nutritional indices (pregnancy rates, calf weights, and the prevalence of disease) have improved as the number of caribou in the MCH declined, and the population's age structure has progressively improved.
5. The importance of predation in affecting population growth and recovery has increased as population size decreased. The poor survival of calves and calf recruitment currently observed can be reasonably attributed to the influence of predation on caribou calves. Fall calf:cow ratios in the MCH have averaged 22 calves:100 cows since 2005.
6. The low MCH caribou calf recruitment in Units 9B, 17, 18, and 19B has resulted in a low bull:cow ratio (17 bulls per hundred cows in 2010), a decrease in the number of harvestable caribou, a complete closure of the nonresident season in 2009, and season and bag-limit restrictions for resident hunters. The reduced bull recruitment and bull numbers have resulted in a failure to provide for human needs.

7. The intensive management harvest objectives for the MCH in Units 9B, 17, 18, and 19B will not be achieved in the near future unless action is taken to improve calf survival and recruitment.
8. Increases in caribou recruitment and abundance in the MCH are achievable utilizing the recognized and prudent active management technique of predator control.
9. The population and harvest objectives have not been achieved, at least in part, because wolf and brown bear predation have been important causes of mortality in the population. Objectives are unlikely to be achieved in the foreseeable future unless predator control is conducted.
10. Reducing predation can reasonably be expected to achieve a sex and age structure that will sustain the population, provide for harvest, and allow growth toward objectives.

Vote: 6-0-1
March 30, 2011
Anchorage, Alaska


Cliff Judkins, Chairman
Alaska Board of Game

**Findings for the Alaska Board of Game
2011-187-BOG
Unit 16 Predation Control Area for Moose
Intensive Management Supplemental Findings
March 30, 2011**


The Board of Game finds as follows, based on information provided by Department staff; Alaska residents and users of moose in Game Management Unit 16. These findings are supplemental to the findings set forth in 5AAC 92.108.

1. The moose in Unit 16B have been identified by the Board as a population that is important for providing high levels of human consumptive use. The Board established an intensive management population objective of 6,500 - 7,500 moose and an intensive management harvest objective of 310 - 600 moose annually for Unit 16B.
2. The most recent population size estimate for the moose in Unit 16B indicates that the population contained 5,800 moose, which is lower than the intensive management population objective of 6,500 - 7,500 moose.
3. The harvestable surplus of moose in Unit 16B, as described in 5 AAC 92.106(3)(A), is currently estimated to be 250 moose annually, which is less than intensive management harvest objective established by the Board of 310 - 600 moose annually.
4. The moose population in Unit 16B likely declined due to deep snow that was wide-spread and persisted for several months during the winters of 1983 and 1989. These deep snow events resulted in poor survival and low calf recruitment during those years, which instigated the population's decline. Poor calf recruitment currently limits population recovery and is not limited by range limitations evidenced by good pregnancy rates, high twinning rates, calf weights, and rump-fat measurements.
5. Predation on moose calves in Unit 16B is an important factor limiting population growth and recovery. Fall calf:cow ratios range between 11 - 19 calves:100 cows in 2008 to 2010. Research studies into the causes of moose calf mortality in Unit 16B have identified predation by black bears and brown bears as the primary factor limiting calf survival and recruitment.
6. The active wolf predation reduction program has resulted in an increased overwinter survival of moose in Unit 16B. Overwinter survival of moose calves increased from 60 percent prior to the start of wolf control activities to 88 percent after wolf control was initiated in 2004. Survival of yearlings and adults is also very high and exceeds pre-control levels.
7. Because adult moose that rut and calve in Unit 16B migrate into Unit 16A during winter months, it is necessary to manage wolf populations in Unit 16A to reduce predation on moose during winter months when there is a need to increase moose harvest opportunity in Unit 16B.
8. The low calf survival and recruitment in Unit 16B has resulted in a decrease in the number of harvestable moose, a complete closure of the nonresident season in 2001-2010, and season and

bag-limit restrictions for resident hunters. The reduced bull recruitment and bull numbers have resulted in a failure to provide for human needs.

9. The intensive management harvest objectives for moose in Unit 16B will not be achieved in the near future unless action is taken to improve calf survival and recruitment.
10. Increases in moose recruitment and abundance in Unit 16B are achievable utilizing the recognized and prudent active management technique of predator control.
11. The population and harvest objectives have not been achieved, at least in part, because wolf, black bear, and brown bear predation have been important causes of mortality in the population. Objectives are unlikely to be achieved in the foreseeable future unless predator control is conducted.
12. Reducing predation can reasonably be expected to achieve a sex and age structure that will sustain the population, provide for harvest, and allow growth toward objectives.

Vote: 5-1-1
March 30, 2011
Anchorage, Alaska



Cliff Judkins, Chairman
Alaska Board of Game

**Findings of the Alaska Board of Game
2011-185-BOG**

**BOARD OF GAME WOLF MANAGEMENT POLICY
(Policy duration: Date of finding through June 30, 2016.
This policy supersedes BOG policy 82-31-GB)**

Background and Purpose

Alaskans are proud that wolves occur throughout their historic range in Alaska. Wolves are important to people for a variety of reasons, including as furbearers, big game animals, competitors for ungulate prey animals, and as subjects of enjoyment, curiosity, and study. Wolves are important components in the natural functioning of northern ecosystems. Over time, many people have come to appreciate wolves as exciting large carnivores that contribute significantly to the quality and enjoyment of life in Alaska.

The primary purpose of this policy is to provide guidance to the public, the Department, and the Board of Game on wolf management issues as the Board and the Department implement constitutional and statutory direction and respond to public demands and expectations. The Board recognizes the need for ongoing responsible wolf management to maintain sustainable wolf populations and harvests, and to help maintain sustainable ungulate populations upon which wolves are largely dependent. The Board also recognizes that when conflicts arise between humans and wolves over the use of prey, wolf populations may have to be managed more intensively to minimize such conflicts and comply with existing statutes (e.g. AS 16.05.255). Under some conditions, it may be necessary to greatly reduce wolf numbers to aid recovery of low prey populations or to arrest undesirable reductions in prey populations. In some other areas, including national park lands, the Board also recognizes that non-consumptive uses of wolves may be considered a priority use. With proper management, non-consumptive and consumptive uses are in most cases compatible but the Board may occasionally have to restrict consumptive uses where conflicts among uses are frequent.

Wolf/Human Use Conflicts

Conflicts may exist between wolves and humans when priority human uses of prey animals cannot be reasonably satisfied. In such situations, wolf population control will be considered. Specific circumstances where conflicts arise include the following:

1. Prey populations or recruitment of calves into populations are not sufficient to support existing levels of existing wolf predation and human harvest;
2. Prey populations are declining because of predation by wolves or predation by wolves in combination with other predators;
3. Prey population objectives are not being attained; and
4. Human harvest objectives are not being attained.

Wolf Management and Wolf Control

The Board and the Department have always distinguished between wolf management and wolf control. Wolf management involves managing seasons and bag limits to provide for general public hunting and trapping opportunities. These seasons provide for both subsistence and other traditional economic harvest opportunities and, as a side benefit, allow for participants to directly aid in mitigating conflicts between wolves and humans or improving ungulate harvest levels. In most cases, seasons will be kept to times when wolf hides are prime. However, some hunters are satisfied to take wolves during off-prime months including August, September and April, and opportunity may be allowed for such harvest.

Wolf control is the planned, systematic regulation of wolf numbers to achieve a temporarily lowered population level using aerial shooting, hiring trappers, denning, helicopter support, or other methods which may not normally be allowed in conventional public hunting and trapping. The purpose of wolf control is not to eradicate wolf populations. Under no circumstances will wolf populations be eliminated or reduced to a level where they will not be able to recover when control efforts are terminated, and wolves will always be managed to provide for sustained yield.

In some circumstances it may be necessary to temporarily remove a high percentage (>70%) of wolf populations to allow recovery of prey populations. In other situations, it may be necessary to temporarily remove a smaller percentage of wolf populations (40-70%) to allow prey populations to increase or meet human harvest objectives. Once prey population objectives have been met, wolf populations will generally be allowed to increase to or above pre-control levels.

During the 1997 review of predator control in Alaska by the National Research Council of the National Academy of Sciences (National Research Council 1997), only two clearly successful cases were found where increased harvests of ungulates resulted from control in the Yukon and Alaska. In the last 13 years since that review, several other programs have been successful, including programs in GMUs 9, 13, 16 and 19. In addition, there is now a thirty year history of intensive wolf and moose management and research, including 2 periods of wolf control in GMU 20A. It is clear, and well documented, that periodic wolf control has resulted in much higher harvests of moose than could be realized without control (Boertje et al., 2009). Biologists now have considerable experience successfully managing moose at relatively high density (Boertje et al., 2007). The GMU 20A case history has provided a great deal of information on what biologists can expect from intensive management programs and these programs are scientifically well founded. However, GMUs are different ecologically and new information on which areas are best suited to intensive management programs will continue to be gathered.

Decisions by the Board to Undertake Wolf Control

Generally, there are two situations under which the Board will consider undertaking wolf control (implementing extraordinary measures outside normal hunting and trapping). In rare cases, control may be implemented where sustained yield harvests of ungulates cannot be maintained or where extirpation of ungulate populations may be expected. More commonly, the Board may implement wolf control to comply with Alaska Statutes (AS 16.05.255) where ungulate populations are declared "depleted" or where ungulate harvests must be significantly reduced and these

populations have been found by the Board to be important for “high levels of human harvest”. In most cases when wolf control is implemented, the Board will favor and promote an effective control effort by the public. Experience has shown that often a joint effort by the public and the Department has been most effective. However, the Board recognizes that there are areas and situations where the public cannot effectively or efficiently control predation and that the Department may, under its own authority and responsibilities, conduct the necessary wolf population control activities. Such situations arise in part because public effort to take wolves tends to diminish before an adequate level of population control is achieved. In areas where wolf reduction is being conducted, ungulate and wolf surveys should be conducted as frequently as necessary to ensure that adequate data are available to make management decisions and to ensure that wolf numbers remain sufficient to maintain long-term sustained yield harvests.

Methods the Board Will Consider When Implementing Wolf Control Programs

- 1) Expanding public hunting and trapping into seasons when wolf hides are not prime.
- 2) Use of baiting for hunting wolves.
- 3) Allowing same-day-airborne hunting of wolves when 300 ft from aircraft.
- 4) Allowing land-and-shoot by the public.
- 5) Allowing aerial shooting by the public.
- 6) Allowing use of Department staff and helicopters for aerial shooting.
- 7) Encouraging the Department to hire or contract with wolf trappers and other agents who may use one or more of the methods listed here.
- 8) Allowing denning by Department staff and use of gas for euthanasia of sub-adults in dens.

Terminating Wolf Control

Depending on the response to wolf control and ungulate population and harvest objectives, control may either be of short or long duration. In some cases, control may last less than five years. In other cases it may be an ongoing effort lasting many years. As ungulate harvest objectives are met, the Board will transition from a wolf control program to a wolf management program, relying to a greater extent on public hunting and trapping. In cases where ungulates respond very well and hunting is ineffective at controlling ungulate numbers for practical reasons, it may be necessary for the Board to restrict the taking of predators.

References Cited

- Boertje, Rodney D.; Valkenburg, Patrick, and McNay, Mark E. 1996. Increases in moose, caribou, and wolves following wolf control in Alaska. *Journal of wildlife management*. 1996; 60(3):474-489.
- Boertje, R. D., K. K. Kellie, C. T. Seaton, M. A. Keech, D. D. Young, B. W. Dale, L. G. Adams, A. R. Aderman. 2007. Ranking Alaska moose nutrition: signals to begin liberal antlerless moose harvests. *Journal of Wildlife Management* 71(5): 1494-1506.
- Boertje, R. D., M. A. Keech, D. D. Young, K. A. Kellie, and C. T. Seaton. 2009. Managing for elevated yields of moose in Alaska. *Journal of Wildlife Management* 73 (3): 314-327.

National Research Council. 1997. Wolves, bears, and their prey in Alaska. National Academy Press, Wash., D.C.

Vote: 6-0-1

March 25, 2011

Anchorage, Alaska



Cliff Judkins, Chairman
Alaska Board of Game

**Findings of the Alaska Board of Game
2011-184-BOG**

**Game Management Unit 13
Caribou and Moose Subsistence Uses**

These findings supplement 2006-170-BOG as to uses of Nelchina caribou and Unit 13 moose. In the 2006 finding, the Board indentified the specific pattern of subsistence uses upon which the positive customary and traditional use finding for Nelchina caribou and Unit 13 moose, set forth in 5 AAC 99.025, were based. This pattern of uses originated within the communities of the indigenous Ahtna Athabascan inhabitants of the Copper River Basin. Among other things, the findings emphasized the “community-based” nature of this traditional pattern of use. As described in those findings, this community-based subsistence pattern:

- Links families in widespread networks of sharing that are shaped by traditional norms of behavior;
- Provides a context in which skills, knowledge, and values are passed across generations; is accomplished efficiently with thorough, non-wasteful use of the harvested game and often by hunters who specialize in harvesting meat for the community; and
- Occurs within a broader pattern of use of and dependence upon a variety of locally-harvested wild foods that is a key element of the way of life of the local area.

The board has also noted that this community-based pattern as established by the Ahtna has been adopted and modified by other local settlers and, to a more limited degree, by other Alaska residents. This community-based, local use pattern was contrasted to a largely nonlocal, Rail belt based pattern that was probably most properly characterized as a non-subsistence use pattern. Thus, the 2006 findings addressed and discussed two basic use patterns for Nelchina caribou and Unit 13 moose.

The Board finds that there is need to recognize the range of uses within the previously-described subsistence use pattern that have developed as individuals, families, and other social groups, both within and outside the local area, have adapted to changing economic, demographic, and cultural conditions. Differences have developed concerning the level of organization of subsistence uses of Nelchina caribou and Unit 13 moose, such that the traditional uses are practiced among households and families in addition to the community-based pattern established by the Ahtna. The Ahtna community-based pattern persists within close-knit communities that are also widespread both within and outside the basin. Other basin residents and some nonlocal residents who are not part of the traditional Ahtna community engage in subsistence uses at a more individual, household, or extended family level. Both sub-patterns exhibit, with some variation, most of the criteria listed in 5 AAC 99.010(b), but different regulatory options may be necessary to provide reasonable opportunities for each. The range of uses that characterize these sub-patterns are as follows.

Since the beginning of the towns and settlement areas within the range, or with easy access to, the Nelchina Caribou Herd and Unit 13 moose, individuals, households, and families from

those towns and settlements have hunted the herd to provide for their basic necessities of life, especially food, and not just for recreational or trophy purposes. This relatively small use is not community based in nature, in that these individuals, households, and families are not linked to extensive networks of cooperation and sharing or are not part of larger social groups that organize and promote traditional knowledge and behavior, but is focused primarily on procuring food and has, as of the date of these findings, existed now for at least three generations in some of these areas. As set forth in greater detail below, this use has at least a few identifiable characteristics which separate it from the larger Rail belt based, non-subsistence use patterns.

Since at least the early 1930's, hunting of the Nelchina Caribou Herd and Unit 13 moose have been regulated by season and bag limits. Nonlocal hunters interviewed in the 1980's by the Subsistence Division of ADF&G confirmed that most hunt in the fall, with fewer participating in winter hunts. All hunters currently tend to focus their harvest efforts during the late summer and early fall, when caribou and moose are in their best physical condition and relatively accessible from the road system. Winter hunts have been an important back-up opportunity for the community based subsistence use pattern described in the 2006 findings, and may also be relied on by other subsistence users, to a somewhat lesser extent. The winter hunts do not appear to be important to non-subsistence users.

Regarding efficiency of hunting effort, the Board has not been presented with any information that would distinguish non-local subsistence users from other users based primarily from the Rail belt. Compared to community-based and other local users who hunt close to home, non-local users tend to travel greater distances (typically 200-300 miles), thereby incurring greater costs, to harvest Nelchina caribou and Unit 13 moose, making their use less efficient. However, data from the 1980's illustrates that even non-local subsistence users tend to hunt in the areas most accessible to their communities. Thus, Fairbanks-area hunters tended to hunt near the Denali Highway, and Anchorage-area hunters tended to hunt near the Glenn Highway. Also, efficiency by non-community based subsistence users may be fostered to some extent by limiting hunting to a few well-known areas year after year, within relatively easy, and predictably economical, reach of participants.

Non-local subsistence users of the Nelchina Caribou Herd and Unit 13 moose and others who are not organized at the community-level have testified, and Board members know from experience, that they prefer to return year-by-year to one or more well-known and long-established camping/hunting sites. These are traditional "caribou," "moose," or "caribou and moose" camps for these individuals and their families. If caribou or moose are not obtained during these forays, chances are they will not be obtained at all because subsistence users, unlike non-subsistence users, tend not to travel around the state to experience a wide variety of hunting opportunities. Unlike subsistence users who are organized at the community level, many other users tend to travel further into the backcountry, away from major roads and rivers, often using off-road vehicles to get to the remotest locations possible.

The Board has not been presented with any information that would distinguish the handling, preparing, preserving, and storing techniques used by individuals, households, families outside the traditional community-based context to distinguish them from their neighbors who hunt for recreation. Most users of Nelchina caribou and Unit 13 moose based along the Rail belt

freeze their harvested meat and use modern methods of handling, preparing, preservation, and storage. Compared to those who follow traditions established by the Ahtna and adopted by some other users, there is less use of organ meats, and almost no use of the hide and bones; and the roles in handling and preparing harvested animals are less formal and not based on longstanding, widely-understood rules of proper behavior towards the animals taken, as is the case for those who follow the Ahtna, community-based traditions.

Because households and families engaged in subsistence uses tend to hunt from long-established, multi-generational camps, lore about how and where to hunt is handed down from generation to generation. This intergenerational transmission of knowledge is less formalized than the way knowledge is passed on within the Ahtna community based use pattern, but it is more apparent and traditional than is the case for non-subsistence uses, in which knowledge is clearly passed from one generation to the next but very little in the way of a formal and traditional transmission system exists, and knowledge is not necessarily tied to any particular location.

All subsistence users tend to share their harvests within their families and with close friends and, to some extent, this sharing is expected from year to year, and plays parts in traditional meals and celebrations. Non-local hunters interviewed by the Division of Subsistence in the 1980's confirmed that they shared mostly within their own households, while approximately 1/3 also said they shared with friends. Sharing among nonlocal hunters, as well as among some hunters who live in the local area, is less formal than is true under the community based use pattern as practiced by the Ahtna and some other local residents, and community and peer pressure to share is far less pronounced, but it is greater than is generally the case for the non-subsistence uses of Nelchina caribou and Unit 13 moose. Some long-established families living in close proximity to, and with a well-established history of hunting the Nelchina Caribou Herd and Unit 13 moose, do expect that, if a family member successfully harvests a Nelchina caribou, the meat will be shared.

Some nonlocal hunters have testified that, as is generally the case in a subsistence use pattern, they prefer to consume wild foods over purchased foods, and often obtain the majority of their protein needs from Alaska's fish and game resources, as well as pick berries and harvest other wild foods. These preferences are sometimes expressed by non-subsistence hunters as well. Such users often travel to different, favored locations to harvest fish and game and other wild foods, but many of these locations are outside of the range of the Nelchina Caribou Herd and/or Unit 13 moose. Most non-local residents interviewed by the Division of Subsistence in the 1980's reported that moose was more important than caribou in their harvesting priorities, and often travelled to other locations to obtain moose. Locally-based users, on the other hand, tend to concentrate all of their wild food harvests in close proximity to the herd's range, and often try to harvest more than one resource per trip. Non-subsistence users tend to rely on wild foods to a much lesser degree, or not at all, compared to both groups of subsistence users.

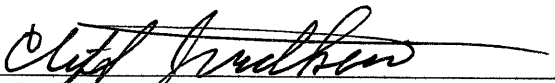
Based on public testimony provided during the Board's last several meetings addressing the Nelchina Caribou Herd, on the Board's own experience, and on the above finding and 2006-170-BOG, the Board, applying its expertise and judgment, concludes that, at most, a few thousand people use the Nelchina Caribou Herd and Unit 13 moose in accordance with the identified subsistence use patterns, and that, therefore, a range of 600-1000 caribou and 300-600

moose are necessary to provide a reasonable opportunity for both identified subsistence uses of this herd. This finding may be updated as appropriate and as additional data on the uses is gathered.

Vote: 6-1

March 7, 2011

Wasilla, Alaska



Cliff Judkins, Chairman
Alaska Board of Game

**Findings for the Alaska Board of Game
2008-176-BOG**

**Units 16A and 16B Intensive Management Supplemental Findings
Mar . 21, 2008**

The Board of Game finds as follows, based on information provided by Department staff, Alaska residents and users of moose in Units 16A and 16B. These findings are supplemental to the findings set forth in 2006-167-BOG, 2006-164-BOG, 5AAC 92.108, and in the predator control implementation plan in 5AAC 92.125(d).

1. The moose population size, currently estimated to be 3193-3951 moose in Unit 16B, is less than the population objective of 6,500-7,500 moose. The population objective has not been achieved for at least the last 11 years.
2. The unit 16B moose harvestable surplus, as described in 5AAC 92.106(3) (A), currently (2008) estimated at 171 bulls, is less than the harvest objective of 310-600 moose. The harvest objective has not been achieved for at least 8 years.
3. The unit 16B moose population is, thus, depleted and reduced in productivity, which has resulted in a significant reduction in the allowable human harvest of the population.
4. Enhancement of abundance or productivity of moose is feasibly achievable utilizing the recognized and prudent active management techniques of predator control.

5. The Board has repeatedly, since 1990 been required to significantly reduce the taking of moose in Unit 16B by restricting harvest, seasons and bag limits as compared to the level and timing of hunting opportunity that was allowed when the population was not depleted and reduced in productivity.
6. The population and harvest objectives have not been achieved, at least in part, because wolf, black and brown bear predation have been important causes of mortality in the population, to the extent that the population is unlikely to recover, and objectives are unlikely to be achieved, in the foreseeable future unless predator control is conducted.
7. Subpopulations of moose from Unit 16B winter in portions of Unit 16A where predation by wolves is an important cause of mortality and objectives are unlikely to be achieved, in the foreseeable future unless predator control is conducted western Unit 16A.
8. Subpopulations of moose from Unit 16B also calve in portions of Unit 16A where predation by wolves and black bears are important causes of mortality to

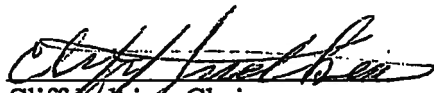
the extent that the population is unlikely to recover, and objectives are unlikely to be achieved, in the foreseeable future unless predator control is conducted.

9. Reducing predation in Units 16A and 16B can reasonably be expected to achieve the population and harvest objectives of moose in Unit 16B.

Vote: 6-0-1

March 21, 2008

Anchorage, Alaska




Cliff Jenkins, Chairman
Alaska Board of Game

Finding for the Alaska Board of Game
2007-173-BOG

Nonresident Drawing Permit Allocation Policy
March 12, 2007

At the March 2007, Southcentral/Southwest Region meeting in Anchorage, the Board of Game modified the Nonresident Drawing Permit Allocation Policy, #2006-162-BOG, by adding item #4 to the guidelines that shall be applied when determining the allocation percentage for drawing permits to nonresidents:

1. Allocations will be determined on a case by case basis and will be based upon the historical data of nonresident and resident permit allocation over the past ten years.
2. Each client shall provide proof of having a signed guide-client agreement when applying for permits.
3. Contracting guides shall be registered in the area prior to the drawing.
4. When a guide signs a guide-client agreement, the guide is providing guiding services and therefore must be registered for the use area at that time.


Cliff Judkins, Chairman
Alaska Board of Game

Vote: 7-0
Amended: March 12, 2007
Anchorage, Alaska

**Findings for the Alaska Board of Game
#2006 – 170 - BOG**

**Game Management Unit 13
Caribou and Moose Subsistence Uses**

Background

Virtually since its inception, the Tier II subsistence permit system has been plagued with public complaints about inequities, unfairness, and false applications. Over the years, the Alaska Board of Game (Board) has amended its regulations numerous times to try to address management and legal problems, but the controversy continues and the system remains rife with problems. Public complaints have been primarily directed at the Tier II permitting system—particularly those near urban areas like the Minto moose hunt and the Nelchina Tier II caribou hunt.

The Board has primarily focused on the Nelchina basin caribou and moose hunts because these have generated the vast majority of the interest and complaints from the general public. In addition, Board members are concerned the hunting patterns no longer meet the Board's intent when these subsistence hunts were originally established in regulation. A review of these hunts question whether the current hunts are consistent with the Board's customary and traditional use findings based on the eight criteria the Joint Boards of Fish and Game established (5 AAC 99.010) for implementing the state subsistence law (AS 16.05.258(a)).

Statistics associated with the Nelchina caribou hunt illustrate some troubling trends. Permits have been slowly shifting away from local Alaskan residents the Board identified as the most dependent on the wildlife resources in the region and towards less subsistence dependent urban residents. Testimony from some local residents of Unit 13 indicated they no longer participated in the state subsistence program. The present Tier II scoring and permit allocation system has made it more difficult for long-time, resource-dependent residents of the area to compete for permits, forcing them to rely more heavily on the federal system to provide for subsistence opportunities. The system also makes it almost impossible for area newcomers and younger Alaskans to ever qualify for the limited permits despite their subsistence dependence on wildlife resources for food. In addition, many of the traditions associated with a subsistence way of life are being sidestepped and avoided, such as the traditional teaching of the art of hunting, fishing and trapping to younger generations; and the processing, utilization, and other long-term social and cultural relationships to the resources being harvested and to the land that produces those resources.

The Board's long-term goal is to design a system to accommodate subsistence-dependent users in such a manner that permits can be virtually guaranteed from year to year. The reliability of available hunting opportunities is critical to the maintenance of the subsistence way of life. This could be similar and complementary to the federal subsistence permit system. The federal program allows any Alaska resident living in the Copper Basin and several communities outside

of GMU 13 to harvest two caribou and one moose per year, there is no limit per household except in Unit 13(E) for moose, harvest of caribou by gender is also generally unrestricted in units 13(A) and 13(B), and moose hunters may only take any antlered bull under the federal system.

Bag limits may not be accumulated across both state and federal systems, so hunters can take a total of only one moose and two caribou for the year. State regulations allow all Alaskan residents to harvest a bull moose with spike-fork or 50-inch antlers or antlers with 4 brow tines on at least one side from September 1 – 20. In addition, up to 150 Tier II permits are issued for any bull moose, August 15 – 31, with only one permit being allowed per household. The moose seasons for federally qualified users on federally-managed lands are much longer from August 1 – September 20.

Under the state system, all caribou permits are issued under Tier II regulations and were limited to 3 per household. The Board recently changed the limit to 2 per household. The bag limit is one caribou, although in recent years, harvest under state regulation has been limited to bulls only. The caribou season for federally qualified users on federal land is 10 days longer in the fall, ending September 30 rather than September 20.

State regulations do not jeopardize a qualified federal subsistence hunter from hunting under a federal permit. However, if there are too many state applicants, controlling statutes mandate that permits be issued under the Tier II criteria, with all of its attendant problems.

The Board intends to explore subsistence hunt provisions that reflect and accommodate the customary and traditional use patterns of Nelchina caribou and moose in Game Management Unit (GMU) 13, while distinguishing those uses from other uses.

In accordance with the Joint Boards of Fisheries and Game eight criteria for implementing the state subsistence law, the following findings are made:

Findings

When the Board originally determined there were customary and traditional uses of the Nelchina Caribou Herd and moose in GMU 13, it recognized these subsistence uses were established by Ahtna Athabascan communities within the Copper River basin, and were later adopted by other Alaska residents. Due to the importance of, and high level of competition for subsistence permits in this area, the Board has undertaken, as precisely as possible, the task to identify the particular characteristics of these customary and traditional use patterns. Although they have changed over time due to limited access associated with demographic, economic, and technological factors, the patterns are characterized by traditional fall and winter hunting seasons, efficient methods and means, thorough use of most of the harvested animal, harvest areas traditionally associated with local communities, traditions about harvesting and uses that are passed between generations orally and through practice, and reliance on other subsistence resources from within these same traditional harvest areas

Criterion 1. A long-term consistent pattern of noncommercial taking, use, and reliance on the fish stock or game population that has been established over a reasonable period of time of not less than one generation, excluding interruption by circumstances beyond the user's control, such as unavailability of the fish or game caused by migratory patterns.

This criterion presupposes that an identifiable, consistent "pattern" of noncommercial taking, use, and reliance is characteristic of subsistence use. The Board finds, even though there are many similarities among all users of the moose and caribou resources in the area, there continue to be identifiable distinctions, constituting a unique pattern of subsistence use, that is traceable in direct line back to the original Ahtna Athabascan and later non-native customary and traditional use.

The Board has concluded that the pattern of moose and caribou subsistence use for this region was originally defined by the Ahtna Athabascan residents and then adopted and modified by other local settlers in the early 20th century. This pattern of use was established over many generations and focused on the total aggregate of fish, wildlife, and plant resources locally available to the area residents.

The greatest dependency on subsistence resources occurred prior to the completion of the existing road system in the 1940s. After about 1950, historical use patterns changed rapidly, especially with the introduction of more mechanized access methods. The mobility of the subsistence and non-subsistence users, the availability of seasonal and part-time employment, increased human populations, increasing competition for wildlife resources, and fluctuating game populations (particularly moose and caribou) caused major shifts in subsistence dependency of people within and adjacent to the region. Nevertheless, aspects of the traditional Ahtna Athabascan use pattern are present today, but subsistence-dependent families engaged in that pattern now account for a smaller percentage of all users than a half-century ago.

Most of the long-term subsistence patterns in this area are community-based. The area's communities tend to be long-established, by Alaskan standards, and the residents of these communities tend to be long-term residents, descending from multi-generational families with long ties to the area. These communities tend to exhibit a use of local resources that stretches back to well before Euroamerican contact. In contrast, the use pattern based out of nearby urban areas tends to involve much more recently established communities, a high degree of turnover among residents, short-term residency and, generally, a relatively brief history of use.

Criterion 2. A pattern of taking or use recurring in specific seasons of each year.

Local communities established a tradition of hunting caribou, moose, and other big game species in the late summer and early fall following subsistence fishing, and again hunting in the winter as fresh meat was needed and game was available. Winter hunts have always been critical to subsistence users, as very few other subsistence resources are available during this time. This need for, and use of, winter hunting opportunities is different from use patterns developed by residents of Alaska's more developed and urban areas, where almost all big game hunting takes place exclusively in the fall and is controlled largely by regulations. Thus, as late as 1984, over 60% of the caribou harvest taken by local residents was taken during the winter. Recent changes in that pattern can be largely attributed to regulatory changes, competition from non-local

hunters and shifting migratory patterns of the caribou herd. The seasonal use pattern was based on the traditional Ahtna seasonal movements and the general availability of game. For example, the fall hunt traditionally followed the salmon harvest, whereas the winter hunt took place whenever meat was needed and game was available.

Criterion 3. A pattern of taking or use consisting of methods and means of harvest that are characterized by efficiency and economy of effort and cost.

Before the mid-20th century, Ahtna Athabascan hunters tended to rely on boat access along the area's major waterways in fall, on foot along established trails, and by dog team along winter trails after freeze-up. With the opening up of the Nelchina basin to highway access, and the introduction of off-road vehicles, snowmachines, four-wheelers, and other transportation innovations, a shift in the use pattern occurred. Now, local residents tend to utilize roads as hunting corridors in place of rivers in the fall, and use snowmachines to access the backcountry in winter. Recently, expensive off-road vehicles have been purchased and used by many non-local users and a few more affluent local residents in an attempt to compete with non-local hunters and to increase their opportunity for success. The use of all terrain vehicles may create their own hunting efficiencies as hunting effort and transportation take advantage of labor-saving devices. Hunting methods have changed over the last 75 years. Automobiles, snowmachines, and less expensive all terrain vehicles may make hunting more effective because local and non-local residents can now cover larger areas when hunting caribou or moose. Local hunters can, when animals are available, make relatively short trips that fit into a contemporary work schedule. On the other hand, the use of highway, off-road, and similar vehicles has promoted more frequent short trips with considerable transportation costs for depreciation, fuel, and maintenance. What are being lost are the multi-resource harvest efficiencies associated with long subsistence-oriented summer and fall camping trips traditionally engaged in by Ahtna communities. Thus, recent transportation improvements and fuel prices may have changed traditional subsistence activities to the point where it is unlikely that there is a positive cost/benefit (from an economic standpoint) associated with some of the hunting techniques, especially in cases involving the use of expensive recreational motor vehicles. Overall, the use of some motorized vehicles such as ATVs has blurred the distinction between true customary and traditional patterns and recreational activities.

Residents of local communities—those with the longest histories of use of moose and caribou in the region—have traditionally traveled shorter distances to hunt than do non-local participants; and generally utilize less technology in doing so. Most Ahtna elders testified they still prefer to walk in to hunting areas and maintain permanent camps, whenever possible, in accordance with longstanding means and methods. On the other hand, most non-local users must travel at least 125 miles just to get to the area and have tended to be reliant on all-terrain vehicles (ATVs), aircraft and other expensive off-road and recreational vehicles.

As late as 1984, Copper Basin residents utilized only highway vehicles for hunting access over 65% of the time. It is the Board's conclusion that many of these newer technologies have been adopted based on a perceived need to compete with technologically-oriented recreational hunters from Alaska's urban areas. This may be a direct effect of the 1984 regulations.

Historically, much of the taking of caribou, moose, and small game was done as part of a seasonal round of subsistence activities throughout defined areas used by the community. Family dependence on these resources required a commitment of considerable time and effort to accumulate adequate subsistence resources to meet annual protein requirements and other customary and traditional uses.

Another example of subsistence efficiency in the customary and traditional use pattern has been that specialized hunters tend to provide for the community at large, sometimes or often taking more than necessary for their own family's use in their capacities as community providers, and to fulfill social and cultural obligations. Community subsistence activities are then divided among members and further introduced into traditional patterns of barter and exchange. Thus, some harvest and others process, distribute, receive and utilize the results of the harvest. Each member of the community has a defined role and specialty.

A third example of subsistence efficiency, historically, has been the effort to keep hunting as close to home as reasonably possible, minimizing cost and effort necessary to obtain the wild food resources needed by families and communities. The Board believes that, if competition among users can be reduced, this efficiency is likely to be easier for subsistence users to realize.

In these community efforts, special emphasis has been placed on allowing the maximum opportunity to harvest as many animals and the widest variety of useable species as efficiently as possible. Emphasis was also placed on food gathering activities and other traditions associated with Ahtna Athabascan communities.

Criterion 4. The area in which the noncommercial long-term, and consistent pattern of taking, use, and reliance upon the fish stock or game population has been established.

The Board is examining the area where the subsistence hunting of big and small game occurred prior to the significant change in uses and activities that occurred after approximately 1950 in Game Management Unit 13.

Subsistence uses involve an intimate and exclusive relationship between the user and a very particular set of places generally in close proximity to the hunter's residence. The user is tied to the land. Other types of uses do not exhibit these close, long-term, multi-generational ties to a particularly locality. Even as late as 1981, hunters from Copper Basin communities did not report traveling out of the basin to hunt, while urban-based hunters named alternative areas if they could not hunt Nelchina caribou and moose. Testimony from Ahtna elders emphasized their reliance on local fish and game, and their reluctance, for practical and cultural reasons, to travel outside of their traditional areas for subsistence purposes. Likewise, they described the longstanding family and community use histories and patterns for such areas. Consistently, lifelong residents of the local areas did not share the attitude of utilizing other areas. When Nelchina caribou were not available to them they either added emphasis on moose, and/or use of the Mentasta caribou herd. Resident lake fish species and small game were other alternatives commonly mentioned as alternative and supplemental wild food resources. Families in the range of the Nelchina caribou who harvested little or no wild game mentioned receiving donated meat as an alternative. This differs markedly from the use patterns found in Alaska's urban areas,

where traveling to, and exploring, new game country is deemed a virtue and an essential part of many outdoor experiences.

The Ahtna pattern exhibits a familiarity with terrain and landscape including the associated history of the region transmitted through oral traditions and Ahtna geographic placenames.

Criterion 5. A means of handling, preparing, preserving, and storing fish or game that has been traditionally used by past generations, but not excluding recent technological advances where appropriate.

The traditional pattern has been to salvage and use all parts of the harvested animal, in conformance with traditions prohibiting waste. Lifelong residents of the Copper Basin testified they still practice their traditional methods of harvest by retrieving the entire carcass and all bones, hide, head, heart, liver, kidneys, stomach, and fat. Only the antlers were often left behind. This also differs from patterns based out of urban areas, where hunters tend to focus on the meat and antlers, usually leaving most organs, bones, and the hide in the field.

Ahtna elders also emphasized that preparation and storage are viewed as essential components of their overall use. Women traditionally look forward to practicing their roles as preparers and preservers of harvested game every bit as much as men looking forward to harvesting and providing the game. These traditions and roles are passed on by older relatives to younger family members through in-the-field training and a system of *engiis* (rules of appropriate behavior or taboos) that teach traditional means of harvest, handling, and preparation. These “engiis” emphasize traditional Ahtna views of the human place within the natural world and a respectful treatment of animals.

Criterion 6. A pattern of taking or use that includes the handing down of knowledge of fishing or hunting skills, values, and lore from generation to generation.

The Board has concluded that the subsistence traditions of handing down the hunting and fishing knowledge, values and skills through family oriented experiences are an important aspect of the subsistence way of life in this region. Providing the opportunities for the young and old to participate in subsistence activities is critical to the perpetuation of traditional knowledge about hunting locations, hunting methods, methods of handling harvests, and respectful treatment of wildlife. To increase hunting opportunities for youth, a recent provision adopted by the Board allows a resident hunter between the ages of 10 and 17 to hunt on behalf of a resident permit holder. The youth hunter must have completed a certified Basic Hunter Education course and be in direct supervision of the permit holder, who is responsible for ensuring all legal requirements are met.

Ahtna elders have passed this knowledge on to the next generation in the context of community-based traditions that included relatively long summer and fall camping trips described above. As mentioned previously, teaching roles and lessons tend to be more formalized through the system of “engiis” than is the case for uses based out of the urban areas. Skills emphasized included not only those needed to harvest each species, but also the art of field preparation and care for a wide

variety of species and the utilization, preparation, and distribution of game. Most local users learned how to hunt in the local area from other family members in the local area. Most older, local users have also taught other family members. On the other hand, most non-local users learn about hunting in the area by personal experience or from fellow non-local, unrelated hunters. Also, non-local users tend to be controlled primarily by applicable statutes and regulations rather than long-term oral traditions and community-based values.

The Board considers it extremely important to stress the need to pass on skills and knowledge associated with utilization of all parts of the animal taken, as well as preservation of the traditional, cultural rules and family values associated with these subsistence users in this area. Field skills need to be perpetuated for handling not only the meat but the hides, internal organs, stomach, and intestines. This is consistent with the customary practice of maximizing the use of animals taken characteristic of subsistence uses.

Criterion 7. A pattern of taking, use, and reliance where the harvest effort or products of that harvest are distributed or shared, including customary trade, barter, and gift-giving.

Widespread community-wide sharing is customary in local communities, involving all family members, elders, others in need, and taking place in formal settings such as during ceremonial potlaches. As such, sharing has associated social, cultural, and economic roles in the community. Sharing is expected and follows well-understood community standards that are structured on kinship relations and obligations. As an example, young hunters are required by Athabaskan tradition to give all or most of their first harvested animal to elders and others in need. Also, traditional barter and exchange follow these standards. Successful Ahtna harvesters traditionally share some of their moose and caribou meat with other families and communities to meet their social obligations and for ceremonial purposes. This, again, is in contrast to the uses arising out of the urban areas where hunters are completely free to share, or not share, as they see fit and there is not a system of sharing, barter, and exchange. In addition to the key social and cultural roles of sharing in the local rural community, sharing of subsistence resources plays a key economic role in distributing essential food supplies throughout the community. The Board has concluded it is imperative to accommodate the customary and traditional family and community harvest sharing practices as part of the subsistence way of life to the maximum extent possible.

Use of the state authorized proxy system has provided a limited opportunity for individuals to harvest for permittees who are personally incapable of participating in the field but who have a personal history of subsistence use. Proxy hunters are not required to fully accommodate the customary and traditional practices. Non-local users, on the other hand, tend to have few established rules or traditions requiring sharing, and seldom share outside of their own households. External sharing, when it occurs, is usually with friends and co-workers, and extensive kinship networks are absent. There are no non-local traditions of community-wide meat distribution.

Criterion 8. A pattern that includes taking, use, and reliance for subsistence purposes upon a wide diversity of the fish and game resources and that provides substantial economic, cultural, social, and nutritional elements of the subsistence way of life.

The Board has concluded it is critical to emphasize the values associated with the reliance and dependence on a wide variety of fish and wildlife resources as an important element of the subsistence way of life for this region. Subsistence use patterns historically required a significant dedication of time and effort towards the harvesting of adequate fish and game resources to meet the protein and nutritional requirements of the subsistence harvesters, their families, and their communities.

This differs markedly from the more recreational type of uses arising out of the Alaska's more urban areas, where a single, focused effort to harvest only one resource in any given location, and then salvage only what is legally required from that resource, tends to be a predominant characteristic. To the extent that other foodstuffs are harvested, they are often harvested in completely separate areas, far removed from the fall hunting area. Also, different hunting areas are explored in different years. This separation of the interconnected diversity of resource uses also seriously undermines the principles reflected in Criterion 3. As more and more emphasis is placed on single species harvesting patterns, cost is increased, and efficiency is reduced. Such practices do not reflect the customary and traditional use pattern.

Reliance on most, or all, locally available sources of wild food is characteristic of a traditional subsistence way of life where maximum economic and nutritional benefits typically must be derived from the hunt and harvests. The local harvest of salmon has historically been the most important wildlife resource in terms of useable pounds per subsistence-dependent family in Unit 13. Alaska residents are allowed to use a fish wheel in the Copper River between Slana and the Copper River bridge at Chitina to harvest salmon—permits are issued free of charge. The limit is 500 total salmon for a household with two or more members and 200 for a household with one member, with no limit on the number of Chinook salmon in the total harvest by fish wheel. The salmon run in the Copper River is primarily comprised of sockeye and Chinook salmon.

Use of moose and caribou by local communities is embedded in a wide range of other fish and wildlife uses. It is also embedded in a mixed, subsistence-cash economy characterized by seasonal employment and relatively low cash incomes. A wide variety of subsistence foods are still critically important in these local economies. Almost all hunting, fishing, and gathering takes place locally and the majority of meat and fish consumed tends to come from local sources.

Big game species are taken for food and not for their trophy value by families engaged in subsistence uses. The Board may undertake efforts to reduce or eliminate the trophy values of the resources taken to focus entirely on the inherent subsistence values.

Vote: 6/0
November 12, 2006
Anchorage, Alaska

Ron Somerville, Chairman
Alaska Board of Game


**Findings for the Alaska Board of Game
2006-167-BOG**

**Unit 16 Intensive Management Supplemental Findings
May 14, 2006**

The Board of Game finds as follows, based on information provided by Department staff, Alaska residents and users of moose in Unit 16B. These findings are supplemental to the findings set forth in 5AAC 92.108 and in the Unit 16 predation control implementation plan in 5 AAC 92.125.

1. The moose population size, currently estimated to be 3193-3951 moose, is less than the population objective of 6,500-7,500 moose. The population objective has not been achieved for at least the last 9 years.
2. The Unit 16B moose harvestable surplus, as described in 5 AAC 92.106(3)(A), currently estimated at 140 bulls, is less than the harvest objective of 310-600 moose. The harvest objective has not been achieved for at least the last 6 years.
3. The Unit 16B moose population is, thus, depleted and reduced in productivity, which has resulted in a significant reduction in the allowable human harvest of the population.
4. Enhancement of abundance or productivity is feasibly achievable utilizing the recognized and prudent active management techniques of predator control.
5. The Board has repeatedly, since 1990, been required to significantly reduce the taking of moose in Unit 16B by restricting harvest, seasons and bag limits as compared to the level and timing of hunting opportunity that was allowed when the population was not depleted and reduced in productivity.
6. The population and harvest objectives have not been achieved, at least in part, because wolf black and brown bear predation have been important causes of mortality in the population, to the extent that the population is unlikely to recover, and objectives are unlikely to be achieved, in the foreseeable future unless predator control is conducted.
7. Reducing predation can reasonably be expected to achieve the population and harvest objectives.

Vote: 6-0-1
May 14, 2006
Anchorage, Alaska


Mike Fleagle, Chairman
Alaska Board of Game

**Findings of the Alaska Board of Game
2004-148-BOG**

**Authorizing Predator Control in the Western Cook Inlet Area in Unit 16B
with Airborne or Same Day Airborne Shooting
March 10, 2004**

Purpose

This action of the Board of Game is to authorize a predator control program that involves airborne or same-day airborne shooting of wolves in the Game Management Unit 16B (mainland) portion of Western Cook Inlet, in accordance with AS 16.05.783.

These findings are based on the best information available, and include data gathered from Departmental oral reports and presentations at Board of Game meetings.

Identified big game prey population and wolf predation control area

The Board of Game identified moose in GMU 16B as important for providing high levels of harvest for human consumptive use in accordance with AS 16.05.255 (e)-(g). The Board established Intensive Management Objectives for a harvest of 310 – 600 moose and for a population of 6,500 – 7,500 in accordance with 5 AAC 92.106 and 5 AAC 92.108. The Board established a Wolf Predation Control Implementation Plan for Unit 16B in accordance with 5 AAC 92.110 and 5 AAC 92.125.

Failure to meet moose harvest objective

It is clear the current level of moose harvest in Unit 16B is not meeting the Intensive Management Harvest Objective of 310 - 600 moose. This conclusion is based on harvest data from the mid-1980s and from 1998 through 2003.

From 1983 through 1988, an average of 1,315 hunters reported harvesting 485 moose annually, with 1984 showing a high harvest of 581. More recent years show a dramatic downturn as follows:

Year	General Season and Subsistence Hunters	Harvest
1998	1,037	290
1999	1,024	271
2000	1,050	242
2001	400*	122
2002	400*	69

*general hunting seasons were closed; 400 subsistence permits were issued each year.

Amount necessary for subsistence

There must be a minimum of 199 – 227 moose available for harvest in order to meet the amount necessary for subsistence. The Department estimates that there will be 214 moose available for harvest during the 2004 – 2005 hunting season.

Status of Moose Population

The estimated moose population for Unit 16B during fall 2001 was 3,423 – 4,321, compared to 3,387 moose after the fall 2003 surveys.

Since 1996, most of the Unit 16B composition surveys have shown less than 20 calves per 100 cows annually. The minimum fall calf to cow ratio should be 20 – 30 calves per 100 cows; thus, this is a very low ratio if the intent is to maintain the population or provide for population growth.

Bull:cow ratios in the area have generally been above the management objective of 20 bulls per 100 cows.

The minimum moose density objective is 1.0 moose per square mile for Unit 16B based on the intensive management objective of 6,500 – 7,500 moose. Presently, population estimates place the moose density at .52 moose per square mile.

Status of wolf population

Predation by wolves was not considered an important factor until the mid-1990s. During March 1993, an aerial survey was conducted to estimate wolf numbers in Unit 16. The minimum population was estimated to be 48 – 62 wolves, which was assumed to be an increase from the previous five to ten years. A second aerial survey in 1999 revealed a minimum of 119 wolves in 13 packs in Unit 16B alone. The moose to wolf ratio had declined from 160 – 250:1 in 1993 to nearly 40:1 by 1999.

The wolf population in mainland Unit 16B for fall 2002 was estimated to be 140 – 200 wolves, based on aerial surveys, incidental pilot observations, sealing records, and interviews with knowledgeable trappers; harvest by hunters and trappers has increased annually from 15 in 1997 – 1998 to a record 48 in 2001 – 2002. Available moose and wolf population estimates suggested the fall 2001 moose-to-wolf ratio could be as low as 17:1. At that ratio, the combination of wolves, a relatively high bear density, and frequent deep snow winters were expected to continue to depress moose numbers.

In 2003, the spring wolf population estimate for 16B was 88 – 137 wolves in 16 packs. The spring population in 2004 is likely to be higher, as prior year trends suggest. The population objective for wolves in Unit 16B is 22 – 45 wolves in 3 – 5 packs in the spring.

Even though wolf harvests have been at record levels, averaging 45 wolves over the past three years, high productivity has resulted in an increasing wolf population.

Status of black bear population

The black bear population in Unit 16B was previously estimated at 1,300 to 1,600 bears but recent line transect surveys provided an estimate of 2,100 black bears.

The intent of the Board of Game in 1999 and 2001 was to reduce the black bear numbers to aid in the moose population recovery. The human use objective is a three-year average harvest of more than 225 bears with more than 30 percent being females. During the last ten years, harvests ranged from 62 – 158 bears, and harvests from 2000 through 2002 averaged 118 bears. These numbers are well below the harvest objectives. Two of the last three years were below the 30 percent female objective.

Based on a population estimate of 2,100 black bears, the goal of the harvest objective for Unit 16B is to reduce the population by maintaining a three-year average harvest of more than 225 bears, of which more than 30 percent are females.

Status of brown bear population

The brown population estimate for Unit 16B is 530 – 1,050 bears. The goal of the brown bear harvest objective is to reduce the population by maintaining a minimum three-year average harvest of 28 females over two years old. The last three years have averaged 26 legal females. During the last ten years, the total brown bear harvest of males and females ranged from 34 – 80.

The goal of recent Board actions has been to reduce brown bear population in order to enhance moose population recovery.

Predation is an important cause for failure to achieve harvest and population objectives

In 2002 and 2003, the Department indicated that, in the absence of high predator mortality, the current habitat is adequate to allow for moose population recruitment and growth to exceed the minimum population objective level. While rejuvenating some areas of winter range could increase moose productivity, the primary cause of low moose populations appears to be predators.

Although weather has been a contributing factor in moose population fluctuation in Unit 16B, the drastic and continued decline in moose numbers appears to be attributed mainly to high predator mortality. Because the reported human harvest in this subunit is well below acceptable levels, the main mortality factor appears to be predation. Management studies completed in adjacent units suggest that this mortality factor can be attributed to high numbers of wolves, brown bears, and black bears.

Previous actions of the Board of Game

In 2003, the Board actions included:

- adopting the Wolf Predation Control Implementation Plan for Unit 16B
- liberalizing the wolf bag limit from 5 to 10
- providing more liberal methods and means, including using snowmachines, for harvesting wolves
- extending the brown bear season
- eliminating the brown bear tag fee
- adjusting the brown bear bag limit to one ever year and not counting it against the one bear every four year bag limit in other units
- adjusting the black bear baiting boundaries

Reducing predation provides reasonable expectation of achieving harvest and population objectives

Despite Board actions via standard hunting and trapping regulations to liberalize wolf and bear hunting in Unit 16B, those predator populations remain high. Meanwhile, the moose population remains below population objective levels, despite Board actions that have curtailed human harvest.

It is clear, based on information provided by the Department, that reducing predators will help the moose population to recover so that human harvest objectives for moose can be achieved.

While it is Board policy to manage wolf populations and predation to the extent possible through routine hunting and trapping, other methods not generally approved for hunting and trapping may be implemented. One such method is the use of aircraft.

Because predator populations in Unit 16B have not responded to the liberalizations noted in the paragraph above, and given recent experience in Game Management Units 13 and 19D East, it is clear to the Board that wolf numbers can be reduced by implementing a control program using aircraft. It is reasonable to expect that the moose population can be restored to desired population and harvest objectives by implementing an aerial program to reduce wolf predation. Removing wolves can reasonably be expected to increase the survival of calf moose as well as older moose, thus accelerating the ability to accomplish management objectives.

The Board establishes the following:

1. The removal of wolves will occur in Game Management Unit 16B, and will not exceed the limits set forth in 5 AAC 92.125 (6); wolves should not be reduced to less than 20 wolves.
2. Methods and means to take wolves will be designated by the Department in accordance with 5 AAC 92.039; these may include public aerial shooting or public land and shoot activities.
3. Permits shall be issued to members of the public qualified to operate within the constraints of the program, and able to accomplish the objectives of the program,

as designated by the Department. Multiple permits sufficient to accomplish the objectives in an efficient and effective manner should be issued.

4. The GMU 16B wolf control program shall continue through June 30, 2009, or until such time as moose population and harvest objectives are reached and have stabilized. The Board may also reauthorize the wolf control program.

The Board of Game hereby authorizes a Predator Control Program using aircraft for the Wolf Predation Control Implementation Plan for Unit 16B in accordance with 5 AAC 92.125(6).

Vote: 6/1

Date: March 10, 2004

Meeting Location: Fairbanks, Alaska

Mike Fleagle
Chair, Alaska Board of Game

**Findings of the Alaska Board of Game
2003-144-BOG**

**Authorizing Wolf Control in Portions of Unit 13
December 15, 2003**

Background

Unit 13 long has been an important hunting area for resident subsistence users as well as for the bulk of the state's population in Anchorage, the Matanuska-Susitna valley, and Fairbanks. It is recognized under the state's intensive management law as an area where moose and caribou are to be managed for high levels of human consumptive use.

For the past decade, the Board of Game has heard persistent concern from local residents, hunters and wildlife managers about a continuous and steep decline in the moose population across most of Unit 13.

The Board has concurrently heard the equally persistent concern that predation is causing the moose decline. Researchers and public testimony identify the primary causes of poor calf survival and dwindling population:

- Year-round predation by wolves, and
- Late spring/early summer brown bear predation on calves.

Under the Wolf Conservation and Management Policy adopted by the Board in 1991, and revised in 1993, "in areas managed for high consumptive use where predation is keeping prey at low levels, ADF&G may implement wolf population regulation or reduction to allow prey species to increase to population management objectives." Under this policy, the Board will consider wolf control when:

- Wolf predation is a factor in an unacceptable decline in prey population size or productivity, or
- Wolf predation is a factor preventing attainment of approved population or human use objectives.

Both situations clearly apply to Unit 13.

In an effort to initiate predation control activity, the Board established in 1999 a wolf predation control area covering much of Unit 13 under 5 AAC 92.125(5). While this wolf predation control area has been in place since 1999, the state has taken no action. The Board hereby incorporates 5 AAC 92.125(5) by reference, and reaffirms its ongoing validity, with updates noted herein, based on the most current information from the department.

Under AS 16.05.783, the Board of Game may authorize a predator control program involving airborne or same day airborne shooting as part of a game management program if the Board determines, based on information provided by the department, certain steps are met:

- Objectives set by the Board for the big game prey population and human harvest have not been achieved,
- Predation is an important cause for failure to achieve the set objectives, and
- Reducing predation can reasonably be expected to help achieve those objectives.

Board Objectives for the Big Game Prey Population Have Not Been Achieved

For the purposes of implementing AS 16.05.255(e) – (g), the Board of Game identified the moose populations in Units 13A, 13B, and 13E as important for providing high levels of harvest for human consumptive use and has established the following population and harvest objectives (5AAC 92.108):

- Unit 13A, 3,500 – 4,200 moose with harvest objective of 210 – 420.
- Unit 13B, 5,300 – 6,300 moose with harvest objective of 310 – 620.
- Unit 13E, 5,000 – 6,000 moose with harvest objective of 300 – 600.

Additionally, the Board adopted a Wolf Predation Control Implementation Plan for Unit 13 (5 AAC 92.125(1)) with program objectives designed to stop the decline of the moose population within the wolf predation control area and maintain the following moose population composition and density objectives during fall surveys:

- Unit 13A, 1.0 cows per square mile and 25 calves per 100 cows.
- Unit 13B, 1.2 cows per square mile and 30 calves per 100 cows.
- Unit 13E, 0.9 cows per square mile and 30 calves per 100 cows.

The fall 2003 moose population, composition and density estimates are:

- Unit 13A, 2,200 moose with 1.0 cows per square mile and 19 calves per 100 cows.
- Unit 13B, 4,200 moose with 0.9 cows per square mile and 17 calves per 100 cows.
- Unit 13E, 4,100 moose with 0.6 cows per square mile and 15 calves per 100 cows.

The moose population in each unit is below intensive management population objectives and below the population composition and density objectives contained in the Wolf Predation Control Implementation Plan.

The human harvest for the past 5 years has averaged:

- Unit 13A, 169 moose.
- Unit 13B, 223 moose.
- Unit 13E, 154 moose.

Based on information provided by the department, the Board determines that the intensive management moose population and human harvest objectives as well as the

Wolf Predation Control Implementation Plan, moose population objectives are not being met in Units 13A, 13B, and 13E.

Predation is an Important Cause for Failure to Achieve Objectives Set by the Board

Through a series of incremental steps over time, the Board has moved to reduce wolf and bear numbers in Unit 13 in order to meet the objectives set by the Board under the state's intensive management law. Longer seasons, more liberal bag limits and additional methods and means are now in place. These actions have not stemmed the moose decline, nor have they provided the hoped-for predator reduction.

Concurrent with its efforts to ease predation, the Board reduced human harvests of moose by shortening resident hunting seasons, eliminating nonresident hunters, and adopting more selective antler restrictions. Fewer people are hunting and human harvest is declining.

The moose population in Units 13A, 13B, and 13E has declined 52% between 1988 – 2002 and it continues to decline. Pregnancy rates for adult cow moose haven't declined and productivity has remained constant. Calves are being born but are not surviving.

Moose and caribou make up the bulk of a wolf's diet in Unit 13. It is estimated one wolf kills 12 moose or 36 caribou, or some combination thereof, each year to support itself. Wolves take moose of all ages and both sexes, mostly during early winter through late spring.

The Board has already established wolf hunting and trapping seasons that are as long as reasonably practical. Any further liberalization would have little impact on overall wolf numbers. Few additional wolves would be taken due to poor access and poor pelt quality.

Wolf harvests are at record levels, averaging 211 over the past 3 years. Nevertheless, due to high productivity, the spring 2003 wolf population estimate was 253. Even with another high harvest, the wolf population will probably remain well above the Board-established spring objective of 135-165.

Several studies have shown that brown bears take more than half of the moose calves born each spring. The predation rate remains high until calves are about six weeks old. After that, brown bears can and do kill moose of all ages and both sexes, but the rate at which they do so is greatly diminished.

In actions similar to liberalizing wolf seasons, the Board has gone as far as possible to reduce the number of brown bears given current hunting regulations, including establishing a year-round season for most of Unit 13. A series of record brown bear harvests averaging 141 bears per season over the past 6 years resulted. Although recent high harvest rates exceed estimates of sustainable levels, the Board has no evidence the bear population is being – or even will be – reduced. Based on information provided by

the department, the Board determines that predation is an important cause for failure to achieve the set objectives.

Reducing Predation Can Reasonably Be Expected to Help Achieve Objectives Set by the Board

Despite Board actions via standard hunting and trapping regulations to liberalize wolf and bear hunting, those predator populations remain high. Meanwhile, the moose population remains below objective levels despite Board actions that have curtailed human harvest.

It is clear, based on information provided by the department, that removing predators will help the moose population to recover so that human harvest objectives can be achieved.

While it is Board policy to manage wolf populations and predation through routine hunting and trapping, predation control programs using methods not generally approved for hunting and trapping may be implemented. One such method is the use of aircraft. Given the experience over the past decade, it is clear to the Board that the moose population cannot be restored, and wolf numbers cannot be reduced enough, to meet management objectives without the use of aircraft to control wolves.

It should be emphasized that under the Board's wolf management policy, such control programs "are not expected to be permanent, on-going activities" and control of wolves must be done in such a way as to "assure continued viability of wolves in the ecosystem." The use of aircraft will not jeopardize the long-term viability of wolves in Unit 13 or the state as a whole, where the wolf population is estimated at 7,700 to 11,200.

Once the objectives of the wolf predation control program are achieved, the program should cease. However, any future increase in wolf population with a commensurate decrease in moose population should trigger another predator control activity.

The Board of Game hereby authorizes a Predator Control Program using aircraft for the Wolf Predation Control Implementation Plan for Unit 13 in accordance with 5 AAC 92.125(5).

Vote: _____
December 15, 2003
Anchorage, Alaska

Mike Fleagle, Chair
Alaska Board of Game

**Findings of the Alaska Board of Game
2003-143-BOG**

Authorizing Wolf Control in Portions of Unit 13

Background

Unit 13 long has been an important hunting area for the bulk of the state's population in Anchorage, the Matanuska-Susitna Valley, and Fairbanks. It is recognized under the state's intensive management law as an area where moose and caribou are to be managed for high levels of human consumptive use.

For the past decade, the Board of Game has heard persistent concern from local residents, hunters and wildlife managers about a continuous and steep decline in the moose population across most of Unit 13.

The Board has concurrently heard the equally persistent concern that predation is causing the moose decline. Researchers and public testimony identify the primary causes of poor calf survival and dwindling population:

- year-round predation by wolves and
- late spring/early summer brown bear predation on calves.

Under the Wolf Conservation and Management Policy adopted by the Board in 1991 and revised in 1993, "in areas managed for high consumptive use where predation is keeping prey at low levels, ADF&G may implement wolf population regulation or reduction to allow prey species to increase to population management objectives."

Under this policy, the Board will consider wolf control when:

- wolf predation is a factor in an unacceptable decline in prey population size or productivity, or
- wolf predation is a factor preventing attainment of approved population or human use objectives."

Both situations clearly apply to Unit 13.

In an effort to initiate predation control activity, the Board established in 1999 a wolf predation control area covering much of Unit 13 under 5 AAC 92.125 (5). While this wolf predation control area has been in place since 1999, the state has taken no action.

Under AS 16.05.783, Board of Game may authorize a predator control program involving airborne or same day airborne shooting as part of a game management program if the Board determines certain steps are met:

- objectives set by the Board for the big game prey population have not been achieved,
- predation is an important cause for failure to achieve the set objectives, and
- reducing predation can reasonably be expected to help achieve those objectives.

Board Objectives for the Big Game Prey Population Have Not Been Achieved

Through a series of incremental steps over time, the Board has moved to reduce wolf and bear numbers in Unit 13 in order to meet the objectives set by the Board under the state's intensive management law. Longer seasons, more liberal bag limits and additional methods and means are now in place. A wolf predation control area was established. These actions have not stemmed the moose decline, nor have they provided the hoped-for predator reduction.

Concurrent with its efforts to ease predation, the Board reduced human harvests of moose by shortening resident hunting seasons, eliminating nonresident hunters, and adopting more selective antler restrictions. Fewer people are hunting and harvest is shrinking.

Pregnancy rates for adult cow moose haven't declined and productivity remains high. Calves are being born but are not surviving, so the average age of the moose population has increased. Older animals are more susceptible to predation and severe winter weather.

Predation is an Important Cause for Failure to Achieve the Set Objectives

Moose and caribou make up the bulk of a wolf's diet in Unit 13. It is estimated one wolf kills 12 moose or 36 caribou, or some combination thereof, each year to support itself. Wolves take moose of all ages and both sexes, mostly during early winter through late spring.

The Board has already established wolf hunting and trapping seasons that are as long as reasonably practical. Any further liberalization would have little impact on overall wolf numbers. Few additional wolves would be taken due to poor access and poor pelt quality.

Wolf harvests are at record levels, averaging 211 over the past 3 years. Nevertheless, due to high productivity, the spring 2003 wolf population estimate was 253. Even with another high harvest, the wolf population will probably remain well above the Board-established spring objective of 135-165.

Several studies show that brown bears take more than half of the moose calves born each spring. The predation rate remains heavy until calves are about six weeks old. After that, brown bears can and do kill moose of all ages and both sexes, but the rate at which they do so is greatly diminished.

In actions similar to liberalizing wolf seasons, the Board has gone as far as possible to reduce the number of brown bears given current hunting regulations, including establishing a year-round season for most of Unit 13. A series of record brown bear harvests averaging 141 bears per season over the past 6 years resulted. Although recent high harvest rates exceed estimates of sustainable levels, the Board has no evidence the bear population is being – or even will be – reduced.

Reducing Predation Can Reasonably Be Expected to Help Achieve Objectives Set by the Board

Despite Board actions via standard hunting and trapping regulations to liberalize wolf and bear hunting, those predators remain high. Meanwhile, the moose population continues to decline, despite Board actions that have curtailed human harvest. Numbers of cow moose have declined 64% over the past 5 years. Total moose numbers have declined 10% annually for the past 3 years.

It is clear that removing predators will help the moose population to recover so that human harvest objects can be achieved.

While it is Board policy to manage wolf populations and predation through routine hunting and trapping, predation control programs using methods not generally approved for hunting and trapping may be implemented. One such method is the use of aircraft.

Given the experience over the past decade, it is clear to the Board that the moose population cannot be restored, and wolf numbers cannot be reduced enough, to meet management objectives without the use of aircraft to control wolves.

It should be emphasized that under the Board's wolf management policy, such control programs "are not expected to be permanent, on-going activities" and control of wolves must be done in such a way as to "assure continued viability of wolves in the ecosystem."

The use aircraft will not jeopardize the long-term viability of wolves in Unit 13 or the state as a whole, where the wolf population is estimated at 7,660 to 11,170.

Once the objectives of the wolf predation control area are achieved, the Predator Control Program should cease. However, any future increase in wolf population with a commensurate decrease in moose population should trigger another predator control activity.

The Board of Game hereby authorizes a Predator Control Program using aircraft for the Wolf Predation Control Implementation Plan for Unit 13 under 5AAC 92.125(5).

Vote: _____
November 4, 2003
Anchorage, Alaska

Mike Fleagle, Chair
Alaska Board of Game

**Findings of the Alaska Board of Game
on Moose Management in Game Management Unit 16B South
97-109-BOG**

The Board of Game passed a proposal to provide a general resident only spike-fork 50-inch hunt from August 20 through September 30, and extended the season per an existing Tier II subsistence hunt by sixty days (Nov. 15 to Feb. 28) in Game Management Unit 16B south, that portion of 16B south of the Beluga River, Beluga Lake, and Triumvirate Glacier. Based on the reports presented by Division of Wildlife Conservation, Subsistence Division and the Department of Law, and after due consideration, the Board of Game makes the following findings:


1. The moose population in Unit 16B south is estimated to be 1200 moose (200 bulls, 820 cows, 110 calves) based on the most recent survey estimates made in 1996. The moose population in Unit 16B south consists of a single population or subpopulation that is relatively distinct during the fall hunting and breeding season with emigration and immigration of small numbers of bulls across the Beluga River.
2. The current total harvestable surplus of moose in Unit 16B south is approximately 105 bulls. Although the population goals for cows have been exceeded, it is not desirable to harvest the surplus of cows at this time due to the low recruitment of calves.
3. On March, 1993, the Board of Game found that the harvestable portion of Unit 16B south moose population that is reasonably necessary for subsistence uses is 39 - 47 moose. Between 1993 - 1996 the average harvest was fifteen spike-fork 50 inch bulls in the Redoubt Bay drainage area and 13 bulls for the Tier II permit area in the remainder of the unit. The total harvest for the 1996/97 season is 37 bulls in Unit 16B south.
4. The harvestable portion of Unit 16B south moose (105 bulls) is substantially more than the amount necessary for subsistence uses (39 - 47 moose). There are sufficient numbers of harvestable moose in Unit 16B south to provide for a subsistence hunt that satisfies subsistence uses, as well as to provide for a managed general hunt for residents.
5. The fall general hunt will provide additional opportunity for subsistence uses to Alaska resident hunters. In addition, the Board has authorized an extension to the existing winter Tier II hunt of sixty days, which provides additional opportunity to take moose in excess of what is legally required. Hunting in winter is important to residents in some areas of the state.

6. The Unit 16B south moose population is more vulnerable to overharvest during the winter, therefore the winter hunting opportunity must be managed carefully. Resident hunter success during the fall season has averaged 33 percent. During the fall, local hunters use boats, off-road vehicles and highway vehicles, while non-local residents predominantly use aircraft for access. Hunter success in winter is slightly higher, averaging around 35 percent. Currently, it is not desirable to harvest the surplus of cows and the winter hunt is a bull-only hunt during a time of year when bulls are antlerless, requiring that the Board manage hunter participation differently during the hunt periods. The factors outlined previously require that the moose which are the subject of the winter hunt be managed as a discrete "portion of a population" as set forth in AS 16.05.258.

7. It is necessary to manage the winter hunt by limiting the number of permits in a Tier II hunt. Unlimited participation would likely lead to an overharvest of bulk due to accessibility and herd concentration in wintering areas, unless the season was short. However, a short season would not provide adequate opportunity for subsistence uses.

8. Providing a general hunt with a bag limit of one bull with spike-fork 50 inch antlers for residents only and a long winter season with a bag of one bull by Tier II permit will not result in a significant cost to private persons. Such a hunting regime is consistent with sustained yield principles, provides a reasonable opportunity for subsistence use by all Alaska residents.

Date: 4/20/97


 Larry Holmes, Chair
 Alaska Board of Game

Vote: 4-0-3

Absent: {
 Fleagle
 Quakenbush
 Whittington-Evans

ALASKA BOARD OF GAME FINDINGS

Intensive Management for Unit 13

95-84-BOG

1. Given the long hunting history and importance of Game Management Unit 13, the Board finds that human consumption of moose and caribou is the preferred use of those species in Unit 13.

2. Based upon information provided by the Department and public testimony regarding habitat condition and potential, population characteristics and trends, sustained yield principles and various ecological relationships, the Board has determined the moose population should be between 20,000 and 25,000 animals with an annual human harvest of 1,200 to 2,000. The current moose population is estimated at 18,000, down from a peak of 27,000 as recently as 1987. Last fall's harvest was about 850 and next fall's harvest is expected to be about 650.

3. Based on information described above, the Board has determined the caribou population should be between 35,000 and 40,000 animals with an annual human harvest of 3,000 to 6,000. The population currently is estimated at 44,000. Last season's harvest appears to have been 3,500-4,000.

4. While caribou currently meet population and human harvest objectives, the moose population is depleted and its productivity is low. As a result, there has been a significant reduction in the allowable moose harvest.

5. According to information provided the Board, the moose population has been depleted and its productivity reduced through deep snow winters, bear predation on calves and wolf predation. The moose population is approaching, but not yet at what biologists term a "predator pit" which means if present trends continue,

the primary factor limiting the growth and size will be predation.

6. The Board believes it is feasible to enhance the moose population through recognized and prudent management techniques.

7. There is considerable research indicating brown bears are significant predators of moose calves, and the Board concludes the brown bear population should be reduced until there is a consistent and statistically significant increase in moose calf survival. However, the brown bear population must not be reduced below 350 animals in order to maintain a viable brown bear population.

8. According to information provided the Board, in the mid 1980s when the moose population was increasing the ratio of calves to cows was 25-30:100 and the ratio of yearling bulls was 8-10:100. The Board finds brown bear numbers should be reduced until the calf:cow ratio is 30:100 and the yearling bull:cow ratio is 10:100 on a consistent basis. Currently, those ratios are 17:100 and 4:100, respectively.

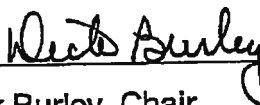
9. Therefore, in order to increase calf survival, improve productivity and increase the moose population, the Board finds it appropriate to adopt regulations allowing hunters to take one brown bear per regulatory year in a season extended to coincide with the opening date of sheep and caribou seasons and to partially overlap the moose season. At its January meeting, the Board waived the \$25 tag fee for brown bear hunters in Unit 13. The Board believes that the combination of a longer season, more liberal bag limit and no tag fee will significantly reduce the brown bear population.

10. There is considerable research indicating wolves are significant predators of moose. The current wolf population objective of 175-225 was set in the late 1980s when the moose population was much higher. In light of the depletion of

the moose population, the Board believes it appropriate to reduce the wolf population objective to 135-165.

11. Department biologists estimate there will be 200 wolves this spring after hunting and trapping end but before pups are born. The Department also provided information indicating hunters and trappers are becoming increasingly effective in harvesting wolves. Given that trend, and given that it appears that the spring wolf population won't be all that much higher than the upper limit of the new population objective, the Board has requested the Department to study whether wolf numbers will be sufficiently reduced through existing seasons, bag limits, methods and means, and to report its conclusions at the Board's fall meeting.

DATE: March 31, 1995



Dick Burley, Chair

VOTE: 5 Favor 0 Oppose 1 Abstain 1 Absent

ADDENDUM TO:

#94-78-BOG

BOARD OF GAME
FINDINGS OF UNIT 16(B) MOOSE SEASONS AND BAG LIMITS

March 30, 1994

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

Unit 16(B) drainages north of Beluga River have an estimated population of 5,850 moose. The population estimate has declined 10% from fall 1990 (a 25% decline north of the Skwentna River). This population exhibits declining productivity yet retains a relatively high bull:cow ratio (21 calves:34 bulls:100 cows). Based on estimated natural mortality and recruitment of yearlings to the population, the allowable sustained yield harvest for 1994 is 220 bulls. Harvest of cows from this population would be additive to natural mortality and would increase the rate of population decline and is not recommended.

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

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

The fall/winter 1993/94 harvest of moose was approximately 142 moose which included 120 bulls and 22 cows. Approximately 100 bulls were taken during the Aug. 20-Sept. 20 season of which 70 were taken by resident hunters. Approximately 50 non-resident hunters harvested approximately 30 bulls during the fall season. The Tier I, Jan. 10-Jan 23 season allowed 10 additional bulls to be taken by resident hunters. In addition, 45 resident hunters were issued Tier II permits to hunt antlerless moose during Jan. 10-Jan. 23, and they harvested 10 bulls and 22 cows. An estimated 300 residents hunted the fall season, while 90 residents hunted during the Tier I and Tier II hunts in January.

Regulations adopted provide a reasonable opportunity for subsistence uses

Unit 16(B) north of Beluga River

The regulations adopted will provide a subsistence and general hunt for spike-fork/50" bulls during an Aug. 20-Sept. 20 season and a Tier II subsistence hunt for any bull during Dec. 1-Jan. 15. The allowable harvest of 220 bulls is in excess of 160-180 moose determined to be necessary for subsistence uses. Therefore, approximately 40-60 additional bulls are available for other uses.

Although spike-fork/50" antler restrictions will continue to be in effect during the 32-day fall season, Tier II hunters will be able to take any bull during a 46-day winter season. Under these regulations, the number of resident hunters during the fall season are not expected to increase substantially over 1993 levels. Therefore, residents are expected to take 60-80 bulls during the fall season. Up to 100 additional bulls will be made available for harvest during the winter hunt. This Dec. 1-Jan. 15 Tier II hunt will be directed at all bulls in the population, including those protected by the fall spike-fork/50" season. In addition, the migratory nature of bulls in this population will make bulls, not previously accessible by hunters, available during this winter hunt. Allowing harvest of up to 100 additional bulls by residents will be accomplished by issuing 200 Tier II permits and providing a 46-day season.

It is necessary to restrict the winter hunt to Tier II permittees because an unlimited participation hunt would likely lead to an overharvest of bulls due to accessibility and herd concentration in wintering areas, unless the seasons were kept very short. However, a short season would probably not provide increased opportunity for documented subsistence uses of this moose population.

Although the opportunity for residents to harvest cow moose is eliminated by these changes, the effect of these changes will be to provide increased opportunity and increased moose harvest by Tier II permittees. Residents receiving Tier II permits will be allowed a total of 78 days of hunting opportunity (if they also choose to hunt during Aug. 20-Sept. 20), 32 more days than allowed during 1993/94. Likewise, changes will allow the total moose harvest by residents to reach 160-180. Residents were able to harvest only 112 moose in 1993/94.

/s/ Richard Burley

Richard Burley, Chair
Alaska Board of Game

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/mi² 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, Chair
Alaska Board of Game

Adopted April 1, 1993

Vote: 5 Favor, 0 Oppose, 2 Absent

FINDINGS OF THE BOARD OF GAME

IMPLEMENTATION OF WOLF POPULATION REGULATION IN GAME MANAGEMENT UNIT 13

Introduction to Written Findings: During the publicly convened Board of Game meeting Nov. 9-19, 1992, the Alaska Board of Game heard and considered public testimony, ADF&G staff reports and advisory committee reports and deliberated in regard to the Game Management Unit 13 wolf management implementation plan. Based on this information, the Board passed a regulation authorizing wolf population regulation within portions of the unit. This implementation plan outlines a management program addressed to increasing yields of moose and caribou for hunters. Additionally, the Board found the following:

1. Game Management Unit 13 (GMU 13) is one of the most important areas for uses of wildlife in the state due to its large wildlife populations and proximity to much of the state's population in southcentral and interior Alaska.
2. There are not sufficient sustainable yields of moose and caribou in GMU 13 to meet present consumptive demands for subsistence and other uses. While current populations of moose and caribou are fairly large, recent yields, particularly of moose, are small. Many Alaskans depend on these populations to meet their nutritional needs and those needs are addressed by the implementation plan.
3. Public testimony prevailed toward strong support for intensive management of GMU 13 wildlife populations to provide high yields of moose and caribou for humans.
4. The Department management goal for GMU 13 is to conserve all populations of wildlife; to produce high yields of moose and caribou for humans and to provide the maximum opportunity to participate in hunting for these species; to maintain all populations of wildlife, including predators, at significant and visible levels to provide for a broad spectrum of uses was found to be appropriate. Also found to be appropriate were recommended population and harvest objectives for moose, caribou, wolves, and grizzly bears as follows:

SPECIES	POPULATION OBJECTIVE	HARVEST OBJECTIVE
Wolf	150-200	50-150
Moose	25,000-30,000	2,000-3,000
Caribou	40,000-60,000	4,500-6,500
Grizzly Bears	Reduce Significantly	>125

5. Wolf and bear predation on moose and caribou is a mortality factor which can be managed through the regulation of wolf and reduction of bear population levels in portions of GMU 13. However, benefits from wolf regulation are more immediately measurable than bear reduction which would take several years to have a measurable effect. Additionally, because of the Board's calendar for dealing with different species, bears don't come up until the Spring 1993 meeting so they cannot be dealt with on a regulatory basis until then. Delaying wolf regulation in a portion of GMU 13 until that time would place additional pressure on moose and caribou and force more extreme wolf regulation and bear reduction in the future.

6. The Department's five-point management proposal for increasing moose and caribou yields which includes habitat enhancement, wolf population regulation, grizzly bear population reduction, more sophisticated harvest strategies, and expanded research is appropriate.

7. The appropriate management emphasis for GMU 13 is on high yields of moose and caribou; however wolves and grizzly bears are important wildlife resources and must be managed on a sustained yield basis and maintained at viable levels. Management for high grizzly bear populations is emphasized in other areas of the state; GMU's 4, 8, and 9 in particular.

8. Wolf packs that reside primarily within Denali National Park are an important resource and are appropriately provided protection outside of the park in GMU 13 by zoning changes in the area-specific plan. Wolves primarily residing with Wrangell St.-Elias National Park were also considered and felt to be adequately protected based on the GMU 11 and 13 boundary, the Copper River, the forested terrain along the boundary, and the history of past wolf harvests in the area. The Department will work with appropriate federal agencies to ensure that wolves

residing primarily on federal land will be excluded from regulation programs.

9. The GMU 13 wolf population has been regulated over the past 20 years primarily by public land-and-shoot hunting techniques. It has been demonstrated that ground trapping and hunting are incapable of regulating the wolf population at the desired level. It was recognized that some object to public participation in wolf control activities. Land-and-shoot hunting was successful in achieving desired harvest levels and under the stringent permit conditions of the strategic wolf management plan, public control is appropriate.

10. During some years wolf control may not be appropriate in all or any portions of GMU 13. The Department will evaluate if wolf control is appropriate by considering wolf abundance, prey population size and trend, prey recruitment, success in meeting harvest objectives, and winter severity.

11. An annual report of implementation activities, plans to implement wolf control, and the status of prey and predator populations will be presented at fall board meetings.

12. A wide range of values and uses of wildlife is accommodated within GMU 13 through zoning in the Area Specific Plan.

13. The Department has developed this implementation plan based on sound principles of wildlife management, consistent with the constitutional and statutory mandates for sustained yield management. This plan is consistent with the Strategic Wolf Plan for Alaska adopted by the board on October 30, 1991, and the area specific for Southcentral and Interior Alaska adopted by the board on November 16, 1992. This plan will maximize the likelihood of success in reaching the program objectives and will provide the department with invaluable knowledge of the relationship of wolf predation and sustainable yields of prey for humans. The data gathered from this program will become an important part of the expanding knowledge base used by wildlife managers to provide benefits to people.

14. The implementation and area specific plans covering GMU 13 provide extensive descriptions of the geographic area, wildlife populations, and human uses of wildlife as well as wildlife population and harvest objectives and the rationale behind them. The implementation plan also contains methods and means allowed for the regulation of wolf numbers, pursuant to 5 AAC 92.110.

15. Extensive public input over the past two years was a critical component in the development of the strategic, area specific, and implementation plans.

16. All oral testimony, written comments, staff reports, and previous board findings were considered and incorporated by reference.

Adopted November 18, 1992



Richard Burley, Chair
Alaska Board of Game

RESOLUTION
BOARD OF GAME

Emergency Session - Anchorage, Alaska

To comply with the court's order by adopting a resolution expressing the board's reasons for disagreeing with the court order, but (under protest) directing the Department to begin implementing the court-ordered Tier II hunt. However, the board will delay adoption of an emergency regulation until

(1) the Supreme Court acts on the motion for a stay

or

(2) until the board reconvenes in two weeks.

Date

Richard Burley, Chair
Board of Game

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7/29/92
5:20 P

OK 5:34 P

7/29/92

6-0-1

RESOLUTION
BOARD OF GAME

The Board of Game met on July 29, 1992 in Anchorage, Alaska to take action on the final judgement of the superior court ordering the board to implement a Tier II hunt from September 1-20 in GMU 13.

The board met in public meeting for eight hours on July 29 and considered reports from the Alaska Department of Fish and Game concerning the anticipated effect of the court-ordered Tier II hunt. Based on information received today as well as the previous meeting on June 23, 1992, the board concluded that it was not in the best interests of the public or the game resource to implement the court-ordered Tier II hunt. However, in a good faith effort to comply with the court's order, the board adopted the following motion:

"To comply with the court's order by adopting a resolution expressing the board's reasons for disagreeing with the court order, but (under protest) directing the Department to begin implementing the court-ordered Tier II hunt. However, the board will delay adoption of an emergency regulation until

(1) the Supreme Court acts on the motion for a stay

or

(2) until the board reconvenes within two weeks."

This motion and the reasons for the motion are succinctly summarized in the following statement from board member, Roger Huntington:

"I'm just a freshman board member and I'm already getting disgusted, my stomach is turning and I'm getting pretty upset here. I have other personal priorities and I don't want to be wasting my time playing these little games. I've watched the Board over the years, I've watched my dad for many years operate. The Board, in the past, has been very professional. I have before me here - just on this page here - ten years of evidence of historical data of professional managers to provide information to the Board. The record shows on that particular page where it deals with subsistence take in line with what the rules that were adopted by the Board on June 23rd. All the preliminaries and information that was brought to the Board at that time and in prior meetings were very technical in detail and done in a professional manner. The Board members have historically made decisions based on data that has some consistency to it. I think we ought to continue that. I think that we ought to depend on that data and I'm sure that as I go on record now as I did the last time be thrown out of context at some sentence I make. That's the

risk we take sitting on this Board. I feel that, damn it, if we're going to do our jobs, let's do it. And there's some risk in that, and if we don't want to take some risks let's get off this board. We stick to our guns and not get thrown around. I'm not saying that we defy the judge, I think that we have reason enough to tell the court that we cannot comply because it is law that we are the managers of the resource but in managing the resource we must be fair to all the users. And for the reasons stated here the confusion to the public, the overload of staff, the short notice for public application period causing for hunting planning time. Even myself I'm planning already. I've already done my planning for September 5 in the area, knowing I can't hunt in that particular area I'll hunt somewhere else. The impact on hunting in other areas. I want to shed a little light on that area. Over the recent years in the Koyukuk and Galena areas we're getting really impact from increased in hunting. What's this going to do? Are we going to go to Tier II in the Koyukuk and those areas too. I think this is going to perpetuate. It's unnecessary in light of the numbers provided. Everything is against it from the technical side and from a professional and sound judgment side I don't see how we can comply. Thanks."

In conclusion the board further determined the following:

1. The board cannot determine a shortage of harvestable moose which would fail to provide reasonable opportunity for subsistence moose hunters in Unit 13.
2. The short timeframe to comply with the Tier II hunt order will result in eligible subsistence hunters being eliminated from the hunt and losing reasonable opportunity to meet subsistence needs.
3. Displacement of moose hunters to other areas will likely result in unanticipated increases in competition in other areas, over harvests, and subsequently, regulation changes to compensate for the effects of hunter displacement; such regulatory changes cannot prevent impacts this fall.
4. The court's order does not take into account the extent of biological and human use data and public testimony which led the board to its reasoned decision on June 23, 1992 to authorize a 14 day Tier I hunt for moose in Unit 13.
5. The timeframe is too short to properly implement the Tier II hunt by September 1:
 - A. not enough time for the public, particularly rural subsistence users, to fill out and return applications.
 - B. will require the department to forego meaningful appeal process for those who don't receive permits.

- C. will likely be challenged by permit applicants who are denied permits and can't get a decision in time to hunt.
6. Confusion to Public. It would add confusion and inconvenience to the public who have made plans to hunt in Unit 13 during the Tier-I hunt.
7. Management concerns:
- A. Hunter displacement; may exceed by logical capabilities in other units; possible over harvest in other units.
 - B. Adverse effect on compatibility of hunting regulations among other units.
 - C. Inconsistency caused by court management of hunts on case by case basis.
 - D. Court invalidating management methods (i.e., reliance on methods such as hunter success rates and effort) and policy decisions.
 - E. Impact on staffing drawn from other necessary management activities, effect of that on other hunts and resource management.
8. The board's finding that one moose per subsistence household is consistent with use patterns and one moose per household would satisfy the vast majority of subsistence users, was not made a finding that one moose per household was required, but rather that 2 moose per household was not required.
9. Failure of the court to take into account the federal subsistence hunt in Unit 13 for the plaintiffs.
10. In addition, as hunters continue to see the courts willing to issue temporary orders changing seasons or bag limits for individual hunters, the more likely they are to go to the court to get immediate access to specific hunts, thereby further disrupting the ability of the Board to function as a manager. The board should be allowed to do its jobs.
-
11. It would disenfranchise a large number of subsistence hunters by eliminating up to 1500 hunters otherwise eligible at Tier I.
12. The board did not rely exclusively on hunter success rates, but rather a number of factors.

For these reasons, the board adopted the motion under protest to comply with the Superior Court Judge Katz's order.

Dated July 29, 1992
Anchorage, Alaska

Richard Burley
Richard Burley, Chair
Board of Game

**BOARD OF GAME
FINDINGS ON UNIT 13 MOOSE SEASON AND BAG LIMITS
ADOPTED JUNE 23, 1992**

The Board of Game has considered the establishment of a 1992 season and bag limit for moose in Game Management Unit 13, which comprises generally that area east and south of the Alaska Range, north of the Talkeetna Mountains and west of the Wrangell Mountains, in the Copper River and Susitna River drainages.

The Board referred consideration of the season and bag limit for moose in Unit 13 to itself as a quasi committee of-the-whole. The actions and report of the quasi committee of-the-whole are part of the official record of the proceedings of this board and are an integral part of the board's deliberations. The record of the board proceedings is incorporated herein, inclusive of all staff reports, documents, public comments and board deliberations.

There are two primary components in determining reasonable opportunity: (1) the opportunity to participate in a hunt, and (2) the opportunity to kill an animal during a hunt. The "opportunity to participate" in a hunt is a function of the number of hunters allowed to hunt and of the percentage of interested hunters allowed to hunt. The "opportunity to kill" during a hunt is a function of the percentage of hunter success on the area's game population, the duration of successful hunts (mean days to kill and the time to achieve a percentage of the kill), as well as the duration of unsuccessful hunts. The latter function is important for determining the period of time before which a hunter loses interest and ceases to use additional opportunity.

Both primary components are important in determining reasonable opportunity. For example, if there are 300 hunter days of hunting opportunity available, using only opportunity to kill could result in one person being given 300 days to hunt. Using opportunity to participate only could lead to 300 people hunting for one day. The Board must strike a balance between the two components and focus on the range of numbers of hunters and length of season that will achieve a reasonable expectation of success for participants.

In determining reasonable opportunity for subsistence use, the board took the following factors into consideration:

the traditional seasons of different use groups; transportation and access, methods and means, competition created by number of participants; hunter success rates; prey population cycle; the customary and traditional level of use; traditional season times and lengths including opportunity to participate within a season.

The Board recognizes there are other considerations as well. Hunters like the freedom to select the time to hunt, they like to have a "quality" hunt, and there is interest expressed in selecting the sex, age or size of the animal. Information provided by the Alaska Department of Fish and Game (department) staff indicates the relative importance of the primary components. For example, during the 1990 Nelchina (Unit 13) registration hunt for caribou (a three day registration hunt) many people were willing to compromise flexibility and "quality" in order to get the opportunity to hunt.

Based on information provided by the department and written public comment, the Board makes the following findings under the 1986 subsistence law - AS 16.05.258:

1. The Board reaffirms the previous findings of customary and traditional use of moose in Game Management Unit 13 as found by the Board in 1983 and again in 1986.
2. The Board accepts the department recommendation that 600 bull moose (based on harvest range of 500 to 700) are available as a harvestable surplus consistent with the sustained yield principle mandated by the Alaska Constitution. Based on the current department estimate, the moose population in Unit 13 ranges between 19,000 and 21,000.
3. The Board determined there are approximately 3000 subsistence users who hunt in Unit 13. Approximately 600 of these hunters are local residents of Unit 13.

Although the Board reviewed harvest data for the past 20 years the board determined that data for the past 12 years was more reliable due to improved data gathering techniques and more relevant due to changing human demographics, access to the hunt area and moose abundance and distribution. Based on this 12 year data (1980 - 1991), there was an average of 3400 Alaska residents hunting moose in Unit 13. This 12 year average included five years when the moose population was at a recent high. During the last two years, when the moose population declined significantly due to weather and wolf predation and the season length was reduced, the average number of hunters was 2844. Considering the range of numbers, the Board decided 3000 was the number of subsistence users who would hunt moose in Unit 13 in 1992.

4. Working under the all Alaskans policy which states that all Alaska residents are eligible to be subsistence users, the Board determined that all 600 harvestable moose were needed to provide a "reasonable opportunity" for subsistence uses.

This number was reached by looking at historical statistics on the number of moose harvested and the number of hunters

participating. Once again the board reviewed harvest data for the past 20 years, however again focused on the last 12 years for the same reasons cited in number 3 above. The success rate of Unit 13 resident subsistence moose hunters ranged from 19 percent to 28 percent with a median of 22 percent. Success rates for non-local hunters ranged from 19.5 percent to 28 percent, virtually the same as for local hunters. A harvest of 600 moose by approximately 3000 hunters yields a success rate of 20 percent, which is within the recent historical range.

5. The Board determined that there was no harvestable surplus of moose available for non subsistence uses.

See no. 4 above.

6. Based on the foregoing findings and considerations, the Board hereby adopts a regulation to allow moose hunting in Unit 13 during an open season of September 1-14 with a bag limit of one bull moose per household and the same antler restrictions that were in place in 1991-92. The use by hunters of all motorized vehicles, except boats, is prohibited from September 1-7 except on borough- or state-maintained roads or highways.


The majority of the board felt that the seven day season established for 1991 provided reasonable opportunity based on harvest information and success rates presented by the department. (Attached and incorporated herein to these findings are two tables showing average number of days hunted by local Unit 13 residents and non-local residents. In 1991 the averages were 6.5 days and 4.3 days.) By establishing a 14 day season with restrictions, the board extended the window of opportunity to hunt by seven days, including two full weekends. This seven day extension gives access to the greatest number of subsistence hunters while still addressing conservation of the moose resource. By restricting the use of ORVs and aircraft during the first seven days, it will improve the quality of the hunt of those in the field but will not be detrimental to local subsistence hunters who traditionally use highway vehicles as their mode of transportation for hunting. In addition, a week of hunting opportunity for aircraft and ORV hunters is still provided during the second half of the season.

The board determined that one moose per household is consistent with use patterns and had previously been recommended by Ahtna Corporation and several local advisory committees in proposals to the board. Based on information provided by the department at this meeting, a one moose per household bag limit would satisfy the vast majority of the subsistence users.

The board took into consideration the federal subsistence season on federal land in Unit 13 which is open only to federally qualified subsistence hunters who reside in Unit 13. The federal season is open for 27 days, from August 25 to September 20. The federal season will open seven days before the state hunt, will be open during the state hunt and for six days following the state hunt.

Attached and incorporated herein is the new regulation for Unit 13.

Dated: June 29 1992
Fairbanks, Alaska


Richard Burley, Chair
Alaska Board of Game

Note to Publisher: When a subsection, paragraph, subparagraph, etc. is indicated by the appropriate number or letter and no text follows that symbol, then the omitted text is the same as that set out in the previous register containing the section. Amended text to be added is underlined. Amended text to be deleted is capitalized and enclosed in brackets.

EMERGENCY REGULATIONS

Register , 1992 FISH AND GAME

PART 3. GAME

CHAPTER 85. HUNTING SEASONS AND BAG LIMITS

Article 2. Seasons and Bag Limits

5 AAC 85.045(a)(11) is amended to read:

5 AAC 85.045. HUNTING SEASONS AND BAG LIMITS FOR MOOSE. (a)

Resident.

Open Season

(Subsistence and

Nonresident

Units and Bag Limits

General Hunts)

Open Season

(11)

EMERGENCY REGULATIONS

Register , 1992 FISH AND GAME

Unit 13(A), that portion Sept. 1[5]--Sept. 14[11] No open season.

northwest of Black River

1 bull with spike-fork
or 50-inch antlers per
household; the use of any
motorized vehicle, including
aircraft but excepting boats,
for hunting moose or for
access to hunt moose
from Sept. 1--Sept. 7 is
prohibited, including
transportation of moose
hunters or parts of moose;
however, this does not apply
to a motorized vehicle on
a State or borough-main-
tained highway/road

Unit 13(A), that portion Sept. 1[5]--Sept. 14[11] No open season.

west of the Lake Louise

~~road, Lake Louise, Lake~~

Susitna, Tyone River, and

southeast of Black River

1 bull with spike-
fork antlers per household;

EMERGENCY REGULATIONS

Register , 1992 FISH AND GAME

the use of any motorized vehicle, including aircraft but excepting boats, for hunting moose or for access to hunt moose from Sept. 1--Sept. 7 is prohibited, including transportation of moose hunters or parts of moose; however, this does not apply to a motorized vehicle on a State or borough-maintained highway/road

Remainder of Unit 13 Sept. 1[5]--Sept. 14[11] No open season.

1 bull with 36-inch antlers per household;

the use of any motorized vehicle, including aircraft but excepting

boats, for hunting moose or for access to hunt moose from Sept. 1--Sept. 7 is prohibited, including transportation

EMERGENCY REGULATIONS

Register , 1992 FISH AND GAME

of moose hunters or
parts of moose; however,
this does not apply to
a motorized vehicle on
a State or borough-main-
tained highway/road

(Eff. 8/20/89, Register 111; am 12/30/89, Register 112; am
8/9/90, Register 115; am 12/27/90, Register 116; am 6/16/91,
Register 118; am 8/10/91, Register 119; am 1/7/92, Register 122;
em am / /92-- / /92, Register)

Average Number of Days Hunted: Successful, Unsuccessful, All Hunters, Moose General (Sport) Hunts, Unit 13.

Year	Successful Hunters		Unsuccessful Hunters		Total Days				
	No. hunters	Total # days	Ave. # days	No. hunters	Total # days	Ave. # days			
1981	767	4382	5.7	2123	13,698	6.5	2890	18,080	6.2
1982	611	3440	5.6	2189	14,790	6.8	2800	18,230	6.5
1983	862	5854	6.7	2257	12,702	5.6	3119	18,556	5.9
1984	810	4843	5.9	2489	15,340	6.2	3299	20,183	6.1
1985	787	4835	6.1	2564	15,228	5.9	3351	20,063	5.9
1986	947	5651	5.9	2673	16,050	6.0	3620	21,701	5.9
1987	764	4959	6.4	2737	16,748	6.1	3501	21,707	6.2
1988	950	5745	6.0	2551	15,298	6.0	3501	21,043	6.0
1989	876	5256	6.0	2680	15,984	5.9	3556	21,240	5.9
1990	378	1489	3.9	1612	7,337	4.6	1990	8,826	4.4
1991	577	2522	4.3	1862	9,634	5.2	2439	12,156	4.9

Average Number of Days Hunted: Successful, Unsuccessful, All Hunters, Moose Subsistence Hunts, Unit 13.

Year	Successful Hunters		Unsuccessful Hunters		Total Days				
	No. hunters	Total # days	Ave. # days	No. hunters	Total # days	Avg. # days			
1983 ^a	32	140	4.4	46	371	8.1	78	511	6.6
1984 ^a	19	150	7.9	53	426	8.0	72	576	8.0
1985 ^b	31	254	8.1	118	873	7.4	149	1127	7.5
1986 ^c	174	929	5.3	596	4659	7.8	770	5588	7.2
1987 ^c	152	772	5.0	371	3050	8.2	523	3822	7.3
1988 ^c	191	939	4.9	371	2719	7.3	562	3658	6.5
1989 ^c	212	928	4.3	386	2888	7.5	598	3816	6.3
1990 ^{b+d}	149	452	6.4	231	1470	6.4	301	1922	6.4
1991 ^d	99	651	6.5	413	3570	8.6	512	4221	8.2

- a Drawing permit hunt.
- b Tier II permit hunt
- c Registration permit hunt.
- d Federal subsistence hunt.

BOARD OF GAME

FINDINGS ON UNIT 13 MOOSE SEASON AND BAG LIMITS

FINDING #91-52-BOG

MARCH 29, 1991

The Board of Game has considered the establishment of a 1991 season and bag limits for moose in Game Management Unit 13, which comprises generally that area east and south of the Alaska Range, north of the Talkeetna Mountains and west of the Wrangell Mountains, in the Copper River and Susitna River drainages. The Board referred to a committee consideration of the season and bag limits for moose in Unit 13, which was before the Board in Proposal 133 by the Department of Fish and Game. The committee recommended that the Board establish a 10 day subsistence as well as a 5 day non-subsistence hunt for moose in Unit 13. For the reasons stated below, the Board finds that a seven day hunt by all users, from the period September 5 through 11, provides a reasonable opportunity to satisfy the subsistence uses on the various moose populations in Unit 13. Accordingly, the Board has amended the committee regulation to establish the seasons and bag limits attached to these findings as Appendix B.

There are two primary components in determining reasonable opportunity: (1) the opportunity to participate in a hunt, and (2) the opportunity to kill an animal during a hunt. The "opportunity to participate" in a hunt is a function of the number of hunters allowed to hunt and of the percentage of interested hunters allowed to hunt. The "opportunity to kill" during a hunt is a function of the percentage of hunter success on the area's game population, the duration of successful hunts (mean days to kill and the time to achieve a percentage of the kill), as well as the duration of unsuccessful hunts. The latter function is important for determining the period of time before which a hunter loses interest and ceases to use additional opportunity.

Both primary components are important in the decision to determine reasonable opportunity. For example, if there are 300 hunter days of hunting opportunity available, using only opportunity to kill could result in one person being given 300 days to hunt. Using opportunity to participate only could lead to 300 people hunting for one day. The Board must strike a balance between the two components and focus on the range of numbers of hunters and of the season lengths.

The Board recognizes there are secondary considerations. Hunters like the freedom to select the time to hunt, they like to have a "quality" hunt, and there is interest expressed in selecting the sex, age or size of the animal. Information from Department staff indicates the relative importance of the primary components. For example, during the 1990 Nelchina (Unit 13) registration hunt for caribou (a three day registration hunt) many people were willing to compromise flexibility and "quality" in order to get the opportunity to hunt.

The findings, and the basis for those findings, follow:

1. The Average Duration of Time in the Field By All Successful Hunters for Moose in Unit 13 Does Not Exceed Seven Days.

The Board heard testimony from ADFG staff that the average length of time in the field by all successful hunters for Moose in Unit 13 does not exceed seven days. This information was taken from harvest reports by hunters in the field for the years 1985-1990. The data are indicated in Appendix A. It indicates that for the general hunts with a 20 day season from 1985-1989, with a mean of 3277 hunters, the average duration of time spent in the field by successful hunters was 6.1 days. For Unit 13 resident subsistence hunters during the same time period for a 25 day season, with a mean of 640 hunters, the average duration of time spent in the field by successful hunters was 4.9 days.

One issue relating to length of time in the field by successful hunters was discussed by the Board. During the 1980s, there were a number of subsistence moose seasons for residents of Unit 13 that exceeded 20 days. The Board is cognizant of the fact that some hunters would prefer to strategically determine when they want to spend the time in the field within a longer hunting season. The Board believes that this preference should not guide the Board as long as the Board believes, based upon all the facts presented, that a reasonable opportunity is presented. One consideration in this issue, is that hunters may use time in the field before and after the season to mobilize for the hunt and to demobilize after the hunt (including removing a harvested animal). The data referred to above does not make that distinction, and the Board believes it likely that data reported by hunters of duration in the field reflects some time for mobilizing and demobilizing, thereby making the calculation of average duration on the liberal side.

In 1990, a general hunt of five days was held for moose in Unit 13. A total of 1918 hunters participated. The average length of time in the field for successful hunters was 3.9 days.

2. The Average Duration of Time In The Field By Unsuccessful Hunters in Unit 13 Likely Does Not Exceed Seven Days.

The same data referred to in Appendix A indicates that during 1985-1989, the average duration of time in the field spent by unsuccessful hunters in a general hunt was 6.0 days. For the 1990 five day general hunt, the average duration of time in the field for unsuccessful hunters was 4.5 days. During 1985-1989, the average duration of time in the field spent by unsuccessful hunters in a subsistence hunt was 7.7 days. The Board believes that, given the likelihood that the data for duration of time in the field includes some time for mobilization before the hunt and demobilization after the hunt, that it is more probable than not that the average duration of time in the field spent by subsistence hunters did not exceed seven days.

3. A Seven Day Season Does Not Significantly Diminish The Success Rate for Hunting Moose in Unit 13.

Appendix A also indicates that the overall success rate for hunters in Unit 13 in general hunts, for the years 1985 to 1989, was 23%. The success rate for subsistence hunters during the same period was 29%. In 1990, the 5 day general hunt had a success rate of 20%. The Board notes that success rate can be influenced by a variety of factors, most notably weather. For example, the Board heard testimony indicating that there was inclement weather during the period of the 1990 general hunt which was a likely contributing factor in the reduction of the success rate by 3%. Another factor contributing to success is the timing of the hunt. The timing of the scheduled 1991 hunt is for those days in September when success rates for hunting moose in Unit 13 increase. Department staff have estimated that it is likely that the success rate for the 1991 Unit 13 moose hunt will be 24% to 25%. Based upon these facts, it is the Board's finding that a seven day season does not significantly diminish the success rate for hunting moose in Unit 13.

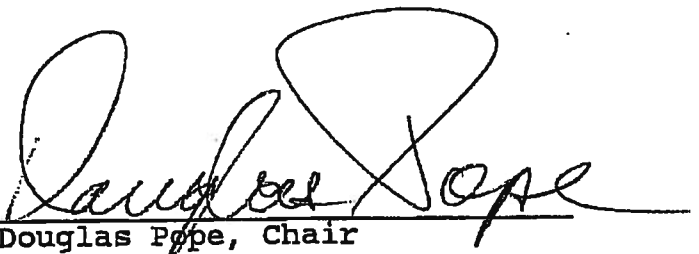
4. The Federal Subsistence Hunt for Moose on Federal Lands Within Unit 13 Provides a Significant Opportunity For Residents of Unit 13 to Harvest Moose.

There is a federal subsistence hunt for moose on federal lands within Unit 13 during the period August 25 to September 20 for residents of Unit 13. The bag limit is one bull. Based upon the history of the 1990 harvest, and the increasing presence of federal management, the federal harvest is expected to amount to 70. Harvests of moose by Unit 13 residents during 1985-1989, ranged from 31 to 215. The Board believes that the federal harvest therefore meets a significant portion of the subsistence needs of Unit 13 residents for moose.

5. The Bag Limits in the 1991 Moose Season for Unit 13 do Not Restrict Reasonable Opportunity.

The bag limits for Unit 13 moose for the 1991 season have antler restrictions throughout the Unit. Antler restrictions differ within the Unit. These restrictions are in place to protect the bull/cow ratios in the various moose populations in the Unit. Subsistence hunts during the period 1985-1989 did not have antler restrictions. The Board believes, given the average duration of time in the field for successful hunters during general hunts in the same time period, which did have antler restrictions, indicates that the antler restrictions will not restrict reasonable opportunity.

The Board has found that the season and bag limits do not restrict reasonable opportunity to satisfy subsistence uses. Based upon the same analysis, the Board also believes that the season and bag limits chosen provide more opportunity to satisfy subsistence uses than the recommendation of the committee.


Douglas Pope, Chair
Alaska Board of Game

ADOPTED: March 29, 1991
Anchorage, Alaska

VOTE: 5 Favor ___ Oppose ___ Abstain 2 Absent

Success rates and average number of days in Unit 13 and by successful and unsuccessful moose hunters in Stearns, 1985-1990.

1985-89	Total Hunters	% Successful	Days Hunted Successful	Days Hunted Unsuccessful
Unit 13 General Hunt * (Sep. 1-20) Hunter Ticket	3277 (3136-3479)	23 (20-25)	6.1 (5.9-6.4)	6.0 (5.9-6.1)
Unit 13 Substrate Registration Permit Hunt** (Aug 25 - Sep 20)	640 (566-802)	29% (22-35)	4.9 (4.3-5.3)	7.7 (7.3-8.2)
Stearns - all hunters Hunter Ticket	22,840 (22,364 - (23,894)	27% (25-30)	5.7 (5.6-5.8)	6.2 (6.1-6.3)
<u>1990</u>				
Unit 13 Substrate Registration Permit Hunter Ticket	1918	20%	3.9	4.5
Stearns - all hunters Hunter Ticket	20,578	21%	5.5	5.7

* Other restrictions in effect
 ** Data for 1986-89. No other restrictions in most of Unit 13

APPENDIX A

Average Success Rates And Number Of Days Spent Hunting Reported By Successful
And Unsuccessful Moose Hunters In Unit 13 And Statewide, 1985 - 1990

	Total Hunters	% Successful		Days Hunted	
		Successful	Unsuccessful	Successful	Unsuccessful
<u>1985-89</u>					
Unit 13 General Hunt *	3,277 (3136-3479)	23 (20-25)	6.1 (5.9-6.4)	6.0 (5.9-6.1)	
(Sep 1-20) Harvest Tickets					
Unit 13 Subsistence Registration Permit Hunt ** (Aug 25-Sep 20)	640 (566-802)	29 (22-35)	4.9 (4.3-5.3)	7.7 (7.3-8.2)	
Statewide (Harvest Tickets)	22,840 (22,364- 23,894)	27 (25-30)	5.7 (5.6-5.8)	6.2 (6.1-6.3)	
<u>1990</u>					
Unit 13 Unlimited Subsistence Hunt (Sep 5-9) (Harvest Tickets)	1,918	20	3.9	4.5	
Statewide - All Hunts (Harvest Tickets)	20,578	29	5.5	5.7	

* Antler restrictions in effect

** Data for 1986-89. No antler restrictions in most of unit

UNIT 13 - MOOSE

Board of Game amendment to Committee Recommendation on Prop. #133
GMU 13 MOOSE

UNITS AND BAG LIMIT

RESIDENT

NONRESIDENT

GENERAL HUNT

Sept. 5-11

NO OPEN SEASON

Unit 13(A), that portion
northwest of Black River.

1 bull with spikefork or
50" antlers

Unit 13(A), that portion
west of the Lake Louise
Road, Lake Louise, Lake
Susitna and Tyone River,
and southeast of Black
River.

1 bull with spikefork antlers

Remainder of Unit 13

1 bull with 36 inch antlers

[DOC: c:\wp51\pope13]

APPENDIX B

Findings Concerning the Petition from the Village of Tyonek for an
Emergency Opening of the Moose Season in Game Management Unit 16B

In the spring of 1983 the Board of Game adopted regulations providing for a November 1-15 season for hunting moose in Unit 16B. Two hundred registration permits were made available to the residents of that unit, including the village of Tyonek (population approximately 300), and the surrounding area bordering the northwest shore of the Upper Cook Inlet. Residents of this area had requested a late season opening, in addition to the September season, in that winter snows drive moose from upland regions to areas closer and more accessible to unit residents. Winter conditions, such as frozen water bodies and snowcover, enable hunters to reach hunting areas and to transport harvested moose to their homes. In addition, the traditional method of preserving moose meat by freezing out of doors or in smokehouses is only possible when constantly cold temperatures prevail.

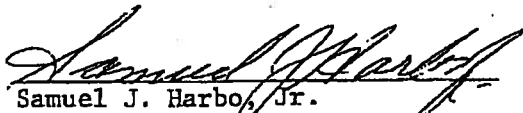
During the November 1-15, 1983 opening, the first under the new regulation, weather conditions were characterized by warm temperatures and an absence of snowfall. Consequently moose populations failed to move to lower regions, and conditions conducive to winter travel were absent. Despite high levels of hunting effort, similar to those of other open seasons, it is estimated that the 80 permitted hunters from the southern portion of 16B harvested only one moose.

The successful harvesting of moose in Tyonek and the area south of the Beluga River in Unit 16B is critical to the health and welfare of the residents of the area. Wild fish and game harvests traditionally provide

the vast majority of the protein consumed by the community. In addition, the extremely poor commercial fishing season experienced by the fishermen of this area in 1983 has severely limited the area's major source of cash income. Unemployment in the village of Tyonek currently is 72%. A local logging operation, which provided a few jobs, is now closed. Thus, the failure to harvest moose in November has resulted in a lack of available food source that cannot be remedied through cash purchases.

The moose population in the southern portion of Unit 16B is currently in a very healthy state and the current harvests are far below what the herd can sustain. An additional harvest of moose by holders of the registration permits will not endanger the herds.

The Board, therefore, finds that an emergency situation exists in the southern portion of Unit 16B, south of the Beluga River. By opening a January 1-15 hunt to the unsuccessful registration permittees who reside in this area, the Board will provide an opportunity for the harvest of moose in winter conditions which will facilitate a successful harvest to meet local needs.


Samuel J. Harbo, Jr.
Acting Chairman, Board of Game

12-7-83
Date